Abstract

Today’s society is not longer integrated on the base of universally-recognized common values and moral rules, but it has produced an immense pluralism of models and behaviours – precursors of the uncertainty and unpraty to gain knowledge of ultimate goals is also the reason of adult’s role and education system crises. Thereby, it is essential that schools take a challenge and develop new dimensions for teaching and learning methods. Schools should play a “transactional” role for the benefit of students, creating new ways of communicate and more innovative educational strategies marked out by relationships and, above all, by a creative and charming teaching. Educating students for autonomy, sociality, critical sensibility and, above all, for creativity is a way to help them to develop a critical thinking – basic prerequisite to learn new knowledge and, more then anything, to start new behaviours.

© 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Keywords: Creativity, Education, Innovation, New educational strategies.

1. Introduction

Globalization indicates not only the economic integration among countries, but it has also produced a sudden collection of serious phenomena marked out by a widespread and invading crisis, with uncertain outcomes (Bocchi, 2007: 49-60).

With relation to that, the dissolution of certainties and the liquid life – conditions of ongoing uncertainty –
represent a valid paradigm of complex systems of those days. Zygmunt Bauman, philosopher and sociologist, explains post-modernity with the metaphor of liquid and solid society. In the past, society was solid because integration was based on common values and moral rules. Post-industrial society is defined liquid because it represents the evolution of a simple society toward a complex one. (Bauman, 2002: 88-100).

Unpredictability is a principle hard to accept since, because as says the philosopher, essayist and mathematician Nassim Nicholas Taleb: we naturally learn from experience and repetition, we focus on what we already know, leaving systematically aside what we do not know. In this way, we are not protected against the unpredictability – both in daily life and financial markets. On the contrary, people should get rid of what learned so far and try to take advantage of new circumstances created by the highly improbable (Taleb, 2009: 11).

The Black Swam symbolizes all that unpredictable events that have extreme effects on life, to be coped with gaining benefit from them. Extreme events should be seen as starting points, and not as an exception to hide because, in spite of the progress of knowledge, future will be more and more unpredictable. Therefore, more inventiveness will be required to live in the world. New horizons of meaning and the ability to imagine new visions will be needed.

Beyond the crisis, there is a new real challenge that needs new attitudes, new rules, new practice and skills to develop and put into play (Arecchi, 2004:61).

However, it is important to understand where humanity is heading. It is in search for new paradigms—essential to find one’s way in a situation that constantly changes and to properly become men and women with new thoughts, acting creatively, sons and daughter for the future. It is important to understand that people are not supposed to protect themselves from the danger of diversity and novelty, they simply are obstacles to overcome, changes to activate, new goals to achieve.

For the reasons examined above, for a while now, creativity and innovation concepts have been circulating with the awareness of peculiar traits, influencing the culture of present society, stimulating behaviours and skills required to cope with different situations. Such skills let people survive changes, giving the certainty of knowledge away (Magrassi, 2009: 23-29).

To be short, knowledge, creativity, innovation are all essential means of the management of uncertainty, they are important points of interests.

2. Creativity

Creativity is a potentiality of human being. It is a productive ability. It is not an activity with an end in itself, but is aimed to different goals from the mere self-satisfaction: “the quality or ability to create. The ability to create new ideas, inventive originality”. Creativity is all about questioning, coping with problems through new prospective, with the aim to get innovative solutions suitable for every area of applicability (Gentile, 2012: 8). It represents the ability to make questions implying new answers. It might be considered as a mental behaviour characterized by two important parts: motivations and needs.

For the word “creativity”, another meaning is present in the dictionary. It refers to the activity with an end not in itself, but in the achieving of a goal different from the mere self-satisfaction. The quality or ability to create. The ability to create new ideas, inventive originality. It is the ability to create a creative thinking, like the ability to communicate or learn. It is a meta-competence applicable to different fields (arts, science, technology, business).

To live in this period of time and manage all the changes, there is the need of strong, flexible and creative personalities. It is important to put oneself into play, dare more, trust in oneself. As the philosopher Edgar Morin said “well-made heads” are required (Morin, 1999: 6). In other words, there is the need of complex abilities and competences, first of all creativity and critical thinking. This is the reason for which a creative subject develops and adopts a systemic and associative interpretative ability. With this approach, correlations of events and facts – even distant with each other – and new keys of interpretation of reality are obtained (Morin, 1999: 89-90).

