

EVALUATION BY RUBRIC OF SOLIDARITY IN ACQUISITION SKILLS COLLEGE

Francisco Manuel Morales Rodríguez

University of Malaga, Spain

E-mail: framorrod@uma.es

Abstract

The European Higher Education Area involves major changes in the teaching-learning process for the acquisition of transversal skills, such as social and citizens. It establishes a need for active methods, learning and so to develop in students the ability to make decisions and learn independently, reflective and critical promoting these skills. Considering the importance of a program, training in values and ethics of solidarity that joins the university curriculum (educational innovation program, PIE10-127), we performed a comparative study on ethical issues in college students before and after of their application the program and an evaluation of effectiveness of different active methodologies to promote solidarity skills acquisition, and its impact on performance. Participants in this study were 4103 university students, aged 18 and 57, of the Faculty of Psychology and Educational Sciences of the University of Málaga (2010-2012). The results show an increase in the acquisition of skills solidarity, following the implementation of the program and that the methodologies employed active, positive impact on academic performance. The relevant conclusion obtained, points to the need to reinforce and develop these values solidarity actions in college.

Key words: *academic performance, active methods, values, solidarity.*

Introduction

Society increasingly places demands on professionals to know how to manage complex situations which consider the human and social aspects involved in different situations. The rapid development of knowledge also requires professionals to become “lifelong learners”, that is, to be able to update their knowledge and competences while constantly improving the quality of their professional practice.

The European Space for Higher Education has recently stressed its interest in training future professionals as social change agents, not only in relation to creating and managing new knowledge but also promoting a higher social cohesion among citizens. The decision making and ethical criteria that lead the application of such knowledge depend on the ethical training of the people responsible for such decisions (García Garrido, 2008), rather than exclusively on their professional or scientific training.

It is also the university’s responsibility (and not only in compulsory education levels) to educate students to exercise their civic responsibility and to be committed to the community based on their university knowledge. In order to face the challenges posed by a globalized world, Legendre (2007), Martínez and Esteban (2005) and Roegiers (2006) stress the urgent need for higher education to prepare competent people who know their field of expertise, as well as people who have solidarity competences, able to analyse the current challenges and who are ready to commit themselves to helping others. The above authors also state that only competence training (when it is well-delivered) can really equip students to become citizens capable of acting in the direction of their own values.

Delors (1997) states that education is one of the keys to the 21st century and must consist of a constant re-educating of the person in terms of their knowledge, skills and power of judge-

ment. The concept of “Education Society” is here evoked; where the individual’s personal and social life becomes the aim of learning. This is an overall experience that lasts for a lifetime, at both a practical and knowledge level. In sum, we must all “learn to learn.” Delors also clarifies that the Knowledge Society makes professionals depend on one another. As suggested by other authors and researchers (Carlo, Roesch & Koller, 1999, Wilson et al., 1998; Savater, 1996) current societies pose a set of requirements related to the education system values education students.

In line with this, the present program suggests that the university is one of the main dynamizing agents in the development of solidarity and volunteering activities. The program has been very favourably assessed, both externally and internally, and from both qualitative and quantitative points of view.

The present study is framed by the innovative educational program “Cross-curricular Education for Solidarity in the Training of Psychologists and Educators” (PIE10-127, Call for Innovative Educational Program, 2010-2012). The general aim of this program is to promote the acquisition of solidarity competences, encourage volunteering work with disabled people and raise awareness in the university context. Participants in this project were a multidisciplinary group of 24 professors from 13 different disciplines, who suggested a number of cross-curricular educational activities aimed to promote solidarity to their students. Activities were adapted for each educational programme and included the implementation and adaptation of advanced learning methods to encourage autonomous learning, active participation and the use of ICT. A total of 4103 students from 34 subjects have benefited from this program at the UMA (University of Malaga).

The activities developed were as follows: a) Discussion of the importance of solidarity action in the world currently, in particular in Spanish and Andalusian schools, and spreading this discussion in ESO (Compulsory Secondary Education); b) Completion of a questionnaire on moral values and attitudes and social volunteering activities; and analysing its results by means of discussion groups to reflect on the causes and consequences of the lack of solidarity; c) Carrying out a survey and a self-report for students to assess the impact and satisfaction of activities, together with the difficulty and average time spent on each activity; d) Students design a solidarity action and, write a report, which is to be uploaded the following academic year; e) Arranging forums and wikis on different dates for each class group; f) Volunteering with disabled students in the UMA as well as with class groups without disabled students.

