

# Validation of an Evaluation Tutoring Task Scale at the University

**María Consuelo Sáiz-Manzanares<sup>1</sup>, Alfredo Bol-Arreba<sup>2</sup>,  
René Jesús Payo-Hernanz<sup>3</sup>**

---

<sup>1</sup> Coordinadora de Calidad. Vicerrectorado de Ordenación Académica y Calidad,  
Universidad de Burgos, Burgos

<sup>2</sup> Vicerrector de Profesorado y de Personal de Administración y Servicios,  
Universidad de Burgos, Burgos

<sup>3</sup> Vicerrector de Estudiantes y de Extensión Universitaria,  
Universidad de Burgos, Burgos.

---

Spain

*Correspondence:* María Consuelo Sáiz-Manzanares. C/ Hospital del Rey s/n. 09001. Burgos (Spain). E-mail:  
[ccalidad@ubu.es](mailto:ccalidad@ubu.es)

---

© Education & Psychology I+D+i and Ilustre Colegio Oficial de la Psicología de Andalucía Oriental

## Abstract

**Introduction.** Recent investigations have emphasized the need for university teachers to develop tutorial programs for students at university. Many universities are committed to broadening research on university teaching that will sharpen academic performance and levels of student satisfaction. Tutoring programs improve the development of the teaching-learning process and reduce student drop-out rates. However, it is necessary to step up teacher training in the evaluation of prior knowledge, in procedures for continuous assessment and in teaching-learning methodologies for project-based learning. Likewise, instruments with high levels of reliability and validity are needed, to measure the effectiveness of these tutorial-programme-based techniques. The objectives of our study are twofold: to validate a scale for measuring the development of the Tutorial Program and to test whether the department to which the teacher-tutor belongs influences the evaluation of the Tutorial Program.

**Method.** A sample of 237 university professors at the University of Burgos from 16 departments participating in the Tutorial Program is analyzed in this study.

**Results.** The results of the study with regard to the first objective indicate high overall reliability of the scale ( $\alpha = .93$ ) and of inter-item correlation ( $\alpha = .92$  to  $\alpha = .93$ ). With regard to the second objective, significant differences are found between departments.

**Discussion and conclusion.** The findings of this study indicate the need to increase teacher training in orientation tutoring.

**Keywords:** Tutoring at the university, program evaluation, orientation at the university, validation of satisfaction scale.

*Received: 04/11/14 Initial Acceptance: 05/10/14*

*Final Acceptance: 11/04/14*

# Validación de una Escala de Evaluación de Tareas de Tutoría en la Universidad

## Resumen

**Introducción.** Recientes investigaciones señalan la necesidad de realizar funciones de tutorización dirigidas a la orientación del alumnado por parte de los profesores universitarios. Muchas universidades apuestan por incrementar la investigación en docencia universitaria con el fin de incrementar los resultados académicos y la satisfacción de los estudiantes. La tutoría programada mejora el desarrollo del proceso de enseñanza-aprendizaje y evita el abandono de los estudiantes. Si bien es necesario incrementar la formación del profesorado en la evaluación de conocimientos previos, en los procedimientos de evaluación continua y en las metodologías de enseñanza-aprendizaje basadas el aprendizaje basado en proyectos. Asimismo para medir la efectividad de estas técnicas basadas en la tutoría programada se precisan instrumentos con altos niveles de fiabilidad y de validez. Los objetivos de la investigación fueron: Validar una escala de evaluación del Programa de Acción Tutorial y comprobar si el departamento al que pertenece el profesor tutor influye en la evaluación del Programa de Acción Tutorial.

**Método.** En este estudio se trabajó con una muestra de 237 profesores universitarios pertenecientes a 16 departamentos de la Universidad de Burgos.

**Resultados.** Los resultados indican respecto del primer objetivo un alto índice de fiabilidad del total de la escala ( $\alpha = .93$ ), así como de inter-elementos ( $\alpha = .92$  a  $\alpha = .93$ ). Con relación al segundo objetivo se encuentran diferencias significativas entre los departamentos.

**Discusión y conclusión.** Se propone un incremento de la formación del profesorado universitario en tareas de orientación.

**Palabras Clave:** Tutoría en la Universidad, evaluación de programas, orientación en la universidad, validación de una escala de satisfacción.

*Recepción:* 11/04/14

*Aceptación inicial:* 10/05/14

*Aceptación final:* 04/11/14

## Introduction

The university is a complex organization that has teaching and research as its fields of reference. At a governmental level, many universities have placed emphasis on expanding research into teaching with a view to improving academic results and student satisfaction (Cardoso, Santiago & Sarrico, 2012; Kivistö, 2008; Wasserman, 2010).

