PROMOTION OF LEARNING SKILLS IN THE STUDY OF ECONOMICS. PILOT PROJECT IN THE SUBJECT AREA OF THE WORLD ECONOMICS

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Abstract

This communication is part of a larger teaching innovation project financed by the University of Barcelona, whose objective is to develop and evaluate transversal competences of the UB, learning ability and responsibility. The competence is divided into several sub-competencies being the ability to analyze and synthesis the most intensely worked in the first year. The work presented here part from the results obtained in phase 1 and 2 previously implemented in other subjects (Mathematics and History) in the first year of the degree of Business Administration Degree. In these subjects' previous experiences there were deficiencies in the acquisition of learning skills by the students. The work in the subject of Mathematics facilitated that students become aware of the deficit. The work on the subject of History insisted on developing readings schemes and with the practical exercises was sought to go deeply in the development of this competence.

The third phase presented here is developed in the framework of the second year degree, in the World Economy subject. The objective of this phase is the development and evaluation of the same cross competence of the previous phases, from a practice that includes both, quantitative analysis and critical reflection. Specifically the practice focuses on the study of the dynamic relationship between economic growth and the dynamics in the distribution of wealth. The activity design as well as the selection of materials to make it, has been directed to address gaps in the ability to analyze and synthesize detected in the subjects of the first year in the previous phases of the project.

The realization of the practical case is considered adequate methodology to improve the acquisition of competence of the students, then it is also proposed how to evaluate the acquisition of such competence. The practice is evaluated based on a rubric developed in the framework of the project objectives. Thus at the end of phase 3 we can analyze the process that have followed the students, detect where they have had major difficulties and identify those aspects of teaching that can help to improve the acquisition of skills by the students. The interest of this phase resides in the possibility to value whether tracing of learning through competences, organized in a collaborative way, is a good tool to develop the acquisition of these skills and facilitate their evaluation.

Keywords: Innovation, Learning Experiences in Higher Education, Analytical Skills.

1 INTRODUCTION

Learning takes place through the active behaviour of the student: it is what he does that he learns, not what the teacher does (Tyler, 1949). If students are to learn desired outcomes in a reasonably effective manner, then the teacher's fundamental task is to get students to engage in learning activities that are likely to result in their achieving those outcomes. It is helpful to remember that what the student does is actually more important in determining what is learned than what the teacher does (Shuell, 1986).

The way of teaching and learning in the University of Barcelona is changing and one of the most important changes is to work through the Transversal Competences. In this University we have created a team of professors in order to develop a Teaching Innovation Project around a main objective: the evaluation of transversal competences from multidisciplinary teacher teams, the competence that we are evaluating is the “Learning ability and responsibility” of our students.

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1 This project has financial support for the institution that is uncharged of promote the Teaching Innovation in the UB (2012PiD-UB/003).
Our main goal is to do something practical to improve our students’ learning. The professors who are involved in this main project come from three different areas of knowledge: Mathematics, Economic History and World Economics. So this is a collaborative project, and our main goal is to have the ability to work together with the same students during the course 2012 -13 and the first semester 2013-14, with three different tasks, it means three different subjects, but with a common background, the distribution of income, at the end we want to set up the way to evaluate this competences and to have the possibility to compare the achievement for our students of this transversal competence.

The University of Barcelona defined a framework for the Transversal Competences, and has identified 6 transversals skills (University of Barcelona, 2008)

1. Communication ability
2. Team work ability
3. Ethics commitment ability
4. Creative and entrepreneur ability
5. Sustainable ability
6. Learning and responsibility ability.

Between all of them we choose the last one, but after the experience that the professors of Mathematics and History had, they realized that at all those competences are connected.

2 PROMOTION OF LEARNING SKILLS IN THE STUDY OF ECONOMICS

Working through competences or skills means the student must understand the learning process as a integral multidirectional circuit where he or she has to take initiative in order to stimulate critical, ethical and creative skills in order to manage its learning process as an holistic one. In this progress, the teacher appears as a master guiding this process (Alsina, 2010).