3. Creative process

The creative thinking is all about questioning, coping with problems through new prospective, with the aim to get innovative solutions suitable for every area of applicability. Creativity let people develop a series of specific abilities making the most of them. Creativity has allowed the world to make progress, achieving knowledge, making culture and more and more complex activities.
This way of thinking is expressed by a “process” without linear generation patterns. It consists of collecting, selecting and recomposing information among all the available, identifying useful connections to make new conclusions. Anyway, creativity is above all the ability to coordinate left and right cerebral hemispheres’ perceptions, getting conclusions and giving shape to what not logic or fantasy alone could ever create. The ability to create something new, something that did not exist before, with real and fantasy dates throughout a process defined by Arieti as a “magic synthesis” (Arieti, 1979: 11). Creativity has allowed the world to make progress, achieving knowledge, making culture and more and more complex activities. It is the ability to create a creative thinking, like the ability to communicate or learn. It is a meta-competence applicable to different fields: arts, science, technology, business (Cinque, 2010: 23-26).

In a particular context like the present one, knowledge, creativity, innovation are all essential means of management uncertainty, they are important points of interests. Creativity is the ability to make questions and it might be considered as a mental behaviour characterized by two important parts: motivations and needs. On the contrary, most people usually see changes as dangerous events.

4. The value of formative systems

The development of creative, innovative and critic abilities registers a growing pressure which means the inadequacy of traditional teaching methods based on teacher-centred lessons. New teaching methods are required. They should agree more with students’ active involvement in reflection and understanding moments.

Stating that, in the last analysis, the current request of education and training is a request of creativity, it shows that a strong need of connection among the request of more authentic developments of personality, the request of a renovation of society, a valour-related proposal including dignity defence purposes. All that is possible by new virtuosos and creative educative flows.

The value of a formative system is determined by the number of experiences and educative proposals offered which gives value to didactics, taking care of the development of thinking. It is important to educate young people to a healthy grow throughout the education for sustainability, peace, conflict prevention, intercultural, citizenships, better justice, equality and human rights, creative and critical thinking.

To be short, educate for creative means letting student be more aware of the need to learn to learn (La Marca, 2009: 90-103), to get right solutions to problems formulating hypothesis, making questions, searching for the most trustworthy and complete information to reconstruct the situation, cooperating with the group, avoiding rushed and early judgments, making decision on the strength of information gathered and changing, if necessary, initial points of view.

Education for creativity handles all that and consequently it brings about renewing actions by important strategies: working in a unconventional way, going beyond the known, developing the curiosity, taking distance from formal procedures and what is considered rational a priori, evaluating the uncertainty and possible alternative solutions.

According to what before said, if a basically rigid thinking is uncomfortable these days, it means that a urgency of changes is necessary (Chiesa, 2013: 23-26).

In this regard, it is important to mention the Recommendations to the European Parliament and of the Council of 18 December 2006 which establishes a list of Key Competences (skills, knowledge and attitudes) for lifelong learning. Eight competences are defined and the last four are strictly correlated to Creativity and Innovation: ability to express oneself (oneself expression), cultural awareness, sense of initiative and entrepreneurship. On the 17th February 2010, the agreement on European guidelines for education 2010 was signed. Common positions adopted by the Council establishing “a strategic framework for European cooperation in education and training up until 2020 with four strategic objectives:

- Making lifelong learning and mobility a reality (progress is needed in the implementation of adults learning, guidances and charming education).
- Improving the quality and efficiency of education and training (give more attention to the improving key competencies).
- Promoting equity, social cohesion and active citizenship (education and training should enable all citizens to acquire and develop skills and competencies needed for their employability and foster further learning, active citizenship and intercultural dialogue).
• Enhancing creativity and innovation, including entrepreneurship, at all levels of education and training (first of all the acquisition of transversal competences by all citizens should be promoted and then the good operation of the knowledge triangle (education-research-innovation)).

5. New educational strategies

The value of formative systems is determined by the number of experiences and educative proposals offered, which gives value to didactics, taking care of the development of thinking - a transversal education covering all the branches of knowledge. To be short, educate for creative means let student be more aware of the need to “learn to learn”, to get right solutions to problems formulating hypothesis, making questions, searching for the most trustworthy and complete information to reconstruct the situation, cooperating with the group, avoiding rushed and early judgments, making decision on the strength of information gathered and changing, if necessary, initial points of view. The creative thinking should go beyond the known, outside the box. A teaching that moves:

a. from results to processes.

b. from problem solutions (resolving models) to defining/discovering problems.

c. from definitions/meanings to the search of horizons of sense.

d. from ready-made knowledge-oriented contents to a knowledge contextualized with developmental and educational psychology.

e. from knowing/applying theories to making hypothesis/theories within a communicative context characterized by the logic of good reasons (rhetoric).

f. from an instrumental and servile idea of language in comparison with thinking, to a more careful vision of its creative and productive powers and a more awareness of complexity between thinking/language.

g. from a sequential randomness idea of relation between teaching and learning, to a systematic vision where reciprocal relations learning/teaching appear to be even asymmetric, ambiguous and unclear.