Next, the objectives of the research (PIE10-127) where this study is framed are set out below:

- To promote solidarity and volunteering within the university context.
- To promote cross-curricular and the acquisition of solidarity competences by means of the joint participation and collaboration between students and university professors from different disciplines and teaching contexts.
- To contribute to a comprehensive education for university students where solidarity plays a crucial role.
- To provide students with theoretical and practical knowledge about the lack of solidarity and the value of solidarity, by carrying out practical and interesting activities.
- To present daily solidarity as being accessible to all, and not as a utopia.
- To encourage debate about the lack of solidarity in daily life.
- To promote practical activities to put into practice what students learn about daily solidarity activities.
- To introduce practical solidarity activities as a daily part of university life.
- To encourage students to persuade other students to carry out solidarity activities.

This is important in order to be able to plan an educational programme which takes into account criteria of an ethical nature as part of these cross-curricular competences that must be promoted, if the aim is to create socially responsible European citizens. So in our context is a

priority a more accurate assessment of attitudes and interest in moral issues for the planning of educational practice criteria considering ethical and moral as part of these generic skills to be encourage European citizens. It is necessary to assess the degree to which these skills are promoted transversales. To do this, in the present study was designed a rubric that allows integrated different assessment methodologies used to develop active generic skills such as those involving ethical values and solidarity. According to other authors, it is considered that this rubric is a tool that, among other aspects, allows tutoring and evaluate the work of students (Maroto, 2010; Torres Gordillo & Perera, 2010). They can be used in any area of knowledge, though it takes time in preparation, allows students to know exactly what the teacher is going to require (Peirce, 2006). It presents different phases (Torres Gordillo & Perera, 2010): a) identification of those competencies that students are expected to work, b) On these elements are determined evaluation criteria that will connect with the skills to be acquired by students for activities proposals, c) take a nominal scale, which is allotted different values, which are used to classify and measure criteria.

The objectives of the present study are as follows: (1) To present the structure of the innovative educational program “Cross-curricular Education for Solidarity in the Training of Psychologists and Educators” (PIE10-127); (2) To conduct an analysis of moral values in a sample of university undergraduate and postgraduate students before and after of their application the program; (3) To assess the impact and satisfaction reported by these students in relation to a number of educational activities for solidarity, framed by the present program; and (4) To assess the effectiveness of different active methodologies to promote solidarity skills acquisition, and its impact on performance.

Problem of Research

The European Higher Education Area involves major changes in the teaching-learning process for the acquisition of transversal skills, such as social and citizens. It establishes a need for active methods, learning and so to develop in students the ability to make decisions and learn independently, reflective and critical promoting these skills. Considering the importance of a program, training in values and ethics of solidarity that joins the university curriculum (educational innovation program, PIE10-127), we performed a comparative study on ethical issues in college students before and after of their application the program and an evaluation of effectiveness of different active methodologies to promote solidarity skills acquisition, and its impact on performance. Participants in this study were 4103 university students, aged 18 and 57, of the Faculty of Psychology and Educational Sciences of the University of Málaga.

As provides in the strategic plans of the University of Malaga in new degree programs and graduate of the University of the XXI century is especially relevant a more accurate assessment of attitudes and interest in moral issues and that one of the transferable skills to encourage students are social skills and citizens. This will enable better design of training activities in educational settings to develop these skills and social responsibilities in the university.

Methodology of Research

General Background of Research

Both the present research and the University of Malaga’s strategic plans for the current courses and degrees stress the relevance of promoting the students’ acquisition of solidarity competences as well as the need to carry out a more accurate assessment of attitudes and interests towards moral issues. This is because one of the main cross-curricular competencies to be promoted among students is social and citizenship competences. This would allow for a better design of teaching activities in the current educational programmes, in order to develop the

aforementioned competencies and assume the university's social responsibilities. Therefore, an assessment of the impact and satisfaction reported by students in relation to educational activities which promote solidarity is crucial here, together with a more accurate assessment of students' attitudes and interests in relation to moral issues.

Sample of Research

The participants were a sample of 4103 university students aged 18 to 57 years old, 36.7% men and 63.2% women, attending the Faculty of Psychology and Education at the University of Malaga (Spain). The questionnaire was completed collectively as a whole class. A non-probability-based incidental sample was used. Although there are data from a sample of over 4.103 college students from different courses and qualifications, the evaluation priority interest lies in this sample of students given the recent implantation the new degree programs and graduate at the University of Málaga. In that sense, in our context, from the University of Málaga is a priority this assessment to plan training activities from the beginning in this program to enable the promotion of ethical responsibilities related to the exercise of a committed and responsible European citizenship socially.

Instrument and Procedures

Instrument

Questionnaire on Moral Values and Attitudes (VATM in Spanish) (Trianes, 2002). It consists of 11 closed items with a Likert-type scale for responses, where students are asked to decide to which degree they agree with a number of statements. Additionally, there are two open questions (12 and 13) aimed to find out students' potential involvement in a non-governmental organization (NGO) or a solidarity activity (i.e. an activity without a financial reward), as well as their reasons for doing so. The reliability and validity analysis of this instrument presented satisfactory results (Morales and Trianes, 2011). A self-satisfaction scale was also used to ask participating students for their degree of satisfaction in relation to the solidarity educational activities which they undertook.

