

***IS IT POSSIBLE TO DEVELOP INNOVATION AT HIGHER EDUCATION
THROUGH THE ASSESSMENT OF CREATIVITY?***

*The example of the Teaching and Learning Observatories at Nottingham
University (UK).*

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IS IT POSSIBLE TO DEVELOP INNOVATION AT HIGHER EDUCATION THROUGH THE ASSESSMENT OF CREATIVITY?

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Résumé : Originalité et innovation sont deux des principaux aspects à considérer pour définir la créativité par rapport à l'éducation.

Si le spécifique domaine dans lequel la créativité doit être développé est la haute éducation, ces deux aspects deviennent des caractéristiques particulières.

Par ce travail on cherchera d'éclairer la raison pour laquelle est important évaluer la créativité, de faire quelque exemple d'évaluation de la créativité avec l'aide de la technologie et de déterminer quelles pourraient être les caractéristiques les plus importantes d'une bonne méthode d'évaluation.

En particulier on parlera des «Observatoires d'enseignement et d'apprentissage», un instrument innovateur d'apprentissage à distance par les images, développé à l'Université de Nottingham.

Most-clé : Créativité, évaluation, innovation, enseignement supérieur, technologie,

Summary: Originality and innovation are two of the main aspects to be considered in order to define creativity in education. If the specific field of interest, where creativity should be developed, is higher education, these dimensions become peculiar features. The attempt of this contribution will be to highlight why it is worth to assess creativity, to show some examples of assessment of creativity performed with the help of technology and assume which could be the most valuable characteristics of a good assessment method. In particular the case of the *Teaching and Learning Observatories*, an innovative way of distance learning through images, carried out at Nottingham University, will be described.

Key words . Higher education, assessment, technology, creativity, innovation.

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Originality and innovation are two of the main aspects to be considered in order to define creativity in education. If the specific field of interest, where creativity should be developed, is higher education, these dimensions become peculiar features. After having learned a large amount of information, in fact, students at University should start apply those concepts and conceive original ideas, letting improvement in society take place.

Without creativity, nowadays, we would not benefit from any of the innumerable possibilities we experience every single moment of the day, from getting on the tube and reach our workplace to connect on the Internet and communicate, instantly, with the world. It is vital, therefore, to understand properly what creativity is, teach its main characteristics to the students and be able to assess it.

As Cowan (2006) underlines «*the heart of the creative process is often the sudden insight or idea, the blue flash out of which the germ of an idea emerges*» and this implies that the above creative process for any learner is often unpredictable and difficult to capture. If it is so difficult to identify a regular path to be creative, assessing it can be extremely complicated. The present contribution tries to find a solution to this problem, considering that there is a urgent need of making students learn how to improve their creative abilities. Assessment can only help this aim.

Different aspects of the matter will be analysed and, in particular, assessment of creativity will be developed as regards its processes and products. Different researchers have studied the special characteristics which lead to creative acts, but there is not one accepted method for the measurement of creativity.

In conclusion, the attempt of this contribution will be to highlight why it is worth to assess creativity, show some examples of assessment

of creativity performed with the help of technology and assume which could be the most valuable characteristics of a good assessment method.

In particular the case of the Teaching and Learning Observatories, an innovative way of distance learning through images, carried out at Nottingham University, will be described.

1 – WHY DO WE NEED CREATIVITY ?

1.1 – State of the art.

There are social and cultural reasons which compel a well-founded interest in creativity, meant as an innovation propeller. The future prosperity of the developed and developing countries will increasingly depend on their capacity to innovate, to develop ideas into new products and services, new technologies and new forms of production, bringing, therefore, better living conditions to all of us.

EUA – European Universities Association - in 2005 launched a project called *Creativity in Higher Education* whose main aim was to develop and deepen the topic of creativity at University, considering it the place where it should be prompted and fostered.