Recent research in university settings (Bredtmann, Crede, & Otten, (2013); Greenbank, 2006; Parker, & University, 2008; Sáiz & Román, 2011) has made it clear that the orientation function of tutorial programs is an essential aspect to increase the quality of university teaching. Tutorial work allows an improvement in the teaching-learning process and strengthens research into educational innovation. All of this lowers the drop-out rate of students following courses leading to academic qualifications (Retna, Chong & Cavan, 2009). However, these studies have shown that only a few teachers voluntarily develop orientation tutorial functions, while most teachers limit the tutorial to academic aspects of their work (Retna, et al., 2009). Tutoring is therefore considered an effective method of instruction that plays an important role in the development of quality teaching. However, the teacher has to be trained in three areas, in order to perform good tutoring (Arbizu, Lobato & Del Castillo, 2005; Retna, et al.; Sáiz, Montero, Bol, & Carbonero, 2012; Sáiz & Payo, 2012):

1. Strategies that help teachers identify the learning needs of their students.
2. Strategies that allow constructive feedback that will improve the progress of student learning.
3. Strategies that stimulate intellectual growth with a view to increasing the quality of student learning outcomes learning (following assessment procedures for example such as rubrics and portfolio).

The orientation work of the teacher therefore requires a structure (Retna, et al., 2009) that is directly linked to the university departments and their organizational activities (Marsh & Hattie, 2002).

Along these lines, the *European Higher Education Area* (EHEA) has pointed to the orientation function of the teacher as an essential aspect for the adaption of students to the

university environment. That function is grounded in the development of active learning based on the significant and independent construction of learning. The adaptation of Spanish Universities to the EHEA has involved both a structural and a functional change in the planning of teaching. Changes in the way we access information and market demands on graduates mean that teaching methods in the university have to be modified and guided towards more interactive and personalized forms for students (Gairín, Feixas, Guillamón, & Quinque, 2004; Pérez, 2012; Sánchez-García, Manzano-Soto, Risque-López & Suárez-Ortega, 2011). Teaching has, therefore, to be more individualized, its final objective being to adjust itself to the student's own rhythm of learning. All of the above means that teachers have to carry out a process of reflection on their own working practice (Bol, Sáiz y Mateos, 2013; Lapeña-Pérez, Sauleda-Pares, & Martínez-Ruíz, 2011). These changes have been stimulated in Spanish legislation through the *Estatuto del Estudiante Universitario* [Statute of the University Student] (*Real Decreto* 1791/2010, of 30 December, BOE nº 318). This regulation places emphasis on the need for students to receive orientation and follow up on their course, considering that an appropriate means for that is tutoring as it facilitates: a) the process of transition and adaption of the student to the university; b) the information, orientation and learning resources; c) definition of the curricular path, also paying attention to the specificities of the students with special educational needs and the transition to the workplace; and d) initial development of a professional career and access to continuous training.

### *Tutorial Orientation at the University*

The tutoring function in the university may be understood as a process of continuous and systematic assistance (Tirado, 2009). A function is developed at different moments in university life: intake, stay at the institution and entering the job market. All of this involves a diversity of functions that should be coordinated through orientation programs in universities (Zabalza, 2003). A difference may be drawn between academic and non-academic tutoring. The first, centres on the development of learning with the final aim of enabling academic success (Knight, 2005; Pozo, & Del Puy, 2009; Sáiz & Román, 2011). The second is directed more at the follow up of student learning paths (Lapeña-Pérez et al., 2011). Many universities have implemented non-academic tutoring programs (University of Washington, University of Wisconsin-Madison, Oxford, and Cambridge, as well as the Universities of Alcalá, Alicante, Burgos, Oviedo, Granada, and Valencia among others, in Spain). The evaluations of these experiences have pointed out that this type of tutoring also facilitates the development of student learning motivation (Wentzel, 2005), the development of social interactions, which in

turn stimulate the development of cognitive skills (Sáiz & Román, 2011), and the acquisition of effective and profound learning (Veenman, 2011a, 2011b). Tutoring, therefore, helps students to deepen their knowledge of both academic aspects and the structural functioning of the university, providing them with a personal and academic guide (Goertzen, Scherr & Elby, 2009; Heimlich, 2010; Wentzel & Watkins, 2011).

The program should be evaluated, in order to measure its effectiveness and quality (Arco, & Fernández, 2011; Biggs, 2005; Chi, Siler, Jeong, Yamauchi & Hausmann, 2001; Lobato, Arbizu & Del Castillo, 2004; Román, 2004), for which reason instruments with high reliability and validity indices should be prepared that permit reliable evaluation of the functioning of the program (Payo, et al., 2013).

### *Aims and hypothesis*

In accordance with the above, this study had a twofold objective: in the first place, to study the reliability and validity of the opinion scale of teachers participating in the Tutorial Action Plan (PAT) at the University of Burgos; and, in second place, to study whether significant differences existed in relation to the variable defined by the department in which the teacher participating in the Tutorial Program worked. These objectives were defined in the following research hypotheses:

1. The *Scale for the evaluation of teacher satisfaction with the Tutorial Program* will obtain high reliability and validity indices.
2. Significant differences will exist in relation to the variable type of department in the different dimensions of the teacher satisfaction survey.

