

## Active methodologies for improving development of graduate students' competences: a four year study

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**Abstract:** This paper represents the experiences and results of 103 students in two courses of the Official Masters in Marriage and Family (<http://www.unav.es/es/icf/master/>), gathered during four academic years (2005-2006, 2006-2007, 2007-2008 and 2008-2009). The two courses studied were "Family Education during Infancy" (EFI) and "Orientation Models in Family Psycho-pedagogy" (MOPF). To be specific, it deals with a methodological proposal which stimulates the integration of practical teaching of the two courses mentioned as well as the development of the student's abilities. Those abilities are instrumental, interpersonal, systematic and specific to the profession of the counselor. The academic program of this Masters combines the online version which lasts two years, with two weekly sessions during the month of August. The results obtained reveal the Masters student's high level of satisfaction with the use of the active methodologies, forcing the educator to face new challenges about the way in which he favors the independent work of each student

### Introduction

It is well known that the merging of the European university systems creates a new focus on teaching methodology, which transforms our system of education based on teaching to another type concerned primarily with the learning and the development of abilities. This process is based on three principles (MEC, 2005): (1) the student becomes more active and more autonomous; (2) more active teaching methods are used; (3) the role of the professor or teacher as an agent in charge of creating learning environments which stimulate the students and develop their abilities. The focus of student centred teaching is the umbrella under which the European university systems guidelines of Bolognas are found. Its principals attempt to respond to the demands of a more active teaching method which is oriented towards the idea of learning to learn. Its ultimate roots are found in a new learning paradigm, as Beltran (1996) explains, which has as its principle traits to be active, cognitive, constructive, significant and auto regulated. This last aspect which is concerned with auto regulation attempts to accentuate the ability and autonomy of the person to learn, which on the other hand, will allow the student to maintain the barriers imposed by constant change. In this manner, if one of the goals is to form students willing to learn in a permanent manner, one of the most important functions of the teacher is to teach self learning (Dembo, 2001: Zimmerman, 2002)" (Lara, Chocarro y Sobrino, 2007, p.230).

### Instructional Methodologies

The instructional methodologies used are those of the small work groups, case methods and role playing. The small work groups have to design and give two orientation interviews applying the techniques and theories seen and used in the two academic courses. The final result of the assignment is the production of a video of the orientation interviews. To conclude, the groups present an analysis of the case studied as well as the video developed. From the beginning the students work in small groups, in separate class rooms and under the watchful direction of their professors. In Table 1, one can appreciate, in an abbreviated form, the innovations which took place during the past 4 years.

Methodologies Course	2005-06	2006-07	2007-08	2008-09
Case	Individual reading and analysis of Case, Analysis lead by professor of LG	Same as for Course 2005-2006	Case content expanded Individual reading and analysis of the case, SG analysis and LG discussion lead by professor	Same as for Course 2007-2008
Scripts for the Interviews	Elaboration in SG	Same as for Course 2005-2006	Same as for Course 2005-2006	Same as for Course 2005-2006
Role-Playing	Elaboration in SG	Same as for Course 2005-2006	Same as for Course 2005-2006	Same as for Course 2005-2006
Filming	Elaboration in SG	Same as for Course 2005-2006	Same as for Course 2005-2006	Filming not done in video
Watching the completed interviews in SG and LG	Watching the completed videos	Watching of videos by the majority of groups, some must be acted out in person due to technical issues	SG and LG acting out interviews	SG and LG acting out of interviews
Evaluation Syllabus	Nothing introduced	Syllabus is included with evaluation criteria for case analysis, script development, video and presentation of work	Same for Course 2006-2007, but with a simplified and improved syllabus	Same for Course 2007-2008 A syllabus is added to stimulate co-evaluation of work done by fellow students
Roles	Labels to invigorate work done in SG	Labels to invigorate work done in SG	Verbal assigning of roles to invigorate the work of the SG	Verbal assigning of roles to invigorate the work of the SG

**Table 1:** Innovations in methodology for the three academic course years (LG: Large Group, SG: Small Group)

## Measuring Instruments

We have applied this methodology for the past five years, although it has been during the past four years in which we have been able to systematically gather the opinions of the students. It is here that we present the opinions of 103 students; 26 students from the academic years of 2005-2006, 36 students from 2006-2007, 25 students from 2007-2008 and 16 students from 2008-2009. The information and facts were taken individually from a questionnaire given at the end of the classes (for more details see Lara and Rivas, 2009). The questionnaire was made up of two blocks of questions. The first group of questions asked the students to opine on aspects of organization, content and didactic teaching methods used. The questions were measured on a five (5) point scale with a (Cronbach Alfa) 0,78 rate of reliability. The second block of questions dealt with open questions attempting to uncover the positive aspects of the course sessions and the areas where improvement was warranted. Since the year 2006-2007, question #5 is included to specifically investigate the usefulness of the questionnaires used, and then question #8 is divided into two parts to analyze more in depth the methodology used (see Table 2, and Figure 2)

