



PERCEIVED USEFULNESS OF PROJECT ORIENTED LEARNING FOR THE FORMATION OF SKILLS. APPLICATION IN THE SUBJECT

Elizabeth Jones, Department of Mathematics, Princeton University
&

James Williams , Department of English, University of Pennsylvania

Abstract

The European Higher Education Area (EHEA) and its fundamental pillar of competency-based training require the implementation of teaching that allows students to learn autonomously. The main objective of this work, of an exploratory and descriptive nature , is to determine the usefulness of Project Oriented Learning (PLO) as an active teaching methodology for the formation of competencies . The The analysis is based on the perception of 173 students of a Degree in Business Administration and Management at a Spanish university , enrolled in the subject .

« Audit of accounts » , which had to prepare and present a professional dissemination magazine on the subject . The results obtained are indicative of the effectiveness of the AOP both for the acquisition of knowledge and for the development of skills and the promotion of relevant attitudes/values. Additionally, it encourages the stimulation of creativity , with a high degree of satisfaction with to master classes. Reading this article is of interest, fundamentally, to all those

professors involved in university teaching and wanting to generate ideas to carry out innovative proposals .Introduction

In recent years , the undertaking of teaching - ~~being in a more get plan~~, autonomous work and protagonism of students has increased significantly in our country (~~As~~ and Fidalgo , 2013) . The purpose pursued with all of them is to achieve the effective integration of the Spanish university in the European Higher Education Area (EHEA) through adequate training .tion based on competencies (Martínez and Echeverría, 2009; Tejada, 2012) .

As Blanco, Jové and Reverter (2012)~~put~~ , in the process of skills training , the contents that are studied are important , but so is the methodological action that is carried out, that is, the way of approaching said contents. In this sense , some authors warn of the obligation that university professors have to modify teaching systems to ~~ad~~ a plus curricular skills that favor, among other issues, greater employability and labor mobility of students (Foncorta , 2010) .

The focus and main objective of this work is to determine the usefulness of Project Oriented Learning (PLO) as an active teaching ~~method~~ for the formation of skills in the field of Accounting, in general, and Auditing . , more particularly. Specifically, the aim is to verify whether this methodology is appropriate for students to acquire the knowledge, skills and attitudes/values established by the *International Education Standards* (IES) as fundamental for be competent in the exercise of the professional activity of the Audit. ~~This paper is~~ This paper is a Bachelor's Degree in Business Administration and Management at the University of Cantabria (Spain) is analyzed , enrolled in the subject " Account Auditing " , who participated in an innovative educational intervention. - pioneer in this area, consisting of the development and exhibition of a

professional dissemination magazine on the subject. Of particular interest is the acquisition of knowledge, the development of skills and the promotion of attitudes/values relevant to the performance of professional activity is examined . Additionally, its interest in stimulating creativity and its relationship with student satisfaction is studied .

The remainder of the work is structured as follows. After this brief introduction , the theoretical framework on the topic is briefly reviewed , focusing attention on the formation of competencies in Accounting and Auditing , and on active teaching methodologies . _ _ with special emphasis on the AOP. Next, the research questions are proposed, the teaching experience is explained, the information collection procedures are detailed, the sample of students is described and the analysis techniques used are specified. The main results obtained are presented below . Finally , we proceed with the discussion of them , pointing out the implications , limitations and lines of future research .

Theoretical framework

The formation of skills in Accounting and Auditing

Since the entry into force of the EHEA, the Spanish university system faces the challenge of demonstrating its capacity for students to obtain and develop the necessary skills for their proper insertion into the labor market (Stoner and Milner , 2010) . In this way , the concept of « competences » becomes a key element , since today the _ companies demand more

Table 1

Knowledge, skills and values, ethics and attitudes of the IES- 8

	<i>Conocimientos</i>
	Mejores prácticas en la auditoría financiera Normas Internacionales de Auditoría
	Declaraciones Internacionales sobre la Práctica de la Auditoría Otras leyes o normas aplicables a la auditoría financiera Contabilidad financiera
	Prácticas y procesos de divulgación de la información financiera Normas Internacionales de Información Financiera
	Otras leyes o normas aplicables a la contabilidad
	Sistemas de tecnología de la información para la contabilidad financiera y los procesos de divulgación de la información financiera
	Marcos para la evaluación de controles y la valoración de riesgos asociados
	<i>Habilidades</i>
	Identificación y resolución de problemas Investigación técnica
	Trabajo en equipo
	Recopilación y evaluación de evidencia Comunicación escrita
	Comunicación oral
	Aplicación de las normas y guías sobre auditoría
	Evaluación de la aplicación de las normas y guías sobre contabilidad financiera y divulgación de la información financiera

Source: own elaboration based on IFAC (2014b).

than experienced experts , competent professionals (De los Ríos, Cazorla, Díaz-Puente and Yagüe, 2010).

In this regard , there is empirical evidence that supports that employers currently operating in the Accounting and Auditing labor market consider that university graduates are not sufficiently prepared in some of the relevant skills required (



Arquero, 2000 ; Kavanagh and Drennan, 2008; Frecka and Reckers, 2010; Hancock et al., 2010; Daff, de Lange and Jackling, 2012; Pan and Perera, 2012; Tempone et al., 2012; Lin, Krishnan and Grace, 2013; Senik, Broad, Mat , & Kadir, 2013).