## **Method**

### *Participants*

Our sample amounted to 237 participants in the Tutorial Action Plan of the University of Burgos (Spain), of whom 132 were women (mean age = 45 years, SD = 1.57) and 105 men (16.4% Educational Science, Geography and History 10.5%; 11.3% 5.9% Chemical Studies, Civil Engineering 8.4%; 8.4% of the Food Science and Biotechnology, Economics 2.5%; 3.4% Private Law, Public Law 4.6%, 6.3% Economics and Business Administration; Specific

Didactics 5.5%; 4.2% Graphic Expression, 3.8% Electromechanical Engineering, Mathematics and Computer Studies 1.3%; 5.0% Applied Economics; Architecture 2.10%).

### *Instruments*

*Tutorial Program* at the University of Burgos (Payo et al., 2013). All students at the University of Burgos participated in the program that had the following objectives: 1) to assist the student in planning the teaching-learning process; 2) to guide decision-making in the choice of subjects and courses; 3) to advise on services available at the university; 4) to promote educational values; 5) to conduct a formative and summative evaluation of the program. The teacher has to give classes on the students' degree course and should make time for three meetings with each student throughout the academic year, as and when requested.

The *Scale for the Evaluation of Teacher Satisfaction with the Tutorial Program* was employed, which was prepared as a 1-5 Likert-type Scale to measure the degree of teacher satisfaction with the Tutorial Program. The scale consisted of 10 items that analyze the following points: 1. Improvements in student-teacher interactions; 2. Improvements in the tutorial functions of the teacher; 3. The degree of general satisfaction with the Tutorial Program; 4. The relation between the Tutorial Program and the academic and social orientation of the students; 5. The quality of interpersonal interactions between the teacher and the student; 6. The degree of presential and/or virtual contact with students; 7. Orientation for scholarships and student grants; 8. The quality of coordination on the Tutorial Program; 9. The assistance of the Tutorial Program for the insertion of the student in the university community; 10. Interest in continuing in the role of teacher-tutor in the Tutorial Program (see Appendix).

### *Procedure*

Each student was assigned a tutor at the start of the academic year, with whom the student would hold at least three meetings during the academic year and who assisted each student with various aspects of the decision-making process (planning of the teaching process for choices in the academic learning itinerary, counselling services and use of the facilities at the University of Burgos, educational values, continuous assessment process). At the end of the academic year, a satisfaction assessment was passed to tutors, teachers and students to identify areas for improvement.

An on-line application of the scale using Survey Methodology, over the month of June, in the 2012/13 academic year was applied to assess tutor satisfaction. With a view to ensuring the transparency and confidentiality of the responses of the teachers, the surveys were anonymous and only identified the department.

### *Statistical Analysis*

A one-shot pre-experimental design was used (Campbell & Stanley, 1966). A reliability analysis of the scale was conducted, using the Cronbach Alpha test for the whole scale and for each of the items with the total and for reliability where one of the items is removed. A study of the descriptive statistics was also conducted [mean average ( $M$ ) and Standard Desviation ( $DT$ )], an exploratory Principal Component Analysis (PCA), and a fixed-effect ANOVA (type of department to which the teacher belongs) that also analyzing the effect value. The SPSS v.19 software program was used to conduct these analyses.

### **Results**

The internal consistency of the scale was analyzed by applying the Cronbach Alpha test, to confirm the first hypothesis “The *Scale for the evaluation of teacher satisfaction with the Tutorial Program* will obtain high reliability and validity indices”, which for the complete scale was  $\alpha = .93$ , indicating high levels of reliability.

The degree of homogeneity and the internal consistency of the scale were also analyzed, for which purpose the correlations between the items were determined. As may be seen in Table 1, those correlations are significant for all the items, with the correlation coefficients between an interval of  $r=.27$  to  $r=.77$ . The lowest correlations appeared in item 6 that refers to the degree of presential and/or virtual contact with students. See Table 1.



**Table 1. Inter-element correlations matrix of the Tutorial Program evaluation scale.**

	1	2	3	4	5	6	7	8	9	10	11
1. Improvement in student/teacher interactions.	1										
2. Improvement in the functions of the tutor.	.75**	1									
3. General degree of satisfaction with the Tutorial Program (TP).	.72**	.70**	1								
4. The relation between the TP and academic and social orientation of the students.	.70**	.69**	.67**	1							
5. The quality of interpersonal interactions between the teacher and the student.	.63**	.56**	.63**	.57**	1						
6. The degree of presential and/or virtual contact with the students.	.38*	.32*	.40*	.27*	.46*	1					
7. Orientation towards the grants and scholarship service.	.53**	.51**	.55**	.51**	.60**	.45	1				
8. Quality of TP coordination.	.55**	.60**	.61**	.49*	.50*	.30*	.42*	1			
9. Assistance as a result of TP in the incorporation of the student in the university community.	.77**	.72**	.67**	.69**	.62**	.36*	.53**	.53**	1		
10. Interest in continuing as a teacher/tutor in the TP.	.63**	.51**	.59**	.63**	.50*	.31*	.45*	.40*	.61**	1	
11.Total	.75**	.76**	.77**	.75**	.67**	.43	.62**	.63**	.77**	.68**	1