Each one of these changes of perspective is characterized by the request of a new way of thinking ignored by the traditional education.

It would be appropriate introducing several aspects into education procedure like the functional use of cooperative learning (Polito, 2003: 321-327), the outdoor training (Rotondi, 2005: 101-105), the oldest methodology of experiential education (Liuzzi, 2006: 69-79), laboratory work and education, getting in touch with the world in a selective way throughout all the possible mediations of meaning and knowing.

6. Conclusions

Schools and more generally all educative processes have proposed two different ways to present key elements of today world: on one hand students and on the other hand school knowledge without considering that students are bearers of experiences, feelings, knowledge and complex outside-school competencies (Taurelli, 2006: 40). If school is the finest place of education, where the thinking is built and trained, it is essential to give students the chances to develop the ability to understand and give their point of view and play their own roles within a global and interconnected society. This way, students will be able to understand and discuss complex relations concerning all the aspects of society, getting new ways of thinking and behaving (Rago, 2006: 46).

Creativity has got an important role in early years of schools with an exponential decrease as school ranking grows forgetting that general basic competencies, creativity and innovation are learnt throughout the age of development concerning first of all motivation and spirit of initiative (Rossi, 2009: 13-63).

According to what before said, if a basically rigid thinking is uncomfortable these days, it means that a urgency of changes is necessary; education should facilitate the develop of creative and innovative abilities, gaining the acquisition of transversal competences, essential to manage and understand the uncertainty of a liquid society. Such qualities are obtained by an education for difficulties, for freedom, for independence, for critical and creative

† Decision No. 1350/2008 / EC of the European Parliament and of the Council of 16 December 2008 on the European Year of Creativity and Innovation, 2009-GUUE. L. 348 of 24 December 2008.
thinking. This is one of the most important challenges for current educative systems. Another challenge is represented by the good functioning of the knowledge triangle: education – research – innovation (Di Nubila 2010: 153).

References

Arecchi F.T. (2004). *Caos e complessita nel vivente*. Pavia, IUSS Press.
Arieti S. (1979). *Creativita: La sintesi magica*. Roma, Il Pensiero Scientifico.
Bauman, Z. (2002). *Modernita liquida*. tr. it. Minacci S. Roma-Bari, Laterza.
Bocchi G. Ceruti M. (2007), *La sfida della complessita*. Milano, Mondadori.
Chiesa G. (2013). *Invece della catastrofe: Perche costruire un’alternativa e ormai indispensabile*. Milano, Piemme.
Cinque M. (2010). *Agire creativo: Teoria, formazione e prassi dell’innovazione personale*. Milano, Franco Angeli.
Decisione n. 1350/2008/CE del Parlamento Europeo e del Consiglio del 16 dicembre 2008 relativa all’Anno europeo della creativita e dell’innovazione, 2009-GUUE L. 348 del 24 dicembre 2008, http://eur-lex.europa.eu/it/index.htm (ultima consultazione 20/03/2014).
Di Nubila R. D., Fedeli M. (2010), *L’esperienza quando diventa fattore di formazione e di sviluppo*. Lecce, Pensa Multimedia.
Gentile A. (2012). *L’intuizione creativa*. Soveria Mannelli (CZ), Rubbettino.
La Marca A. (2009). *Saggezza e adolescenza. Una sfida educativa*. Roma, Armando.
Liuzzi M. (2006). *La formazione fuori dall’aula: Concetti, metodi e strumenti per un nuovo modello formativo multidimensionale*. Milano, Franco Angeli.
Magrassi P. (2009). *Difendersi dalla complessita*. Milano, Franco Angeli.
Morin E. (1999). *La testa ben fatta. Riforma dell’insegnamento e riforma del pensiero*. Cortina Raffaello, Milano.
Morin E., Le vie della complessita. (2007). Bocchi G., Ceruti M. *La sfida della complessita*, (a cura di) Milano, Mondadori.
Polito M. (2003). *Comunicazione positiva e apprendimento cooperativo*. Gardolo (TN), Erickson.
Rago E. (2006). *L’arte della formazione: Metafore della formazione esperienziale*. Milano, Franco Angeli.
Rossi B. (2009). *Educare alla creativita: Formazione, innovazione e lavoro*. Roma-Bari, Laterza.
Rotondi M. (2005). *Formazione outdoor: apprendere dall’esperienza*. Milano, Franco Angeli.
Taleb N. N. (2009). *Il cigno nero*. Milano, Il Saggiatore.
Taurelli C. (2006). *La qualita dell’offerta formativa nell’ottica del lifelong learning. Formazione e cambiamento*. n. 40.