	Block I			Questions asked (summarized)	Block II		
	2005-06	2006-07	2007-08		2005-06	2006-07	2007-08
Organizational Aspects	Q1	Q1		Q1. Adjustment of time	General Assessment		
	Q2	Q2		Q2. Quality of the facilities			
	Q3	Q3		Q3. Quality of work guidelines			
	Q4	Q4		Q4. Quality of the help given by professors		Q13	Q13
		Q5		Q5. Usefulness of the evaluation syllabus		Q14	Q14
Content and Instructional Methodologies	Q6	Q6		Q6. Relationship between the Case content and the EFI Course			
	Q7	Q7		Q7. Usefulness of the EFI and MOPF Course integration sessions			
	Q8	Q9		Q8. Application of the MOPF course (making of interviews)			
		Q10		Q9. Application of the MOPF course (writing interview script guidelines)			
	Q11	Q11		Q10. Application of the MOPF course (acting out interviews: role-playing and filming)			
				Q11. Extension of EFI course content			
	Q12	Q12		Q12. Extension of MOPF course content			
						Q13. Areas where improvement is needed Q.14 Positive aspects	

**Table 2:** Questions in the questionnaire (Lara y Rivas, 2009)

## Results

The following is a presentation of the principle results obtained during the last four years, explaining the data obtained in the first and second block of the questionnaire.

### Block I: Organization, content and methodology

#### Organization

Upon making a global analysis of the four years, it is possible to affirm that evaluations made by the students regarding, the adjustment of time (Q1,  $\bar{x}=3,35$ ), the quality of the facilities used (Q2,  $\bar{x}=4,06$ ), the quality of the work guidelines (Q3,  $\bar{x}=4,33$ ), the quality of the help given by the professors (Q4,  $\bar{x}=4,51$ ), and the usefulness of the evaluation syllabi (Q5,  $\bar{x}=4,46$ ) have been very positive. The only question which receives a median score below 4 is question 1, and as can be seen in Figure 1, notably improves during the academic year of 2008-2009 (Q1,  $\bar{x}=4,13$ ).

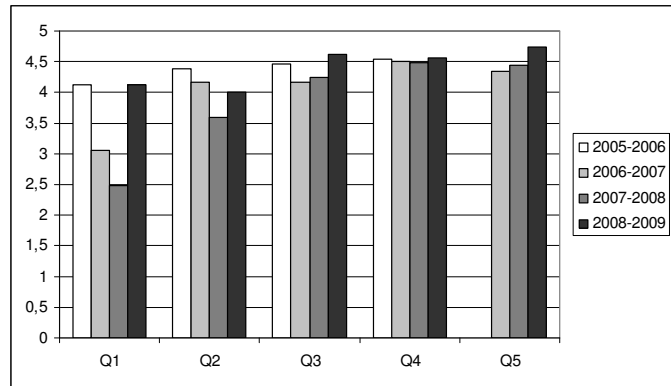


Figure 1: Organizational Aspects (median scores)

Analyzing the results based on course years, the following aspects stand out (see Figure 1):

1. The adjustment of time. The first year, in which this methodology was used, it appeared that adequate time was given; the two years following however, this perception became worse until this negative variable was resolved in the last academic course. One possible reason for this negative time adjustment could be due to the fact that the evaluation syllabi were added and that gave a greater perception of an increased work load. The improved results seen in the last academic course could be attributed to the fact that the professors spent a greater time explaining the syllabi to the students and to a greater control of time to complete the homework.
2. A generalized perceptual improvement in all aspects. During the different course spans, the student evaluations improve. This could be a result of a greater degree of experience on the part of the professors and the introduction of improvements in the didactic methodology used which would affect the organizational aspects of the program (see Table 1 for more details).
3. The most valuable question asked during the courses studied is the evaluation syllabus given during the academic course 2008-09 (Q5,  $\bar{x}=4,75$ ). This assessment is perhaps as much related to the improvements introduced during the last courses as it is to the professors' emphasis to use it to complete the work.

#### Content and teaching methodology.

Making an overall assessment of the four years, we can underline that has been very positive the assessment made by students on the list of the contents of the two subjects, and the methodology used in the sessions (case method, development of scripts for interviews, role-playing and video taping). In all questions the median scores were superior to 4 ("Agree").