\* $p < .05$ ; \*\* $p < .01$ 

Subsequently, the relation was studied between the total score and the scores when each item on the scale is removed, in order to analyze the consistency of the scale with each of its items. As may be seen in Table 2, the correlations between each element and the total was between  $r=.63$  and  $r=.88$ , except for the outlier correlation between item 6 and the total, which was  $r=.46$ .

**Table 2. Internal validity of the items on the Tutorial Program evaluation scale.**

	Corrected correlation item-total	Cronbach Alpha if an item is removed
1. Improvement in student/teacher interactions.	.82	.92
2. Improvement in the functions of the tutor.	.78	.92
3. General degree of satisfaction with the Tutorial Program (TP).	.81	.92
4. The relation between the TP and academic and social orientation of the students.	.76	.92
5. The quality of interpersonal interactions between the teacher and the student.	.73	.92
6. The degree of presential and/or virtual contact with the students.	.46	.93
7. Orientation towards the grants and scholarship service.	.65	.92
8. Quality of TP coordination.	.63	.93
9. Assistance as a result of TP in the incorporation of the student in the university community.	.80	.92
10. Interest in continuing as a teacher/tutor in the TP.	.67	.92
Total	.88	.92

Likewise, with a view to analyzing the validity of the scale, an exploratory PCA analysis with standardized Varimax rotation was applied to the scores of the items with the instrument. As may be seen in Table 3 and in Table 4, two factors were identified that explained 70.84 % of the variance. The first factor was related to ‘Improvements in the interactions of the student with the teachers’ (62.46%) and the second was related to improvements in the tutorial functions of the teacher (8.38%).

**Table 3. Total explained variance for the internal validity of the items on the Tutorial Program Evaluation Scale.**

Component	Total	% variance	% accumulated
1. Improvement in student/teacher interactions.	6.87	62.46	62.46
2. Improvement in the functions of the tutor.	.92	8.38	70.84
3. General degree of satisfaction with the Tutorial Program (TP).	.64	5.89	76.73
4. The relation between the TP and academic and social orientation of the students.	.51	4.64	81.37
5. The quality of interpersonal interactions between the teacher and the student.	.44	4.02	85.40
6. The degree of presential and/or virtual contact with the students.	.38	3.52	88.92
7. Orientation towards the grants and scholarship service.	.32	2.92	91.85
8. Quality of TP coordination.	.28	2.57	94.42
9. Assistance as a result of TP in the incorporation of the student in the university community.	.23	2.13	96.56
10. Interest in continuing as a teacher/tutor in the TP.	.21	1.98	98.55

**Table 4. Summary of the factorial analysis of Tutorial Program evaluation scale.**

Number of the factor (explained variance)	Nº item	Definition of the item	Factorial weight
Interactions of the student with teachers.	1	Improvement in student/teacher interactions.	.87
	2	Improvement in the functions of the tutor.	.84
	3	General degree of satisfaction with the Tutorial Program (TP).	.85
	4	The relation between the TP and academic and social orientation of the students.	.82
	5	The quality of interpersonal interactions between the teacher and the student.	.78
	7	The degree of presential and/or virtual contact with the students.	.71
	8	Orientation towards the grants and scholarship service.	.70
	9	Quality of TP coordination.	.85
	10	Assistance as a result of TP in the incorporation of the student in the university community.	.73
	Improvement in the tutorial functions of the teacher	6	Degree of presential/virtual contact with students.

A fixed-effect ANOVA (variable: type of department) was conducted to test the second hypothesis “Significant differences will exist in relation to the variable type of department in the different dimensions of the teacher satisfaction survey”. As may be seen in Table 5, there are significant differences in the central variable type in all items of the scale.

**Table 5. Descriptive statistics and fixed-effect ANOVA (type of department to which the teacher/tutor belongs) and the effect value ( $\eta$ ).**