Questionnaire of the social environment in center (CECSCU; Trianes, White, de la Morena, Infante & Ray, 2006). The CECSCU assesses the climate on the center and on the faculty by 14 items. The concerns center on the extent to which the learning environment stimulates effort and emphasizes cooperation. The teachers evaluated on the quality of interactions between students / teachers, the perception of students and teachers of personal wellness and positive feelings to feel accepted and be valuable to others in daily life. This is a questionnaire that focuses on interpersonal relationships between students and faculty. It consists of two factors: a) Climate offset to center, which consists of eight items reflecting the social climate of the university evaluating students' perceptions of helping behaviors, respect, safety and comfort in the center. An item example is "When there is an emergency, there is someone to help me" or "My university is a very safe place" and b) Climate concerning teachers, containing six items referring to the student-teacher relationship. Represents perceptions of satisfaction in the relationship with teachers, analyzing their performance according to values of justice and respect (eg "The teachers of this school are nice with students" or "When students break rules, are treated fairly"). The reliability and validity analysis of this instrument presented satisfactory results The reliability of the model according to Cronbach's alpha is .77 for Climate factor concerning the center and .72 for Climate factor relating to teachers. With an interval between test and retest of 9 months, the correlation obtained was 0.61.

Test Exchange (Casares, 1995). In this instrument, widely applied to evaluate college students values, lies a comprehensive anthropological model features ten categories of values: physical, intellectual, emotional, aesthetic, individual, environmental, instrumental, religious,

social and moral. In this study the analysis has focused on the social and moral values. The formal structure of the test for each item includes five possible answers, each with the appropriate numeric code, which is used in the correction, allowing to obtain scores for each item and for each category: Very nice (MA = 2), Pleasant (A = 1), Indifferent (I = 0), Nasty (D = -1) and unpleasant (MD = -2). Each category consists of 25 items, so that the highest possible score of 50 and the pleasure is greater displeasure score -50. Scores near 0 indicate indifference or extreme scores caused by dispersion of opposite sign, i.e. a high deviation. The reliability of the model according to Cronbach's alpha is 0.97. It is a tool that can serve as a powerful tool to help us manage more effectively and the educational sense, to see how it is beginning to take shape with these data can be used as what values mean and which ones could be raised as targets values.

Empathy index scale (Mehrabian & Epstein, 1972, adapted to Bryant). This scale consists of 22 items by which we obtain a general measure of the degree of empathy experienced by college student raised in different situations (e.g., "I am concerned to see a partner who cannot find anyone to perform work or activities, "" I worry when I see a fellow sufferer by any incident ""). This scale adapted by Bryant (1982) was translated by the research group by two expert speakers. Responses range from 1 = never to 4 = always. In these data the scale showed a reliability coefficient of .82. The internal consistency of the scale is 0.67 and statistically significant differences in empathy by gender, with women who score higher compared to men.

Questionnaire behavior prosocial (CCP; Roche, 1995). This instrument consists of 20 items with Likert response format where 1 = always, 2 = often, 3 = Sometimes, 4 = never. Examples of items in this questionnaire may be noted: 1. If ever there is a conflict between my colleagues / as a group or class, I rise to help and so they can talk quietly; 2. When a colleague / a need some material that has not and I do, I offer to share it or leave it, etc.. The internal consistency of the scale in this sample is 0.91. With an interval between test and retest of three months, the correlation obtained was 0.71.

"Using an inclusive rubric by teachers" to evaluate the application of active learning methodologies based on problems, concept maps on cutting educational texts solidarity and development of oral statements made concerning acts of solidarity designed by students (communication skills publicly displayed by the students). To evaluate the quality of oral work (quality control of the presentations), the concept mapping and problem-based learning in these subject teachers used a rubric inclusive as five steps, as follows: 1 = Very poor and 5 = Very good (1 = very poor, 2 = Poor, 3 = Fair, 4 = good and 5 = very good). The evaluation process followed has been continuous and formative. At first it was conducted an evaluation of the course halfway through the section, and a final evaluation at the end of it by heading and the final exam. The scale of achievement measure was 1 to 10 (average performance in that subject officially reflected in the minutes). The performance has been accurately assessed using a rubric considering the quantity and quality of the comments made in the practices text / points for discussion on ethics and education for solidarity, the importance of education for solidarity in the world today, reflections and comments contained text on solidarity, the portfolio, dossier final practice, practice final exam, for example, education and cross-cutting themes, groups at risk of social exclusion, orientation programs and labor insertion of sociocultural disadvantaged groups, etc. depending on each subject.

Procedure

Participants completed the questionnaire voluntarily and data was introduced into the SPSS for analysis. Questionnaire responses were carefully checked and recorded before entering them into the SPSS. With regards to the administration of the different tests, students were informed of the voluntary nature of their participation and that confidentiality of data was guaranteed at all times. Students had unlimited time to complete the questionnaires and were allowed to ask for clarification with regards to their answers or how to answer the questions.