EUA invited 21 different European Countries to participate and 32 institutions have been selected on the basis of their consideration and involvement in creativity. The first phase of the project, recently ended (Feb. 2007), regarded the concept of creativity and the ways through which creative processes are supported within the institution and in particular four main topics have been developed:

- ✓ creative partnerships: HEIs and external stakeholders;
- ✓ creative learners: Innovation in teaching and learning;
- ✓ creative cities/regions: HEIs, NGOs and governments;

- ✓ creative HEIs: structures and leadership.

One of the main findings identified diversity as a crucial factor for strengthening creativity on a number of levels: composition of research teams, among students and staff, teaching and learning methods, joint projects with external partners etc.

But, as you can see from the list the second item is devoted to innovation in teaching and learning and as regards this point the possible ways through which creativity is stimulated have been investigated. In particular three aspects have been considered: creative competences of graduates, variables which influences most these competences and the best conditions for teachers to value creativity.

Final recommendations highlighted that, in order to develop creativity at Higher Education, « *quality assurance agencies should be aware of the potentially detrimental effects of external quality mechanisms if they stress conformity over risk-taking[...].*» QA agencies are invited to explore jointly with higher education institutions how external quality mechanisms may strengthen creativity.

Anyway the above mentioned initiatives is not the only one aiming at identifying and support creativity at Higher Education. In Great Britain, in 1999, *National Endowment for Science, Technology and Arts* (NESTA) has been created and it was aimed at supporting those who showed talent within their area of interest included the one of university teaching. As regards this field, different action research projects have been funded.

Other initiatives promoted by the British Government regard the *National Teaching Fellowships Award*, awarding those teachers who use innovative teaching methods within their modules and demonstrate appreciation and good results and the *Centre for Excellence in Teaching and Learning*, which generously fund very innovative teaching initiatives

1.2. The Hypothesis of research.

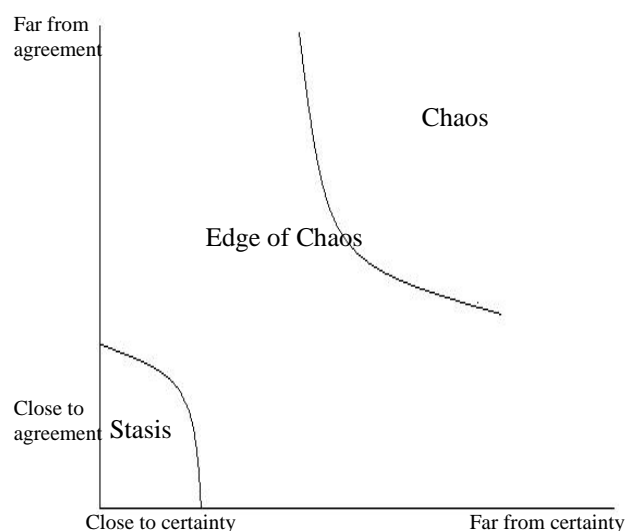
Assessment represent an essential part of the educational process. If the creative aspects are to be prompted and promoted, then it will be necessary to measure the level of creativity reached by the students at that particular

moment of education. But is it possible to assess such an apparently unpredictable, unmanageable and unquantifiable entity, such as creativity?

Time spent in higher education is the culmination of formal education for many young people and it's the place where they are encouraged in intellectual practice with greater freedom than any time previously and maybe ever in the future. According to Lambert (2003) « *Universities are repositories of research and knowledge that have enormous innovation potential, and are key agents in the innovation agenda, in a variety of ways.* »

At University it is possible, therefore, both for students and teachers to use knowledge available to create new knowledge and contribute to social progress. Universities cannot but being the places of creativity but it is obvious that promoting initiatives aiming at creative innovations can be risky. If University does not take this sort of risks it will loose quality and will miss important opportunities.

As regards this aspect Stacey (Stacey et al., 2000, p. 6), developed the so called *Edge of chaos diagram* which could help us to explain the situation that Universities can face when they make an efforts to support creativity.