	1 <i>n</i> =39	2 <i>n</i> =25	3 <i>n</i> =27	4 <i>n</i> =14	5 <i>n</i> =20	6 <i>n</i> =20	7 <i>n</i> =6	8 <i>n</i> =8	9 <i>n</i> =11	10 <i>n</i> =15
	<i>M(DT)</i>	<i>M(DT)</i>	<i>M(DT)</i>	<i>M(DT)</i>	<i>M(DT)</i>	<i>M(DT)</i>	<i>M(DT)</i>	<i>M(DT)</i>	<i>M(DT)</i>	<i>M(DT)</i>
1. Improvement in student/teacher interactions.	2.82 (1.14)	3.20 (1.22)	3.18 (1.17)	2.35 (1.15)	2.20 (1.23)	3.40 (1.23)	2.83 (1.47)	2.50 (1.30)	2.63 (.36)	2.46 (.25)
2. Improvement in the functions of the tutor.	2.47 (1.13)	2.96 (1.17)	2.66 (.87)	2.42 (1.15)	1.85 (1.13)	3.15 (.98)	2.66 (1.36)	2.50 (1.30)	2.72 (1.34)	2.33 (.81)
3. General degree of satisfaction with the Tutorial Program (TP).	2.47 (1.05)	2.64 (1.25)	2.59 (1.00)	2.14 (1.02)	1.80 (1.10)	2.45 (.75)	2.16 (1.16)	2.50 (1.30)	2.36 (1.02)	2.13 (.83)
4. The relation between the TP and academic and social orientation of the students.	2.92 (1.30)	3.44 (1.15)	3.11 (1.15)	2.42 (1.22)	2.25 (1.20)	3.40 (.99)	3.16 (1.32)	3.00 (1.51)	2.81 (1.32)	2.80 (1.08)
5. The quality of interpersonal interactions between the teacher and the student.	3.15 (1.28)	3.20 (1.44)	3.03 (1.05)	2.71 (1.26)	2.63 (1.53)	3.10 (1.02)	2.33 (1.36)	3.25 (1.38)	2.63 (1.28)	2.73 (1.09)
6. The degree of presential and/or virtual contact with the students.	2.81 (1.33)	3.04 (1.36)	2.74 (1.22)	3.35 (1.33)	1.90 (1.25)	2.15 (.98)	2.16 (1.47)	2.00 (.81)	2.45 (1.03)	2.40 (1.12)
7. Orientation towards the grants and scholarship service.	2.76 (1.26)	3.08 (1.35)	2.55 (1.12)	2.78 (1.52)	2.25 (1.33)	3.00 (1.37)	1.50 (.83)	2.71 (1.49)	2.45 (1.03)	2.33 (1.04)
8. Quality of TP coordination.	2.94 (1.27)	3.12 (1.09)	2.92 (1.03)	2.85 (1.23)	2.40 (1.04)	3.10 (.96)	2.66 (.51)	3.28 (1.49)	3.09 (1.04)	2.73 (.79)
9. Assistance as a result of TP in the incorporation of the student in the university community.	2.60 (1.15)	3.37 (1.17)	2.92 (1.14)	2.14 (1.23)	2.38 (1.19)	2.90 (1.11)	2.16 (1.16)	2.71 (1.11)	3.00 (1.09)	2.46 (1.06)
10. Interest in continuing as a teacher/tutor in the TP.	3.05 (1.54)	3.62 (1.17)	3.81 (1.27)	2.57 (1.60)	2.66 (1.49)	2.85 (1.22)	2.83 (1.83)	1.38 (1.38)	3.36 (1.28)	3.26 (1.16)
Total for the scale	2.64 (.88)	3.04 (.89)	2.95 (.75)	2.61 (.92)	2.46 (.92)	3.31 (.66)	1.11 (1.00)	3.32 (1.11)	3.36 (1.28)	3.24 (.59)

**Table 5 (continuation)**

	11 <i>n</i> =13	12 <i>n</i> =10	13 <i>n</i> =9	14 <i>n</i> =3	15 <i>n</i> =12	16 <i>n</i> =5		
	<i>M</i> ( <i>DT</i> )	<i>M</i> ( <i>DT</i> )	<i>M</i> ( <i>DT</i> )	<i>M</i> ( <i>DT</i> )	<i>M</i> ( <i>DT</i> )	<i>M</i> ( <i>DT</i> )	<i>F</i> (15,237 )	$\eta$
1. Improvement in student/teacher interactions.	3.00 (1.08)	2.30 (1.33)	2.55 (1.01)	2.00 (1.00)	2.58 (1.08)	2.80 (.83)	1.59	.31
2. Improvement in the functions of the tutor.	3.15 (1.46)	2.10 (1.10)	2.22 (.97)	2.33 (1.52)	2.58 (.99)	2.80 (1.30)	1.65	.31
3. General degree of satisfaction with the Tutorial Program (TP).	3.00 (1.35)	2.20 (1.39)	2.22 (1.09)	2.00 (1.00)	2.16 (.93)	2.40 (.89)	1.06	.26
4. The relation between the TP and academic and social orientation of the students.	3.30 (1.25)	2.90 (1.44)	2.88 (1.05)	2.66 (1.15)	2.63 (.92)	3.40 (1.51)	1.32	.28
5. The quality of interpersonal interactions between the teacher and the student.	3.30 (1.70)	2.00 (1.05)	2.22 (1.20)	2.33 (1.15)	2.16 (1.11)	2.80 (1.78)	1.33	.28
6. The degree of presential and/or virtual contact with the students.	2.07 (1.44)	1.90 (.87)	2.20 (1.32)	2.00 (1.00)	1.90 (1.22)	2.60 (1.67)	1.55	.31
7. Orientation towards the grants and scholarship service.	2.92 (1.65)	2.40 (1.34)	2.20 (1.00)	2.00 (1.00)	2.00 (1.26)	2.60 (1.67)	1.25	.28
8. Quality of TP coordination.	3.30 (1.43)	2.40 (1.34)	2.88 (1.66)	2.33 (1.57)	2.90 (1.04)	2.60 (1.14)	.80	.22
9. Assistance as a result of TP in the incorporation of the student in the university community.	3.07 (1.25)	1.88 (.78)	2.44 (1.13)	2.33 (1.52)	2.63 (.80)	2.80 (1.09)	.80	.32
10. Interest in continuing as a teacher/tutor in the TP.	3.53 (1.50)	2.77 (1.56)	3.11 (1.61)	2.00 (1.73)	2.72 (1.42)	3.20 (1.48)	1.15	.31
Total of the scale	3.21(1.01)	3.21 (.86)	3.41 (.84)	3.27(1.01)	3.70 (.77)	4.00 (1.00)	3.43*	.43