This study has been approved by the corresponding Ethics Committee of the institution conducting the research. The administration of the tests was carried out by professors/researchers who were trained to explain the objectives to teachers as well as to give the appropriate instructions to students. They explained the objectives to students and gave them instructions to help with completing the questionnaires. Students completed them as a whole class in the different classrooms.

Data Analysis

The study has conducted descriptive analyses to reflect percentages, means and standard deviations. Additionally, the Student's t-test was applied on independent samples to find out if there were statistically significant differences based on gender in the assessment of attitudes and interests in moral issues. The data coding and analysis was carried out by means of the Statistical Package for the Social Sciences SPSS 17.0.

For the evaluation of the project was held monthly meetings of team members. To assess the impact of these active methodologies (problem solving, mapping or conceptual frames and cutting oral solidarity) statistical analyzes were performed using SPSS 17.0. Descriptive analyzes were performed and mean differences for analyzing differences depending on the use or not of these active methodologies, analysis of correlations between scores on problem solving, conceptual maps or frames and communication skills gained through rubric designed and final grade in the relevant subject and regression analysis to assess the predictive ability of active methodologies implemented.

Results of Research

Regarding the results, you can stand, as shown in Table 1, the existence of significant differences in the social environment of the center, moral values and attitudes, other ethical values, empathy and prosocial behavior that increased after the implementation of this transversal program of educational activities for solidarity and work for others.

Table 1. Comparison of mean pre-post Tests in the group of college students participating in the program.

| | Pre M (SD) | Post M (SD) | T |
|----------------------------|---------------|----------------|----------|
| Social climate center | 2.30 (0.75) | 4.61 (0.50) | -8.78** |
| Moral values and attitudes | 1.69 (0.63) | 3.84 (0.37) | -11.27** |
| Values | 1.84 (0.98) | 3.69 (1.03) | -5.48** |
| Empathy | 0.07 (0.26) | 0.92 (0.27) | -8.12** |
| Prosocial behavior | 1.38 (0.65) | 3.76 (0.43) | -13.21** |

** $p < 0.01$.

Table 2 results regarding the students' degree of satisfaction in relation to the educational activities for solidarity show that such activities were very successful and may even have had an emotional impact on students (according to students' opinions), many of whom showed that they had deeply reflected on moral issues.

Table 2. Degree of students' satisfaction in relation to the educational solidarity activities carried out.

| | Mean Score | SD |
|--|------------|------|
| 1. Participating in the forum "Education and Solidarity" | 3.49 | 0.55 |
| 2. Film viewing "It all starts today" | 3.81 | 0.44 |
| 3. Designing solidarity activities | 3.86 | 0.45 |
| 4. Debating on the importance of solidarity action nowadays | 3.63 | 0.64 |
| 5. Filling in questionnaires via the e-campus and analysing and discussing results | 3.72 | 0.59 |
| 6. Making a wiki on solidarity news | 3.70 | 0.89 |

Regarding the use of active learning methodologies to promote the acquisition of skills and training supportive ethical and professional values, the following are the most significant results have been obtained. On one hand, there are linear relationships between academic performance (final classification) and the results of applying different strategies evaluated by the rubrics. We used the procedure of bivariate correlations (Pearson), found significant relationships in all cases (Table 3) between the use of these active methodologies for learning content and professional ethics education for solidarity with the academic performance of both qualitative point of view in the final dossier practices (assessment of the quantity and quality of comments and reflections) and the score on the final exam in parts of the agenda that have been worked by using this type of methodology.

Table 3. Pearson correlation coefficients between active methodologies employed and academic performance (content solidarity).

| Active learning methodology | |
|-------------------------------|--------|
| Troubleshooting | 0.93** |
| Concept maps | 0.82** |
| Basic communication skills | 0.89** |
| Specific communication skills | 0.92** |

** $p < 0.01$

It is used the Student t test on the subject to see if there were significant differences in the final grade among students who had used these methodologies to promote active learning skills acquisition solidarity (eg. Those who took the activity related to the theme contents instructional design and practice of programming design training content as acts of solidarity, etc.) and those who had not (control group: Participants were a sample of 90 university students). We found that students using these active learning methodologies have obtained better grades than those who did not use (Table 4). The differences are statistically significant (Control Group was used) in performance; getting higher yield students who used problem-based learning (content ethical dilemmas and solidarity), mapping or conceptual frames and development of oral presentations on solidarities design compared to that used these methodologies suggested topics. Students who used these innovative methodologies in the context of this subject, have obtained a higher overall return, evaluated on a scale of 0-10, compared to that developed these methodologies.

