

SESSION 4
CREATIVITY AND KEY COMPETENCES
TEACHING CREATIVITY AND
INNOVATION:
A STRATEGY FOR THE FUTURE

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Victor Hugo:

"There is nothing like a dream to create a future."

WE BEGIN WITH SOME BASIC ASSUMPTIONS:

- The human being needs to innovate and be creative in order to live and progress.
- Creativity is a trait which all human beings possess, although in general it must be cultivated.
- We understand creativity:
 - as an acquirable skill.
 - as a strategy for the future which must be encouraged through education in order to meet the challenges proposed today in the different domains of reality.
- From this we derive the implications for education, allowing us to consider two key questions for this session.

What are the implications of measuring creativity for the educational process?

It is necessary to address the implications of measuring creativity for the educational process because the measurement and evaluation of creativity form part of the development of creativity and innovation.

› IMPLICATIONS

› SUBJECT (STUDENT):

- Biological indeterminacy
- Innova, when it perceives a new necessity, reviews and combines existing knowledge until a new and better solution is found by using divergent thinking, originality, flexibility, etc.
- The student's educability and great potential for gaining knowledge

› THE PROFESSOR must not confuse "education" with "manufacturing."

- Take into consideration the "resistance" of the other, who needs to be recognized as a "self"
- Rework educational action
- Assume the role of real authority (not authoritarian)
- Not confuse education with training and subordination

PROCESS

- Encourage divergent attitudes.
- Promote innovation (understood as a process of gaining knowledge), the basic resource of which is knowledge, as well as its main result.
- Understand that it is a complex process:
 - Tacit Knowledge
 - Expertise
 - Variety of intervening factors
 - Requires a model

MODEL PECEI

Creativity permits us to:

- develop thinking skills and attitudes that enable us to respond to new situations.
- transform reality by applying our knowledge and experiences in order to obtain original and appropriate results.
- increase our intellectual potential.
- experience satisfaction and self-realization

What aspects of creativity are being measured?

- Measuring creativity is, in itself, a challenge.
- For fifty years the great theorists of creativity have focused on measuring creativity (Guilford, Torrance, Talf, Mackinon, Marin, etc.).
- Measuring creativity is based on several categories:
 1. Attitudinal aspects (divergent production, fluency, flexibility, etc.)
 2. Creative personality (the behavior of biographical subjects)
 3. Projective tests (TAT, Rorschach)
 4. Performance Tests:
 - Tests of artistic abilities
 - Tests of psychometric creative performance and production
- In summary, we can identify two trends:
 1. The measuring of creativity through the ability to produce answers to a prompt (graphical, verbal, etc.)
 2. The measuring of traits (motivational, attitudinal, behavioral, etc.) of the creative personality
- However, there is no consensual definition of creativity.
- The Creativity Institute is in the preparation phase of developing a measuring instrument (TSPC).

What aspects make up our measuring instrument TSPC?

- Some basic assumptions:

- The basic indicators of creativity, collected from the bibliographical corpus of authors, form the foundation of our thinking of the instrument.
- The instrument seeks to measure the traits of the creative person through their perceptions of themselves in relation to the most relevant indicators of creativity, both mental and behavioral (i.e. what they think and what they do).
- The leading indicators are structured and categorized based on the subject, process and context.

What aspects make up our measuring instrument (TSPC)?

- For its development we have followed the following steps:
 1. We have analyzed the bibliographical corpus of the authors who, in recent years, have published papers on indicators of creativity.
 2. Based on this information, we have defined a series of basic factors which have served as the basis for producing a measuring instrument (questionnaire) within the traditional theoretical structure of the elaboration of norm-referenced tests.
 3. As a previous step to the definitive development of the questionnaire, it was pilot tested online with one hundred individuals in order to assess its adequacy, the comprehension of the questions and the coherence of the answers, and to obtain an initial evaluation regarding the reliability of the instrument (internal consistency) and initial evidence of its validity.
 4. We have extracted nine factors that permit us the first working approximation of creativity without a consensual definition.

What aspects make up our measuring instrument (TSPC)?

5. Once the quality report on the pilot test was evaluated, we proceeded to draw up the new questionnaire so that the online field work can now begin with the use of a survey of a group of creative professionals (art, publicity, business, architecture, etc.) and the general population.
6. After the data has been processed with classic statisticals and complex mathematical models, we will proceed to establish a model and diverse scales in various dimensions and differing components.
7. Subsequently, and from a perspective of (quantitative/qualitative) methodological complementarity, we will try to complete the definitive design of the instrument and its validation based on ethnographical strategies which will allow us to identify key biographical elements of the concept of creativity as it is revealed by people identified as creative.
8. All this is done in order to be able to define the characteristics of the creative person in relation to his or her creative production and to ensure the pertinence of the measuring instrument based on the research evidence.
9. Finally, we seek to be able to lay the foundations for educational models of creative development with a general and/or sectoral application and to develop experiments in educational contexts to access the educational potential of the model.

Thank you for your attention.