\* *p*<.05

- 1. Department of Educational Sciences.
- 2. Department of Historic Sciences and Geography.
- 3. Department of Chemistry.
- 4. Department of Philology.
- 5. Department of Civil Engineering.
- 6. Department of Biotechnology and Food Science.
- 7. Department of Physics.
- 8. Department of Private Law.
- 9. Department of Public Law.

- 10. Department of Applied Economics.
- 11. Department of Specific Didactics.
- 12. Department of Graphic Expression.
- 13. Department of Electromechanics.
- 14. Department of Mathematics and Computing.
- 15. Department of Economics and Business Administration.
- 16. Department of Architectural Constructions and Earth Engineering.

As may be seen from Table 5, there are significant differences between the departments in all items of the scale. The post-hoc Tukey test was conducted to determine the departments between which the differences existed and significant differences were found between: the departments of Educational Sciences and Applied Economics ( $DM=-1.05$ ;  $p<.00$ ); Educational Sciences and Specialized Didactics ( $DM=-1.14$ ;  $p<.00$ ); Philology and Specialized Didactics ( $DM=-1.17$ ;  $p<.00$ ); Civil Engineering and Specialized Didactics ( $DM=-1.32$ ;  $p<.00$ ); and Civil Engineering and Applied Economics ( $DM=-1.23$ ;  $p<.00$ ). In all cases, the first department in each pair refers to the department with the highest satisfaction.

## Discussion and Conclusions

The *Scale for the evaluation of teacher satisfaction with the Tutorial Program* is a valid and reliable instrument for the measurement of teacher-tutor satisfaction from the Tutorial Program evaluation. The consistency of the scale was tested for all items, item 6 that refers to the degree of presential and/or virtual contact with students being the one that obtained the lowest correlations with the rest of the scale. Likewise, the factors that explained 70.84 % of the variance were student interaction with tutors and tutor interaction with students (Sáiz & Román, 2011; Wentzel, 2005) and the need to improve orientation functions in the tutor (Payo & Sáiz, 2012a). All of this is directly related with the organization and planning of tutorials (Payo et al., 2013; Heimlich, 2010; Wasserman, 2010; Zabalza, 2003). The tutorial program at the university directed at student orientation beyond academic tutoring requires exhaustive planning and precise follow up (Payo & Sáiz, 2012b). This planning is directly related with the organization and structuring of the orientation function by the departments (Marsh & Hattie, 2002). In fact, differences in the perceptions of teacher-tutors regarding the development of the Tutorial Program were identified in accordance with the department to which the teachers belonged. In this study, the teaching staff from the departments of Specialized Didactics and Applied Economics had a more satisfactory perception of their participation in the Tutorial Program, which implies a tutorial function that goes further than traditional academic assessment and that forms part of the aspects that relate to educational orientation at the university, matters relating to the transition and the adaptation of the student to the university setting, guidance on resources to develop effective learning, orientation on the curricular pathway relating to the diversity of students and to practices of continuous training. The teaching staff considered that the success of orientation at the university provided an increase and an improvement in the interactions of the teacher with students, provided that a good de-

gree of presential and/or virtual contact is developed and that further training in non-academic orientation strategies is available.

This explains why the effectiveness of these types of experiences in university settings are linked to the development of teaching skills related to: the detection of learning needs, the facilitation of constructive *feedback* that improves the teaching-learning process and, finally, an increase in learning quality among students. Although not all of this develops naturally, it requires specific training of the university teachers in the field of tutoring that targets student orientation (Retna, et al., 2009). This training is therefore the challenge for the governance structures of universities, as efforts must continue, despite the considerable work in this field over recent years, with the planning of training that not only involves teaching staff in a uni-personal context, but from the links to the management structures of the departments and the coordinating bodies of the academic qualifications (Bredtmann, et al. 2013). The final objective would be to develop more personalized tutorial programs in harmony with the characteristics and needs of the students. In other words, programs that take into account the diversity and specificity of the academic qualifications and the different courses for each one (Arbizu, Lobato, Del Castillo, 2005; Arco, & Fernández, 2011).