Table 4. The mean difference in academic performance based on each learning strategy used in the subjects.

| Methodology | With methodology | Without methodology | T |
|-------------------------------|------------------|---------------------|---------|
| | M (SD) | M (SD) | |
| Problem-based study | 8.51 (0.84) | 5.79 (1.04) | 16.48** |
| Concept maps | 8.33 (1.23) | 5.95 (1.17) | 11.34** |
| Basic communication skills | 7.41 (0.65) | 6.08 (1.24) | 7.56** |
| Specific communication skills | 7.64 (0.73) | 6.03 (1.20) | 7.56** |

** $p < 0.01$.

Finally, it has been multiple linear regression analysis to know what percentage of the variance of the final grades of students in the course are being explained by the use of these active learning methods used in this course. To make the decision to choose which variables to include in the regression equation, which would allow to get a better fit we performed a stepwise regression analysis (stepwise), using the method of successive steps. The linear regression analysis shows that the three active learning methods used (troubleshooting, basic communication skills and specific communication skills) to promote the acquisition of transversal skills were predictive of the final grade. The model explained 87% of the final grade of the students (Table 5).

Table 5. Multiple linear regression analysis (stepwise method) considering these methods as predictors of the final.

| Model | R ² Adjusted | F | p |
|---|-------------------------|-------|------|
| Problems solution | 0.80 | 541.9 | 0.00 |
| Communication skills problems solutions | 0.84 | 374.5 | 0.00 |
| Solution problems concept maps | 0.87 | 306.9 | 0.00 |

Discussion

The convergence process establishes the need for active strategies and learning methodologies in order to develop in students the ability of autonomous learning, cooperative and continuous part of the skills needed in the knowledge society, information and new technologies. In this sense, according to the data, these strategies and learning skills to help foster the acquisition of general and specific skills training related to ethical values that are relevant in the professional world.

Values and attitudes are learned predispositions to act in a certain way to people and things and are one of the main determinants of the behavior of individuals. In this paper learning is a priority of the University XXI century as a place not only for acquiring knowledge and intellectual skills but as a place where you buy and modify values and attitudes through their experiences, positive or negative, in interaction with their teachers and peers. The assessment of values of solidarity and social justice is particularly relevant due to the formulation of new

powers on the European model of education for college students in the current grade securities which is useful for assessing the acquisition of social and civic competences in university (Benitez, 2009; Escamez, Martinez & Ortega, 2005; García Garrido, 2008; López-Barajas & Ruiz, 2000; Rios & Ruiz, 2011; Touriñán, 2008; Trianes & Fernández, 2001).

Considering the importance of a program, training in values and ethics of solidarity that joins the university curriculum (educational innovation program, PIE10-127), we performed a comparative study on ethical issues in college students before and after of their application the program and an evaluation of effectiveness of different active methodologies to promote solidarity skills acquisition, and its impact on performance. One objective of this study has been to contribute with an analysis on moral values and attitudes on a postgraduate student sample, as well as to carry out an assessment of the impact and satisfaction that these educational activities for solidarity have had on students. Activities are framed by the innovative educational program "Cross-curricular Education for Solidarity." As a background to the study, the structure and main features of this program are presented as follows.

With respect to another objective, evaluating ethical values before and after the implementation of the program, the results indicate statistically significant differences before and after the implementation of the program of ethical and solidarity between the total score values of social justice and solidarity, facility social climate, the total test score Securities and empathy and prosociality factors. These results are consistent with other research that found an association between training in ethics and solidarity and a higher score on values of justice and solidarity, improved social climate, empathy, and self prosociality (Roche, 1995; Touriñán, 2008). This research found that one of the most effective ways to inhibit violent and aggressive behavior is to equip individuals with values and codes of ethical values and positive behaviors such as cooperation and solidarity that are functional in achieving personal goals and social. Also been shown (Casares, 2008; Gervilla, 2000; Lara, 2001; Madriaza, 2008, Roche, 1995) that learners in this type of values and attitudes in favor of solidarity and social justice and for the resolution of aggressiveness and overcoming conflicts, contributing to improving the living and classroom climate, our institutions and schools. This result is also consistent with the findings in our study.

The New Model of Higher Education involves new methodologies, requirements and challenges, where attitudinal competences are one of the very basic and main competences to be promoted. Nowadays, volunteering, solidarity and interests in analysing social values in young people are aspects immersed in a context of accelerated development within the academic field (Martinez Buxarrais & Esteban, 2002; Martinez & Esteban, 2005; Moral, 2011; Pereira, 2003; Vilanou & Colledemont, 2000); and university students can actually become one of the most important groups to develop educational activities for solidarity. In relation to this, the results of this study also show that this is a feasible project. In fact, a number of daily solidarity actions have already been carried out and have been applied in a truly practical way, benefiting the university community and its surroundings. What is more, students have already suggested and designed (with the supervision of their teachers) a substantial amount of solidarity acts; such as a successful Solidarity Concert, a photography exhibition on solidarity and a film made by a group of postgraduate students. The film relied on the collaboration of the University's Centre for Initiatives at the University of Malaga and the Department of Education, the Department of Education, Innovation and Science of the Regional Government of Andalusia. It is gratifying to observe how students have moved from a purely theoretical context, where a number of educational activities for solidarity were carried out in class, to the realm of truly practical applications within society.

