

## Decoding the Disciplines in European Institutions of Higher Education Intercultural and Interdisciplinary Approach to Teaching and Learning

# KNOWLEDGE WITHOUT WALLS FOR TEACHERS IN SEARCH OF THE TRUTH

Discipline: General Pedagogy. *Fundamentals of Pedagogy - Theory and Politics of Education*. The first year of Annual course. Infant and Primary School Teacher in University Education and Training. Università degli Studi Roma Tre, Italy- By Sandra Chistolini

### Aims of the Project

The main aims is to provide the "Erasmus Plus" project participants with a solid knowledge of the Decoding the Disciplines (DD) methodology, as well as to acquaint all other participants with a common understanding of this innovative teaching and learning approach. (From Report of the first Introductory training by Dr. Jolanta Mickute (Lithuania) & Dr. Simon Warren (Ireland), Torhout, Belgium, November 14-16, 2016)

### Background

#### Critical Thinking and the Disciplines

"The focus on critical thinking has led to a laudable effort on the part of faculty members and teaching support professionals to move the focus of courses to the higher levels of Bloom's (1956) classification of learning behaviors. But efforts to help students learn at the levels of analysis, synthesis, and evaluation may be impeded by a mismatch between the kinds of thinking actually required in specific classes and generic formulas for encouraging higher-order thinking. In fact, the notion of a unified "critical thinking" runs counter to an important strand in current thinking about teaching that stresses the disciplinary nature of knowledge"

Joan Middendorf, David Pace

#### Bottleneck and social justice

Decoding the Disciplines is a methodology aimed to support teachers and students of University to tackle obstacles and difficulties in learning process. It is assumed that students come to classroom with different level of secondary school preparation and teachers are generally reinforcing the inequalities in principle deplored as form of injustice in our society. The question of giving tools that students need to succeed in our disciplines requires new strategies intend to make teaching effective in line with the development of the democratic vision of teaching. The methodology represents a dynamic sequence of steps based on the understanding of the content of discipline taught and learned. All disciplines are involved, humanities as well as sciences. Under the Erasmus Plus Programme some European Universities are collecting relevant evidences to understand what to teach about an academic discipline. Monitoring students' learning and motivation means to bring out the bottlenecks, which hinder the achievement of knowledge and slow down the learning process leading to failure. Decoding emerges as challenge and option for policy makers of higher education.



Decoding the Disciplines: A Model for Helping Students Learn Disciplinary Ways of Thinking  
Joan Middendorf, David Pace

### Context - Decoding in teacher education humanities

Students were invited to learn the epistemology of the discipline starting from questions concerning theoretical an experimental knowledge, understanding, strategies, means, perspectives of approaching the scientific universe of education, quite complex in itself. The exploratory questionnaire was followed by a discussion in the classroom in order to define bottlenecks in the learning and teaching process. The definitions implied the awareness of the difficulties and for this dialogue and subsequent questions were very important to form the critical thinking, to allow the teacher to understand the communication of the scientific knowledge, to solve problems and to design procedure according to the seven steps of the methodology. Tasks of the course were re-define and results were appreciable for the success of the students. Benefits were for both teacher and students. Moodle platform was the environment where the interaction of the teaching and learning process was visible. The interaction was also possible via email.



### Bottleneck Area

Often the gaps are frequent between teacher's ability to communicate academic teaching and student's ability to enter in conceptual knowledge of the discipline. It was evident that teachers should have been open to change the way of teaching and students should have been interactive during the process. Educate to critical thinking was an open question. There were required flexibility, self-evaluation, use of other methods of study and willingness to accept the challenge of Decoding methodology.

### STEP 1 Bottleneck Definition

Students have difficulty to identify the nature of Pedagogy in terms of saying what does it mean to give theoretical characteristics of the discipline and to provide children situation and condition to grow independently. (Epistemological bottlenecks).

### STEP 2 Mental Operations

The Inbound Questionnaire K - W was intended to investigate knowledge and learning with: K-questions: what students already know about Pedagogy, and what students would like to know about the discipline. W-questions: what helped students to learn what they know and what might help them to learn more.  
Supporting Resources: Chart Knowledge - Logical model - Criteria to read.



### STEP 4 Opportunities to practice the processes and feedback - Students' comments

Interactions of the students went from passivity to activity and the final feedback reached high level. Answering the Chart Knowledge was a useful strategy to prepare the analysis of the classics. In the description of the knowledge already possessed, the responses of 148 students to 319 censuses show a close link with their background, attributing knowledge to what they learned in secondary school, while in the specification of the knowledge to be acquired as expectation has been seen in the sense of being able to receive the knowledge useful to carry out the teaching profession. Regarding resources, prerequisites for university education, students mostly indicate the study of books, while the expectation of enhancing knowledge to learn prevails in the demand for more material available online in order to examine in detail how traditional theories can find reflection and application in contemporary school practice.  
Supporting Resources: Student critical thinking.