The proposals for the improvement of the Tutorial Program include modifications to the program structure, adapting it better to the needs of the students on each degree course and linking it up with the training needs of the teachers in each department. Along these lines, future research will focus on longitudinal studies that can analyze improvements in the satisfaction of teaching staff with the Tutorial Program after a more specific training, in accordance with the needs of the students on each course and training in the organization of the Tutorial Program, directed at the departmental directors and the coordinators of the qualification.

## References

- Arbizu, F., Lobato, C., & Del Castillo, L. (2005). Algunos modelos de abordaje de la tutorial universitaria [Some models for university tutorials]. *Revista de Psicodidáctica*, *10*(1), 7-22. doi: 10.1387/RevPsicodidact.367.
- Arco, J. L., & Fernández, F. D. (2011). Eficacia de un programa de tutoría entre iguales para la mejora de los hábitos de estudio del alumnado universitario [Efficacy of peer tutoring program on the studying habits of university students]. *Revista de Psicodidáctica*, *16*(1), 163-180. doi: 10.1387/RevPsicodidact.1131.
- Biggs, J. B. (2005). *Calidad del aprendizaje universitario* [The University Learning Quality]. Madrid: Narcea.
- Bol, A., Sáiz, M.C., & Pérez, M. (2013). Validación de una encuesta sobre la actividad docente en Educación Superior [Validation of test teaching activity in Higher Education]. *Aula Abierta*, *41*(2), 45-54.
- Bredtmann, J., Crede, C. J., & Otten, S. (2013). Methods for evaluating educational programs: Does Writing Participation affect student achievement? *Evaluation and Program Planning*, *36*, 115-123. doi: 10.1016/j.evalprogplan.2012.09.003.
- Campbell, D., & Stanley, J. (1966). *Experimental Design for Research*. Chicago, Illinois: Rand McNally.
- Cardoso, S., Santiago, R., & Sarrico, C.S. (2012). The impact of quality assessment in universities. Portuguese students' perceptions. *Journal of Higher education Policy and Management*, *34*(2), 125-138. doi: 10.1080/1360080X.2012.662738
- Chi, M.T.H., Siler, S. A, Jeong, H., Yamauchi, T., & Hausmann, R. G. (2001). Learning from human tutoring. *Cognitive Science*, *25*, 471-533.
- Gairín, J., Feixas, M., Guillamón, C., & Quinquer, D. (2004). La tutoría académica en el escenario europeo de la Educación Superior [The academic tutorship in European Higher Education]. *Revista Interuniversitaria de Formación del Profesorado*, *18*(1), 61-77.
- Goertzen, R.M., Scherr, R.E., & Elby, A. (2009). Accounting for tutorial teaching assistants' buy-in to reform instruction. *Physical Review Special Topics-Physics Education Research*, *5*, 1-20. doi: 10.1103/PhysRevSTPER.5.020109
- Greenbank, P. (2006). The academic's role: The need for re-evaluation? *Teaching in Higher Education*, *11*(1), 107-112. doi: 10.1080/13562510500400248.

- Heimlich, J. E. (2010). Environmental education evaluation: Reinterpreting education as a strategy for meeting mission. *Evaluation and Program Planning*, 33, 180-185. doi: 10.1016/j.evalprogplan.2009.07.009
- Kivistö, J. (2008). An assessment of agency theory as a framework for the government-university relationship. *Journal of Higher Education Policy and Management*, 30(4), 339-350. doi: 10.1080/13600800802383018
- Knight, P.T. (2005). *El profesorado de Educación Superior: Formación para la excelencia* [The teaching staff in Higher Education: Training to excellence]. Madrid: Narcea.
- Lapeña-Pérez, C., Sauleda-Pares, N., & Martínez-Ruiz, A. (2011). Los programas institucionales de acción tutorial: Una experiencia desarrollada en la Universidad e Alicante [The institutional programs in tutorial action: An experience in Alicante University]. *Revista de Investigación Educativa*, 29(2), 341-361.
- Lobato, C., Arbizu, F., & Del Castillo, L. (2004). Las representaciones de la tutoría universitaria en profesores y estudiantes: Estudio de un caso [The university tutorialship in professor and students]. *Educación XXI*, 7, 135-168.
- Marsh, H. W., & Hattie, J. (2002). The relationship between research productivity and teaching effectiveness: complementary, antagonistic or independent constructs. *Journal of Higher Education*, 73(5), 603-643. doi: 10.1353/jhe.2002.0047
- Parker, J., & University, K. (2008). Comparing research and teaching in university promotion criteria. *Higher Education Quarterly*, 62(3), 237-251. doi: 10.1111/j.1468-2273.2008.00393.x
- Payo, R.J., García-Moreno, J.M., Sáiz, M.C., López, M.P., & Alvear, A. (2013). Guía para el profesor tutor y el estudiante: Plan de acción tutorial de la UBU [Tutorial guide for professor and students] Burgos: Servicio de Publicaciones de la Universidad de Burgos.
- Payo, R.J., & Sáiz, M.C. (2012a). Evaluación del Programa de Acción Tutorial en la Universidad de Burgos: Propuestas de mejora dirigidas a la Orientación del proceso de enseñanza-aprendizaje [Assessment of the Tutorial Program at the Burgos University: a proposal to improve the teaching-learning process]. In E. Fernández Rodríguez & E. Rueda Antolínez (Eds.), *La educación elemento de transformación social* [Education as an aspect of social transformation] (pp. 319-326). Valladolid: AUFOP.
- Payo, R.J., & Sáiz, M.C. (2012b). El programa mentor en la Universidad de Burgos: Un estudio longitudinal [The Mentor Program at the Burgos University]. In E. Fernández Rodríguez & E. Rueda Antolínez (Eds.), *La educación elemento de transformación*