In the university context, the teaching-learning process focuses on the acquisition and / or development of competencies, understood as a complex expertise that requires a set of knowledge, skills, values and attitudes that ensure the efficiency of a responsible professional and excellent (Lasnier, 2000). Hence, the roles of teachers are not just about being a good investigator but must also be an expert in the design, development, analysis and evaluation of

educational practice. In that sense, these strategies and active learning methodologies developed in this experience contribute to enhance procedures and transversal skills such as social competence, communication skills and organization, raising the possibility of forming teachers and students and encouraging independent learning and collaborative. Also allow to provide more effective feedback and continuous exchange of information.

It may be noted that these innovative strategies used in this program to promote the acquisition of skills and ethical solidarity and central share basic features such as the increased activation and involvement of students in learning, a greater degree of autonomy and responsibility in the construction of their learning, learning more functionality from posing problems, real or suspected cases in professional, ethical values that enhance solidarity and involving university and the need for teamwork and communication and collaboration among its members. However, it can be concluded that, in this experiment, the “problem based learning” has become a very useful tool to have a positive impact on academic performance of students in these matters (which have worked in solidarity cutting content) and achieve a high level of motivation and student participation. This result is consistent with other studies that find a differential efficiency in the use of some strategies over others in the overall performance of students and performance prediction (Dochy, Segers, Van den Bossche & Gijbels, 2003; Fidalgo, Arias-Gundín & Garcia, 2008). It is considered that, as presented by these authors, the most effective and positive impact of PBL on student performance may be related to the fact that this method demands more involvement and autonomy of the students, encourages critical thinking, skills troubleshooting, creative discussions, self-managed learning, identify their own learning needs and systematization and integration of the wide variety of knowledge and the related ethical values and professional ethics.

In the process of European convergence is necessary, as proposed in this study, the design and evaluation of strategies to develop transferable skills in students and to assess the effectiveness and impact of different strategies on the academic performance of students, especially not only to evaluate the acquisition of knowledge but also of procedures, values and attitudes. However, as a suggestion for improvement arises the need for future studies with more specific performance indicators in line with the three basic dimensions underlying the competence approach, related not only with knowledge but also with the expertise and knowledge-be.

If we make a SWOT analysis (Strengths, Weaknesses, Threats, Strengths and Opportunities) of this program, one of the strengths and opportunities is related to the high degree of student satisfaction (as reflected in the qualitative ratings and reviews have been obtained) as the true stars of the teaching / learning according to the European Higher Education Area. The students perceived the usefulness professional and practical applications of these activities. Besides being necessary for their formation, the results show that the use of problem-based learning, mapping or conceptual frames and development of cutting oral solidarity positive impact on students' academic performance. Most University Students Participating in the study were satisfied with the educational also solidarity activities carried out.

Conclusions

This study argues that we must work values such as honesty, civility and non-violence and solidarity at the college level. Citizenship education is not only typical of compulsory education levels, prior to the University. Citizenship is learned either per se, without an education in values or pedagogical unattended in that sense. Ethics training and a full life from a personal standpoint and community capacity to cope with reasoned solutions, complex personal and social situations, require an adequate educational practice, planned, systematic and other elements of character training. In a time when the University has to take on more social responsibility than ever, it is necessary to continue providing continuity and extension in time such programs also feasible in terms of cost / benefit, effectiveness and efficiency, it is necessary to foster transversal competences such as digital competence and social and citizens. For this type of

learning ethical approach university education student-centered learning and competency with the use of these active methodologies indicated seems very successful. Also, the data obtained in this study are relevant in order to improve the quality of teaching in these subjects in the European Higher Education Area. In this experiment the teacher is no longer a mere transmitter of scientific knowledge and the students begin to acquire a more active role.

With regards to the limitations of the present study, the use of more robust multivariate analyses is recommended for future studies, to reach more accurate and reliable conclusions. It would also be advisable for future studies to analyse the associations between the assessed values and attitudes on the one hand, and other variables such as self-concept and psychological welfare on the other.

In despite of such limitations, studies such as the present one are relevant for an early detection and assessment of interests and attitudes towards moral issues in view of a comprehensive education aimed to improve social coexistence. Such assessment will also allow for the design of an educational programme and activities that will contribute to the acquisition of cross-curricular competences, such as social and citizenship competences. In the current European convergence process, which emphasizes the promotion of social and civic skills in college and in a society where there are many aggressive and competitive models, both researchers and education leaders, politicians and social are discovering the importance of evaluating these variables related to solidarity and social justice by providing a potential optimization face a more harmonious coexistence, functional and have adjusted and preventive mental health value to the particular person, under strong pressure from society not always easy, spontaneous, healthy behaviors.