Stacey's point is that an Higher Education institution should try to work at the very limit of the area of chaos, far from the stasis and certainty one, being careful of not entering chaos itself. Tosey (2000) underlines that it is

at this edge, where uncertainty, difference and risk taking have more space to generate creative thinking and action, that the propensity for emergence is thought to be at its greatest.

To be productive at the edge of chaos it is essential to be free and develop personal projects according to one's methods and times, to make experiments, evaluations, to learn, try and try again if results are not satisfactory.

If creativity is an essential component of a successful higher education how to evaluate creative processes in order to exploit and promote them?

2 – DESIGNING A MODEL TO ASSESS CREATIVITY.

2.1 – How to assess creativity.

Cowan (2006) who studied the problem deeply tells that asking his students to record the paths that conducted them to the creative product they could not reproduce the process precisely.

The assessment of creativity is a multidimensional problem. We refer to very personal situations which vary according to the peculiarity of the situation and solutions often appear out of the blue and it's extremely difficult to find out what brought to them.

Notwithstanding the difficulty of the task, Cowan (2006) conceived a model of assessment of creativity. It foresees a two step approach.

In the first phase, the creative actor is involved, assigning him/her very original tasks, asking him/her to cooperate with others in the creative process therefore establishing a student-centred learning, where interaction and peer cooperation could help and facilitate the results.

The second step to be undertaken is the one which regards assessment of creativity more directly. It means that students involved in the process will evaluate their level of creativity according to a model drafted ad hoc by Cowan. Adopting the model described below students self evaluate themselves, improve more conscientiously their learning, according to standards, and, at the same time, can identify their level of creativity.

According to Cowan's model students should assess themselves:

1. *A definition of what the person being assessed means by creativity.*
2. *A clear statement of the achievement and/or development in the creative ability which the learner aspired in respect of undertaking the period of study or development wherein creativity is being assessed.*
3. *An indication of the sources from which the learner has drawn information from which to assemble their judgement of their performance and development.*
4. *The information which then emerged and informed the learner's judgement.*
5. *The making of that judgement.*
6. *The judgement in qualitative terms.*

The aim of the model is that of letting students be more aware of what being creative means and moreover to improve knowledge about that particular field of study they are investigating. The teacher's role in that case is to facilitate this sort of learning by the students and then to identify, represent and evaluate their own creative abilities)

2.2 – A suitable test bed: the *Teaching and Learning Observatories* at Nottingham University.

The *Teaching and Learning Observatories* represent a particular application of the VLL¹. The Visual Learning Lab, a learning, teaching and research centre, supports a range of visual learning projects across the University of Nottingham. The project we are dealing with here regards the training course that future language school teachers attend at the institution. The activity arose within the so called *Training School Initiative* promoted by

¹ The *Visual Learning Lab* at Nottingham University is first of all one of the Centres that the *Higher Education Funding Council* for England funded in the year 2005. The above Centres, called *CETLs, Centres of Excellence for Teaching and Learning*, represent an initiative which has the double aim of awarding valuable teaching practices and of investing in those practices, so that institutions, students and teachers could benefit from the support given.

the DfES (*Department for Education and Skills*) in the year 2000 and, initially, it regarded Nottingham University and a beacon comprehensive school (age 11-18), the Hockerill Anglo-European College at Bishop's Stortford.

The activities are conducted at two different places (the University where *Post Graduate Certificate in Education* students are located and the School where normal everyday classes are taken by the students) linked by a technologically advanced equipment made of big electronic whiteboards placed at both sites and communicating by ISDN line.

Communication is enhanced by video-cameras endowed with very powerful zooms. At University, the room, devoted to TLO activity, is equipped with two big electronic whiteboards, one dedicated to observation and the other to communication. The presence of two screens is due to the need of trainers both to observe and exercise their critical thinking abilities.

Trainers main activity is, of course, observation, and, then, the connection with the place of teaching action must be constant; at the same time, interaction and critical discussion must be prompted and carried out, therefore the second screen facilitates them.