- social* [Education as an aspect of social transformation] (pp. 327-334). Valladolid: AUFOP.
- Pérez, P.R.A. (2012). Institutional arrangements for tutoring and skills development within the European Higher Education: A study from the perspective of students. *Perfiles Educativos*, 34 (137), 28-45.
- Pozo, J. I., & Del Puy, M. (2009). *Psicología del aprendizaje universitario: La formación en competencias* [The psychology of university learning: training in competences]. Madrid: Morata.
- Real Decreto 1791/2010, de 30 de Diciembre, por el que se aprueba el *Estatuto del Estudiante Universitario* [Statute of the University Student], BOE nº 318 de 30 de Diciembre de 2010.
- Retna, K. S., Chong, E., & Cavana, R. Y. (2009). Tutors and tutorials: students' perceptions in a New Zealand university. *Journal of Higher Education Policy and Management*, 31(3), 251-260. doi: 10.1080/13600800902974336
- Román, J. M. (2004). Self-regulated learning procedure for university students: the "meaningful text-reading strategy. *Electronic Journal of Educational Psychology*, 2(1), 113-132.
- Sáiz, M.C., & Payo, R.J. (2012). Autopercepción del conocimiento en Educación Superior. [The self-perception of knowledge in Higher Education]. *Revista Iberoamericana de Psicología y Salud*, 3(2), 159-174.
- Sáiz, M.C., Montero, E., Bol, A., & Carbonero, M.A. (2012). An analysis of learning-to-learning competences at the university. *Electronic Journal of Research in Educational Psychology*, 10(1), 253-270.
- Sáiz, M.C., & Román, J.M. (2011). Cuatro formas de evaluación en Educación Superior gestionadas desde la tutoría [Four Forms of Assessment in Higher Education Arranged from Tutoring Program]. *Revista de Psicopedagogía*, 16(1), 145-161. doi: 10.1387/RevPsicodidact.1116.
- Sánchez-García, M., Manzano-Soto, N., Rísquez-López, A., & Suárez-Ortega, M. (2011). Evaluación de un modelo de orientación tutorial y mentoría en la Educación Superior a distancia [Assessment of a tutorial and mentoring orientation model in Higher Education]. *Revista de Educación*, 356, 719-732. doi: 10-4438/1988-592X-RE-2010-356-119
- Tirado, M. C. B. (2009). University teaching and teaching skills. *Perfiles Educativos*, 31(125), 76-87.

- Wasserman, D. L. (2010). Using systems orientation and foundational theory to enhance theory-driven human service program evaluations. *Evaluation and Program Planning*, 33, 67-80. doi: 10.1016/j.evalprogplan.2009.06.005
- Veenman, M. V. J. (2011a). Alternative assessment of strategy use with self-report instruments: a discussion. *Metacognition and Learning*, 6, 205-211. doi: 10.1007/s11409-011-9080-x
- Veenman, M.V.J. (2011b). Learning and Self-Monitor and Self-Regulate. In R. Mayer & P. Alexander (Eds.), *Handbook of Research on Learning and Instruction* (pp. 197-218). New York: Routledge.
- Wentzel, K. R. (2005). Peer relationships, motivation, and academic performance at school. In A. Elliot, & C. Deweck (Eds.), *Handbook of competence and motivation* (pp. 279-296). New York: Guilford Press.
- Wentzel, K. R., & Watkins, D. E. (2011). Instruction based on peer interactions. In R. Mayer & P. Alexander (Eds.), *Handbook of Research on Learning and Instruction* (pp. 322-343). New York: Routledge.
- Zabalza, M.A. (2003). *Competencias docentes del profesorado universitario: calidad y desarrollo profesional* [Teaching competences in university teaching: professional quality and development]. Madrid: Narcea.