Acknowledgements

This study was funded by the Dirección General de Investigación (General Research Design). Spanish Ministry of Education and Science. (Ref. SEJ2007-61447) (2007-2010).

References

- Benítez, A. (2009). La educación en valores en el ámbito de la educación superior. [Values education in the Area of Higher Education]. *Revista electronica iberoamericana sobre calidad, eficacia y cambio en educación*, 7, 116-129.
- Bryant, B. K. (1982). An index of empathy for children and adolescents. *Child Development*, 53, 413-425. DOI: 10.1111%2Fj.1467-8624.1982.tb01331.x
- Carlo, G., Roesch, S. C., & Koller, S. H. (1999). Similarities and differences in prosocial moral reasoning between Brazilian and Anglo-American College students. *Interamerican Journal of Psychology*, 33, 151-172.
- Casares, P. M. (1995). Test de valores. Un instrumento para la evaluación. [Test values. A tool for the evaluation]. *Revista Española de Pedagogía*, 202, 513-537.
- Casares, P. M. (2008). Valores, afectividad y desarrollo de la persona. Aspectos convergentes e implicaciones educativas. [Values, emotional health and development of the individual. Converging aspects and educational implications]. En J. M. Touriñán (Dir.), *Educación en valores, educación intercultural y formación para la convivencia pacífica* [Education in values, intercultural education and training for peaceful coexistence] (pp. 77-88). La Coruña: Netbiblo.
- Delors, J. (1997). *La educación encierra un tesoro*. [Education imprisons a treasure]. Madrid: Santillana.
- Dochy, F., Segers, M., Van den Bossche, P., & Gijbels, D. (2003). Effects of problem-based learning: a meta-analysis. *Learning and Instruction*, 13, 533-568.
- Escamez, J., Martínez, M. & Ortega, P. (2005, 2 de noviembre). *Formación en valores y construcción del Espacio Europeo de Educación Superior*. [Training in values and building the European Higher Education Area]. Ponencia presentada al XXIV Seminario Interuniversitario de Teoría de la Educación SITE, Universitat Politècnica de Valencia, España.