The learning and responsibility ability is connected to the teaching, it means that for our students to achieve the skill of learning, the professors we have the responsibility to teach them in a correct way, in order that they achieve the knowledge, the abilities, attitudes, and aptitudes, all of them will be the base for to develop the tasks that the professors give to the students with the main goal of our project, Learning and responsibility skills. So it is important that our students gain the necessary and specific knowledge of each discipline in order to achieve this competence.

The capacity of learning and responsibility, include the analysis and synthesis capacity, at the same time to have global vision of any situation, all this in order to know how to use this knowledge in the real situation and to have the ability to take decisions and to adapt to the new situations.

It seems that it can be difficult to do it, considering the differences between the three subjects involved in the main project, but we realize that it is possible to find a common background, and the most important the methods of evaluating this competence are not so different.

The inclusion of the transversal competence also affects the way to evaluate the tasks of the students. The main objective will be to establish the methodology to evaluate the students work in order to know if they achieve this main competence. This methodology will be made through the rubric system (Carrizosa et al, 2011). In designing appropriate assessment tasks, the following must be taken into account: The criteria for the different grades, assigned to describe how well the assessment tasks have been performed, should be clearly outlined as rubrics that the students fully understand. These rubrics act as signposts to students for preparing for assessment (Biggs et al, 2007).

The objective to do the evaluation trough rubrics is to improve the process of learning, thus it permits to evaluate the process and the outcome.

It is also important to involve the students in this evaluation, the self-assessment system will be the way that the students can be aware of their achievement. So the evaluation is a part of the learning process, this learning process will occur during the four years of the degree, from the first year till the last, in a process that the students can improve their knowledge, abilities, attitudes and aptitudes, it means to develop their potential capacities.
2.1 Precedents: main results of the previous teaching activities

Till now we have the experience of a pilot test in two subjects, Mathematics and Economic History. In Mathematics the task that the students had to work was to know how to do a Lorenz curb, and to measure the degree of inequality of the income distribution. In Economic History the students have work with readings about the topic of income distribution inequalities.

The result for these activities was not too satisfactory, the evaluation of the analysis and interpretation of the mathematical solution, had a very low qualification for the professors, it means that the majority of the students did not achieve the competence of learning, they did not do a correct interpretation of the problem solution. In the case of the Economic History experience, results were similar regarding to the analytical skill of the students.

In these subjects there were deficiencies in the acquisition of this competence by the students. The work in the subject of Mathematics facilitated that students become aware of the deficit. The work on the subject of History insisted on developing readings schemes and with the practical exercises was sought to go deeply in the development of this competence.

The main result of the previous experiences done in the project by the other subjects shows that students know how to repeat in a memorizing way the knowledge that they study, but they don’t know to develop the ability of analyze and synthesis, so they did not reach till now the competence that we are evaluating.

3 PILOT PROJECT IN THE SUBJECT AREA OF THE WORLD ECONOMICS

3.1 Shared methodology

As we have pointed the aim of this third pilot test is to assess the mentioned student's capability, “learning skill and responsibility”, as a continuity of a previous tests (in Mathematics and Economic History), in order to develop a shared methodology of assessment (rubric) but also to confirm/reject previous results obtained by the students.

This is especially important considering that the results of earlier activities (mainly in Mathematics) show that the student develops properly in mechanical/memorisation activities but has serious difficulties to get analytical and interpretative capabilities. So, beyond the justification to assess this skill defined as transversal (interdisciplinary) by the University of Barcelona, the evidence of the pervious results in the sense that there is still room from improvement leads to focus this third activity to deeper in the promotion and assessment of analytical skills.

The methodology designed for the activity in World Economics for second degree students will share main features of that developed in previous tests/activities:

1. **Same topic.** In this third phase we have developed a new activity related to the same topic that the students has been working in Mathematics and Economic History activities, that is, the study of economic inequality. It is worthy to mention that while in the first phase the task was developed from a mathematical/instrumental perspective and in the second one the activity tries to deepen into the analytical/interpretative perspective, in this third stage the aim is to deepen on the analytical work by assessing the mentioned skill by different ways.