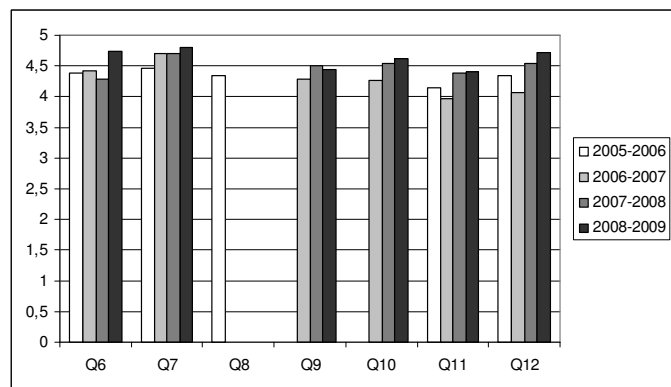


Figure 2: Content and methodology (median scores)

If we observe the scores obtained in the different courses, we see that the student evaluations improve in all the questions, scoring around or better than 4,5. Our reasoning to explain this rise is similar to that used previously when discussing the organizational aspects of the program: the greater experience and practice of the professors and the didactic improvements introduced during those years. Specifically we would like to emphasize that the evaluation of the Case content, used with the last course (Q6,  $\bar{x}=4,7$ ), is a sample of how the improvements which were introduced in that year, are not unnoticed by the students. Equally, the corrections introduced in the other areas are also appreciated by the students.

**Correlations.** Upon studying the existing relationships between the different questions in the questionnaire, some significant Pearson correlations have been detected ( $p>.01$ ). The most relevant are shown below:

- 1) The usefulness of the syllabi (Q5) relates to the evaluation of the integration of the two courses (Q7) [0,42], as well as the usefulness in the making of the guidelines for acting out (role-playing) of the interviews as an assignment for the MOPF course (Q9) [0,32].
- 2) The quality of the work guidelines (Q3) relates to the help given by the professors (Q4) [0,40], and the quality of the evaluation syllabi (Q5) [0,62].
- 3) The usefulness of the role-playing script used during the practice interview in MOPF (Q9) [0,38] with the integration of the two courses (Q7) [0,48] is dependent upon the quality and effectiveness of help (Q4) given by the professors.

## **Block II: Positive aspects and improvement areas**

The second block of open questions compiles the student's opinions regarding the positive aspects of the program and areas where improvement is seen necessary. The most relevant points are discussed below.

**Positive aspects.** Positive evaluations were given in those areas relating to the personalities of the teachers especially regarding their ability to guide the students through the learning process. The concerned and friendly personalities of the teachers were the most notable aspects of those in the 2005-2006 and 2006-2007 classes. The class of 2007-2008 was specific in mentioning the professional expertise of the professors. For the class 2008-2009, on the other hand, positive emphasis was given in those areas relating to the general makeup of the practice sessions (maintaining timetables, availability of professors to answer individual and group questions during office hours).

**Areas of improvement.** The students from classes 2005-2006, 2006-2007, and 2007-2008 were overwhelmingly unanimous in their belief that the work sessions were lacking in adequate time distribution. The students from the 2008-2009 class pointed out a need to improve course content and hardly mentioned the time distribution problem seen in previous years. This change was probably a result of the alterations made in the timetables for the 2008-2009 class.

If in fact the incidence of answers has been low, we do observe that some students suggest that different matrixes than those used presently, be offered in the Case study which would contemplate the possibility of dedicating greater time to imagining the orientation interviews and thus exemplify good professional practice.

## **Conclusions**

The data gathered is an analysis of the opinions of both students and the teachers as well as the changes and improvements made as a result of these opinions.

In general terms we can say that the opinions of both students and professors are positive, despite the demands of the program. From the professors' point of view it has been necessary to design evaluation tools and guides which foster the autonomous and responsible work of the groups, and which also evaluate the abilities developed. As a result of this and with the intention of improving the autonomous work of the students, new evaluation forms or rubrics were introduced during the last three course years.

Upon analysis of the data given by students from the past four classes, we can affirm that:

- The students give positive reviews to the active methodology used.
  - The students remark that it is helpful to integrate the contents of the two subjects (Q7), they encounter a more real affinity to the theoretical content studied (Q6, Q9, Q10 and Q12), and they learn to consider various solutions to the same problem (Q11).
  - They point out the positive environment found in class, a consequence of working in groups and acting out, a favorable context which is necessary for the development of active methodologies. The facilities used were helpful in fostering interaction between the groups although less helpful logistically speaking when dealing with the video taping and moving around of students during the acting out of interviews (Q2).
  - They found the presentation of the scripts adequate and the work guidelines very positive (Q3).
  - They underline the quality of help given by the professors (Q4 and Q14).
- In addition, the students give favorable views of the helpfulness of the work guidelines distributed by the professors (Q4), and of the evaluation syllabi (Q5).

It is interesting to point out the correlation between the improvements made in teaching and the high marks or scores received by the students (Figure 1 and 2). The use of the questionnaires permitted us to see the need to:

- reorganize the scheduling of the sessions, an aspect which received high reviews from the 2008-2009 class (Q13);
- add more concrete work guidelines that have been seen by some students as more positive;
- and improve the Case content which was used during the first three academic years, having been evaluated very well by the students from the last academic year (Q6).

Lastly, it is worth mentioning that the application of the active methodologies used, helps improve the quality of the teaching only if one has a reflexive attitude which is open to change and improvement. It has been of vital importance for the experience shown in this paper to consider the opinions of the students as a way to improve the methodology during the academic years studied.

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