- Fidalgo, R., Arias-Gundín, O., & García, J. N. (2008). *La eficacia diferencial de las metodologías activas a lo largo de la diplomatura de Magisterio*. [Differential efficiency of active methods along the Diploma in teaching]. En *Actas de las V Jornadas Internacionales de Innovación Universitaria*. [In Proceedings of the V International Workshop of university innovation]. Madrid: Universidad Europea de Madrid.
- García Garrido, J. (Ed) (2008). *Formar ciudadanos europeos*. [Solidarity and voluntary work]. Madrid: Academia Europea de Ciencias y Artes.
- García, M. V., Alvarado, J. M., & Jiménez, A. (2000). La predicción del rendimiento académico: regresión lineal versus regresión logística. [Predicting Academic Achievement: Linear Regression versus Logistic Regression]. *Psicothema*, 12, 248-252.
- Gervilla, E. (2000). Modelo axiológico de educación integral. [Axiological model of comprehensive education]. *Revista Española de Pedagogía*, 215, 39-57.
- Lara V. R. (2001). *El aprendizaje cooperativo en historia: diseño de actividades y efectos cognitivos y sociales* [Cooperative learning in history: design activities and cognitive and social effects]. (Tesis de doctorado inédita). Universidad de Murcia, España.
- Lasnier, F. (2000). *Réussir la formation par compétences*. [Successful training skills]. Montréal: Guérin.
- Legendre, M. (2007). L'évaluation des compétences professionnelles [The Evaluation of Professional Competences]. In L. Bélair, D. Laveault, D and C. Lebel (Dir.), *Les compétences professionnelles en enseignement et leur évaluation* [Professional competences in teaching and assessment] (pp. 169-179). Ottawa: Presses de l'Université d'Ottawa.
- López-Barajas, E., & Ruiz, M. (2000). *Derechos Humanos y educación. Actas y Congresos*. [Human Rights and education. Proceedings and conferences]. Madrid: UNED.
- Madriaza, P. (2008). Violencia escolar en Chile. [School violence in Chile]. En C. Guajardo (Ed.), *Seguridad y prevención: la situación en Argentina, Chile y Uruguay durante 2007* [Safety and prevention: The situation in Argentina, Chile and Uruguay during 2007] (pp. 114-139). Santiago de Chile: Centro Internacional para la Prevención de la Criminalidad y Universidad Alberto Hurtado.
- Maroto, O. (2010). Evaluación de la presentación de caso, clínica de odontología de restaurativas: propuesta de una metodología con rúbrica. [Assessment of case presentation, clinical restorative dental: a methodology proposal rubric]. *Revista Electrónica Actualidades Investigativas en Educación*, 10, 1-22.
- Martínez, M., Buxarrais, M., & Esteban, F. (2002). La universidad como espacio de aprendizaje ético. [University as a learning space ethical]. *Revista Iberoamericana de Educación*, 29, 17-43.
- Martínez, M. & Esteban, F. (2005). Una propuesta de formación ciudadana para el EEES. [A proposal for civic education to the EHEA]. *Revista Española de Pedagogía*, 230, 63-84.
- Mehrabian, A., & Epstein, N. (1972). A measure of emotional empathy. *Journal of Personality*, 40, 525-543.
- Moral, F. (2011). Valores sociales y hábitos mediáticos en una muestra de universitarios. [Social values and media habits in a sample of university students]. *Electronic Journal of Research in Educational Psychology*, 9, 711-730.
- Morales, F. M., & Trianes, M. V. (2011). Actitudes hacia temas morales en estudiantes de posgrado. [Analysis of values and attitudes in a sample of University students]. *Revista Galego-Portuguesa de Psicoloxía e Educación*, 19(2), 9-20.
- Peirce, W. (2006). *Designing Rubrics for Assessing Higher Order Thinking*. Columbia, MD: AFACCT Howard Community Collage.
- Pereira, C. (2003). El cine, nuevo escenario de la educación. [The film, a new stage of education]. En Román Blay, M. T., & Martínez Martín, M. (Eds.), *Otros lenguajes en educación* [Other languages in education] (pp. 101-105). Barcelona: ICE-Universitat de Barcelona.
- Ríos, J. M., & Ruiz, J. (2011). *Competencias, TIC e innovación. Nuevos escenarios para nuevos retos*. [Competences, ICTs and Innovation: New Scenarios for new challenges]. Sevilla: MAD.
- Roche, R. (1995). *Psicología y educación para la prosocialidad*. [Psychology and education for the empathy]. Barcelona: Universitat Autònoma de Barcelona.
- Roegiers, X. (2006). *Approche par compétences dans l'enseignement supérieur et cadre européen de qualifications: opportunités, enjeux et dérives. Conférence introductive du colloque La logique des compétences: chance ou danger?* [Competence Approach in Higher Education and the European Qualification Framework: Opportunities, Challenges and Diversions. Introductory lecture of the discussion on the logic of competences: opportunity or threat?]. Retrieved from: <http://www.bief.be:80/index.php?s=4&rs=22&uid=34&found=1&lg=fr>

- Savater, F. (1996). *Ética para Amador*. [Ethics for Amador]. Barcelona: Ariel.
- Torres Gordillo, J. J., & Perera, V. H. (2010). La rúbrica como instrumento pedagógico para la tutorización y evaluación de los aprendizajes en el foro online en educación superior. [The rubric as an educational tool for mentoring and assessment of learning in higher learning online forum]. *Revista de Medios y Educación*, 38, 141-153.
- Touriñán, J. M. (Ed.) (2008). *Educación en valores, sociedad civil y desarrollo cívico*. [Values education, civil society and civic development] Coruña: Netbiblo.
- Trianes, M. V. (2002). *Cuestionario sobre Valores y Actitudes en Temas Morales*. [Values and Attitudes Questionnaire on Moral Issues]. Retrieved 10/07/2002, from notes on Educational Psychology and practices from the UMA e-platform.
- Trianes, M. V., Blanca, M. J., de la Morena, L., Infante, L., & Raya, S. (2006). Un cuestionario para evaluar el clima social del centro escolar. [A questionnaire to assess school social climate]. *Psicothema*, 18, 272-277.
- Trianes, M. V., & Fernández, C. (2001). *Aprender a ser personas y a convivir. Un programa para secundaria*. [Learning to be people and live together. A program for high school]. Bilbao: Desclée de Brouwer.
- Vilanou, C., & Colleldemont, E. (2000). *Historia de la educación en valores*. [History of education in values]. Bilbao: Desclée De Brouwer.
- Wilson, J., Torres, T., Estrada, S., González, J., Izaguirre, B., & Candelas, R. (2002). La enseñanza de la ética en psicología. [Teaching of ethics in psychology]. *Enseñanza e Investigación en Psicología*, 7, 5-27.

Advised by Paolo Bussotti, University of West Bohemia, Pilsen, Czech Republic

Received: January 19, 2013

Accepted: February 13, 2013

**Francisco Manuel Morales
Rodríguez**

PhD in Psychology and Bachelor of Labour, Associate Professor (Doctor),
Department of Psychology and Education, School of Psychology, University
of Malaga, Campus de Teatinos s / n, 29071, Malaga, Spain.
E-mail: framorrod@uma.es
Website: <http://webdeptos.uma.es/psicoev/>