2. **Same students** This activity will be developed by the same students tested in previous phases, in order to have comparable data and consequently improved conclusions.

3. **Same assessment tool.** In this activity, it is developed again an assessment rubric in which it is defined the contents of the activity and the evaluations aspects and criteria to give a final score. It is worth to mention that the rubric will be used either to facilitate teacher assessment of the exercise either for allowing a self-assessment of the students.
3.2 Design of the activity (World Economics, 2nd course degree)

As mentioned earlier, this activity is focused on the study of inequality among countries through quantitative analysis and critical reflection. It includes the following items:

a) General target: Study of the dynamic relationship between economic growth and distribution of wealth (inequality)

b) Skills to be developed:
   - SPECIFIC SKILLS:
     - Identification and interpretation of variables and indicators
     - Management of economic databases
   - TRANSVERSAL SKILLS
     - Analytical and interpretative capabilities
     - Creative and entrepreneurship skills
     - Responsibility skills
     - Team work attitudes (not include in assessment process)

c) Methodology and progress work to be made by the student

I. Identification of indicators and countries
   a. Identification, election and justification of economic indicators needed to perform an international comparative analysis in terms of inequality and economic growth.
   b. Identification, election and justification of two countries –one “developed” country and other “developing” country-.

II. Getting macroeconomic data
   a. Elaboration of macroeconomic table (using international databases) composed by the evolution of both indicators selected to measure the dynamics of inequality and those of economic growth (1980-2010, 5 years-period)

III. Interpretation and analysis of data
   a. Interpretation of the data obtained by assessing the relationship between economic growth and inequality in both countries.
   b. The students must compare their own conclusions with the main conclusions of Milanovic2 work

IV. Enhancing analysis (broadening knowledge)
   a. Improve comments and conclusions in the case study being developed by new information sources (maximum two sources -articles, webs-).

Additional comments:

V. This activity must be delivered on time and a proper presentation is required. This activity is conceived as a teamwork (max. two students)

d) Assessing skills: rubric

In order to assess the acquisition of the competence by the students, it has been developed an assessment rubric. It includes five acquisition levels, a detailed explanation of each of the corresponding activities, and four descriptors to range the scores. As some authors have pointed out the use of a rubric allows the student to have a feed-back on his/her own knowledge process. In this sense, the design of such an assessment tool is devoted to promote either an appropriate and easy way to correct the exercise for the teacher either a clear instrument for the student to know how he or she has been corrected and which are his or her strengths and weaknesses.

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2 It is worthy to mention that Milanovic’s text is what has been worked in Economics History activity (“2nd Phase project”)
### Table 1. Assessment of contents (c) and skills (s)

<table>
<thead>
<tr>
<th>N.</th>
<th>ACQUISITION LEVEL</th>
<th>ACTIVITIES</th>
<th>DESCRIPTORS (SCORE)</th>
<th>C</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Identification of variables and countries. (20%)</td>
<td>- Identification, election and justification of economic indicators needed to perform international comparative analysis in terms of inequality and economic growth. - Identification, election and justification of two countries – one “developed” and other “developing”.</td>
<td>NO identification neither variables nor countries</td>
<td>Identification of countries but not variables</td>
<td>Identification of variables but not countries</td>
</tr>
<tr>
<td>II.</td>
<td>Getting macroeconomic data. (20%)</td>
<td>Elaboration of macroeconomic table (using international databases) composed by the evolution of both indicators selected to measure the dynamics of inequality and economic growth.</td>
<td>Data obtained is incorrect (because of wrong election of indicators)</td>
<td>Most of the data obtained is incorrect but indicators chosen are correct</td>
<td>Most of the data is correct but not complete data is available</td>
</tr>
<tr>
<td>III.</td>
<td>Interpretation and analysis of data (30%)</td>
<td>- Interpretation of the data obtained by assessing the relationship between economic growth and inequality in both countries. - Compare your conclusions with the main conclusions of Milanovic text (see article)</td>
<td>Incorrect interpretation of the data (he/she doesn’t understand what the data means)</td>
<td>Misunderstanding of some concepts which makes the analysis partially incorrect</td>
<td>Correct interpretation and analysis but incomplete</td>
</tr>
<tr>
<td>IV</td>
<td>Enhancing analysis (enrichment) (20%)</td>
<td>Improving comments and conclusions of the case study by new information sources</td>
<td>Not contribution with any new source of information</td>
<td>In spite of contribution of new sources it doesn’t have any relationship with the topic.</td>
<td>Contribution of new sources of information (related with the topic) but there is no/few analysis or comments.</td>
</tr>
<tr>
<td>V.</td>
<td>Deadline submission and presentation requirement (10%)</td>
<td>- Delivering on time - Proper presentation</td>
<td>Not fulfilment neither deadline nor proper presentation.</td>
<td>Not fulfilment of deadline (but presentation is good)</td>
<td>Deadline accomplished but not proper presentation</td>
</tr>
</tbody>
</table>