### STEP 3 Modelling and Practicing the mental operations

Students presented the book and their individual or group study  
a) teachers posed questions about the study;  
b) presentation aimed to form to scientific mind and critical thinking requiring faithful description of the contents and to give autonomous comment;  
c) after the presentation of the student/s there was an integration the contents;  
d) finally, the other students, who did not presented, could enter in the discourse by posing other questions or by asking for some explanation.  
e) interaction was: oral; power point; questions; contents from my book and the books of the students.  
Supporting Resources: Comment the classics - Structure of presentation.

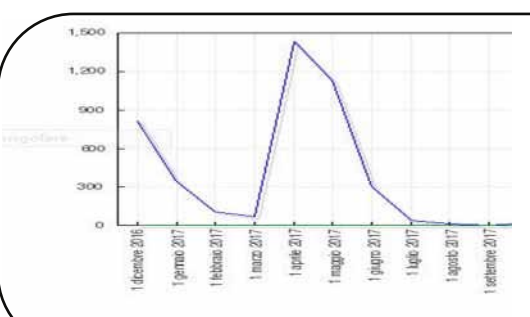
### STEP 5 Motivate students to move through these processes

Outbound Questionnaire L - S. At the end of the course the questions examine learning and knowledge as one unique process. Examples of outbound answers about 1) "L" - What I Learned?:  
- I learned to organize my knowledge, to deepen many topics, to link many different themes in the same subject.  
- During the course of general pedagogy I learned the role of nature in the process of formation. I also learned the role of pedagogy in the transition from science to education sciences. Very important was also the pedagogical innovation that has been through the use of new methodologies. I also learned the good teacher profile and the characters that this has to have to make the school efficient.



### STEP 6 Assessment

Written texts, open questions about concepts and meaning of education learning from classics, proved the involvement of the students and the increasing level of the awareness of the learning process. The students' work was part of the formal curriculum and validated with the assessment. For the analytical and comparative study of the data recorded the videos were very useful and there was time to analyse them with the students who could see the development of their learning process. Process which is initially very poor and finally very rich.



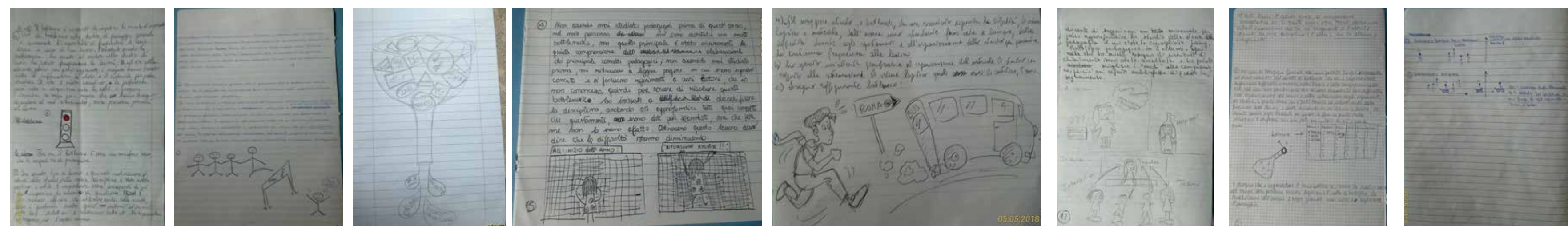
Students' Feedback from 1st December 2016 to 1st September 2017. The highest feedback was during the application of Decoding the Disciplines methodology 1st March - 1st June 2017. The Semester runs from March to May.

The first application of the Decoding the Disciplines methodology allowed to reach import results underlined by the students themselves. The examples are just a minimum selection of the whole sample which is the testimony of the class positive action and interaction.

### STEP 7 Share what has been learned

Students shared the knowledge with other students and colleagues.  
• Decoding the Disciplines methodology was divulgate in seminars, conferences, workshop, articles.  
<http://www.sandrachistolini.it/?p=4245>  
• The processes were shared on youtube: Decoding Bottleneck 06.03.17 <https://youtu.be/0z2QL-3KJgE>  
• During the 2016-2019 academic years, besides the General Pedagogy further applications of Decoding the Disciplines methodology interested the Disciplines: Laboratory of General Pedagogy; Pedagogy of Interculture and Citizenship Education; Mathematics; English. Results were shared in the Scholarly E-Journal.

### From Bottleneck to sharing the process of teaching and learning



### STEPS 1-7 Students' Focus group

#### The explorer Geography, my dear

How to define the bottleneck  
The explorer Geography, my dear

How to face the Bottleneck  
The explorer Geography, my dear

How to help the teacher  
The explorer Geography, my dear

The expert's eye  
The explorer Geography, my dear