At school, instead, one whiteboard is sufficient to carry out both functions. The sound is broadcasted by microphones located on the ceiling of the school environment.

Every place can observe the other and at any time can be connected with the other.

The original idea to create the *Teaching and Learning Observatories* emerged from the need to satisfy a practical need for "student teachers" of modern languages and immersion/bilingual education (Geography, History and Science to be taught through the medium of French/German). They, in fact, have to experience a considerable amount of time in class in order to get their qualifications and this was not always so easy to do close to Nottingham University.

In The United Kingdom, the *Pre-service Post-graduate Certificate in Education*, PGCE, the primary form of teacher training, requires a training period of 36 weeks: 24 school-based weeks and 12 weeks at University.

Agreements between the University and local schools are not always sufficient to satisfy the demand of all the future teachers engaged in specialising in a very wide range of subjects. Moreover, participation in classes where the subject of specialisation is involved are deeply encouraged.

One of the main objectives of the initiative, for instance, regards the possibility to improve target language communication abilities of PGCE students, and at the same time to practice and get accustomed with the main teaching strategies employed.

The possibility to share experiences and observations which allow mentors, trainees and teachers themselves to discuss, analyse and deconstruct observed realities, without having to “invade” lessons and without having to leave the University, suggested the use of technology which proved to be a valid tool to develop a teacher training system based on cooperative learning.

As Do Coyle, co-director of the TLO programme at Nottingham University, highlights: *«it soon became clear that information and communication technology (ICT) might provide the means to develop a deeper sharing and collaborative approach to teacher training. ICT, we felt, would not only bridge but “fuse” the school-based and the university-based elements of the PGCE programme, whilst at the same time involving students teachers in developing their ICT skills for authentic purposes.»*².

3 - CONCLUSION : THE APPLICATION OF COWAN'S MODEL TO THE TEACHING AND LEARNING OBSERVATORIES.

As one can see from the description of TLO, the above way of teaching seems to be a suitable test bed for Cowan's model of assessment of creative abilities, especially considering that among Cowan's aims there is the one of enhancing and stimulating those skills.

At PGCE students are invited to learn teaching methods and methodologies, apply them and create new ones if possible.

Technology can help them to use their own creativity: starting from observation, they can discuss, interact and develop new ideas.

If we consider Cowan's model in detail and try to refer it to the *Teaching and Learning Observatories*, we will realise that students can, on the basis of the educational situation they are observing, formulate their creative path, think of the objectives, refer to particular resources available at University, and, being directed by the tutors, focus on challenging issues related to their own subject of specialisation. The entire process would allow them self-assess the activity performed.

TLO students, accustomed to an approach which is similar to the one Cowan suggests for self assessment of creativity, could find the task easier.

There are different good reasons to test Cowan's model within TLO programmes:

1. it helps self-teaching,
2. refers to a higher education course,
3. aims at training future teachers (who will have to understand the importance of creativity in their job).

It cannot be forgotten then, that TLO is a form of teaching based on cooperative learning supported by particularly advanced technology, which confirms the need to make good use of the opportunities offered by ICT.

Higher education should help students become aware of their creative abilities and have the possibility to demonstrate them outside University. This development will last for their life time and they will be compelled to self evaluate both in formative and summative way. If University can anticipate those situations, training students to self evaluate in order to improve, a substantial contribution to the matter of quality will be given.

Where students can cooperate and work together as well as with their teachers learning objective will be reached easily.

As it has been highlighted, the one who better knows his/her own level of ability is the learner himself/herself, therefore, driving the process of creativity assessment closer and

² Do Coyle, 2004, p.1. Do Coyle is director of the *School of Education* at Nottingham University and co-responsible of every activity connected to the TLO programme of the VLL.

closer to those directly involved in the creative process should give better results.

University must be the place of creativity and assessment and evaluation are essential components of education. This means that creativity and assessment can't be so far one from the other.

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