### 3.3 Expected results on the learning-teaching progress

This specific activity should be considered as the final phase of an interdisciplinary project which embraces different areas, one instrumental –Maths- and the other applied –History and World Economics-, the benefits of this project must be considered from this major perspective. Anyway here we refer mainly to the expected benefits from this specific activity, but considering it will be the result of the previous activities developed.

In spite of the learning-teaching process can be considered as mutual interdependent, we can differentiate both dimensions in order to specify the expected results from this experience. From the learning point of view, beyond the specific contents worked by the student in this activity, we focus our expectations on and improvement of the transversal skill to be attained. Specifically, we are interested in the improvement of the competence of our project, that is, the “learning skill and responsibility” focused on analytical capabilities by interpreting economic data which conduce to elaborate some interpretative conclusions. In this third phase, this skill attainment is reinforced by the ability of the student to compare this own results and reflections with other analysis (coming from other sources and materials). It is also important to point that in this activity we try to developed and added skill not often promoted by professors which is the entrepreneurship capability of the student to search beyond professor guidelines. This in fact open the door to a major question in our considerations of the teaching-learning- process related to a greater participation of student in his/her own process of
learning, considering him/herself as an active actor. In fact, we are giving to the students the necessary tools to do all this work, because the main goal is that the students could make the knowledge their own.

Form the teaching perspective, the main expected results are related basically to the improvement of the assessment and evaluation process, by a deeper work and effort related to the systematisation of tasks and the transparency in the evaluation process. Another expected benefit is derived from shared work which different professors/areas involved. In this third phase, thanks to the information from previous phases and proper coordination of professors, we have been able to redefine our activities in order to promote those skills in which students show bad results. So the self-assessment process of the teaching task is a valuable benefit.

Lastly, of course, it is expected that the attainment level of the student in the analytical skills has improved in this third phase, considering, as mentioned, this would be the result of learning and teaching effort.

4 CONCLUSIONS

The (future) implementation of a pilot test in the subject of World Economics as the third phase of the promotion of learning skills project, will firstly allow us to confirm or reject the result of previous tests, that is, the insufficient ability in the interpretation of knowledge and analytical skills. In this sense the existing gap in the ability to analyse and synthesise in relation to mechanical/memorizing activities, is the point of departure to develop and specific activity (in this third phase) focused on the need to develop this analytical capability.

Secondly, the assessment process of this specific transversal skill introduces us to develop and elaborate an evaluative methodology shared by different teaching areas (subjects) through the rubric. As mentioned this concrete methodology not only allow us to objectify assessment process but also it facilitates students’ work thanks to better systematization of tasks.

Moreover, considering this work is a part of a collaborative project we have found other outputs coming from this interdisciplinary experience which go beyond the assessment of the transversal competence. Effectively, a part from the mentioned aim to improve the level of attainment of the analytical skill of the student, we have discover other by-product outputs. By sharing class experiences we have been able to discuss about specific class activities or how to developed new methodologies. Also, the case of overlapping contents in different subjects has been evident which leads us to take it into account.

So, as mentioned, the improvement of the learning-teaching process is probably another of the most valuable result from this specific project focused on the assessment of the analytical skill, because it questions us about so many items in our teaching practice, not only those based on contents and methodologies but also those related to attitudes.

REFERENCES