To try to correct this gap, the IES issued by the *International Accounting Education Standards Board* (IAESB) of the *International Federation of Accountants* (IFAC) have become an important reference . This regulatory framework defines competence as “ the ability of a person to perform a job in compliance with a certain standard in real work environments . ” Likewise, it defines capacity as " the set formed for the professional knowledge, professional skills, and professional values, ethics and attitudes required to demonstrate competence » (IFAC, 2014a , pp. 20-21). From these two definitions, it follows, therefore, that to be competent, professionals in these disciplines must be trained from three different aspects: cognitive, procedural and attitudinal.

Focusing attention on the specific field of Audit , it is necessary to refer to “ IES 8 : *Competence Requirements for Audit Professionals* ” , which has been in force since July 1 , 2008 (table 1). This standard establishes the body of knowledge (paragraphs 32 to 41), skills (paragraphs 42 to 44) and values, ethics and attitudes (paragraphs 45 to 52) required to be competent in the exercise of this professional activity (IFAC, 2014b). Many of these demands, such as communication , management of

information, problem solving, teamwork, capacity for effort or responsibility are also fundamental for improving employability in any professional field (Convention of European Higher Education Institutions , 2001 ; Eurobarómetro, 2010; Michavila, Martínez, Martín- González, García- P e ñ alvo and Cruz-Benito, 2016).

This new approach to competency-based training requires introducing important changes in the university pedagogical model . Some authors propose, with a view to their effective development, the importance of acquiring practical professional experience during undergraduate studies (Paisey and Paisey, 2010) . Now , the most widespread proposal for action is the one that supports a role more active on the part of university professors, putting into practice innovative educational interventions (see Apostolou, Hassell, Rebele and Watson, 2010 ; Apostolou, Dorminey, Hassell and Watson, 2013 and Apostolou, Dorminey, Hassell and Rebele, 2015). In the specific field of teaching _ _ _ _ University of Accounting and Auditing , there are various opinions that defend the need to introduce methodological changes that affect both the contents to be taught and the evaluation methods and the use of appropriate pedagogical innovations that allow students develop professional skills specific to the area of knowledge (Gandía, García and Vico, 1996; Porter and Carr, 1999; Demski and Zimmerman, 2000; Arquero, 2000; Burnett, 2003; Gandía and Montagud, 2011; Gómez- Ruiz and Naranjo-Gil, 2011; Pascual Ezama, Camacho M i ñ ano, Urquía Grande and Müller, 2011).

For the purposes of the work presented here , the most important part of this literature review rests on two essential points , recently highlighted by Abayadeera and Watty (2014) . Firstly , there is a need to expand the curriculum in the specialty of

Accounting and Auditing _ _ _ through the inclusion and evaluation of activities for the formation of skills (Lawson et al., 2014; Arquero, Fernández-Polvillo, Hassall and Joyce, 2017). And secondly, that to achieve this objective it is vital to find the appropriate educational methodologies and, of course, train university professors so that they can carry them out successfully (Luengo, Luzón and Torres, 2008; Hopper, 2013).

*Active teaching methodologies : Project **Oriented** Learning _ _ _*

The promotion in Spain of the use of active participation methodologies in the field of university teaching is justified by the support that they have received from different national public bodies (Ministry of Education and Science , 2006) and international organizations (UNESCO, 1998). In the specific field of Accounting and Auditing it has not been immune to this , and this support has also been given by various professional corporations related to the subject (AAA, 1986; AICPA, 1999 ; IFAC, 2003) .

There are many authors who defend the usefulness of teaching innovation for the development and strengthening of skills and the increase in the academic performance of students in the accounting area . Some of the most widely analyzed methodologies are Problem - Based Learning (Adler and Milne, 1997; Breton, 1999; Stanley and Marsden, 2012) , Cooperative Learning (Cottell and Millis, 1992), the Method of Case (Stewart and Dougherty, 1993; Azofra, Prieto and Santidrián, 2004; Hassall and Milne, 2004; Carrasco and Donoso, 2008) and Peer Learning (Adler and Milne , 1997; Dobbie and Joyce, 2008). There are even

those who advocate the simultaneous use of several of them (Saudagaran, 1996; Gandía and Montagud, 2011).

This work , however, focuses on the AOP, a methodology that, although it has not been sufficiently tested in the field that concerns us, it has shown positive effects in other branches of knowledge, such as education, engineering and mathematics (Boaler , 1999; Liu and Hsiao, 2002; Frank, Lavy and Elata, 2003; Chinowsky, Brown, Szajnman and Realph, 2006; Gülbahar and Tinmaz, 2006; De los Ríos et al., 2010). Various authors defend that AOP is a particularly effective methodology for developing skills in solving real-life problems, but without leaving aside , the acquisition of knowledge and the promotion of useful attitudes and values that favor the insertion of students into the labor market and their ability to learn throughout life (Willard and Duffrin , 2003 ; Olivares and Fidalgo , 2013 ; Carrasco, Donoso, Duarte, Hernández and López, 2015). In particular, it is shown that this methodology reinforces several of the competencies established as fundamental according to the IES- 8 , such as the acquisition of knowledge , oral and written communication , critical thinking , teamwork , planning and management _ of time and individual and group responsibility , among others (De Miguel, 2006) .

The AOP is characterized by being based on action-oriented experiential learning. In this sense, it is proposed that students work autonomously in carrying out a specific real project during a certain period of time. The final objective can be diverse, from solving a problem to providing a service or creating a product. In any case, the planning, design and execution of a series of activities is required in which it is necessary to apply the learning acquired and effectively use the resources available (De



Miguel, 2006). . That is , throughout _ _ Throughout the entire process , they must solve relevant and very different problems through reflection, debate, and data collection and analysis, generating their own ideas and putting them into practice (Blumenfeld et al., 1991; Mettas and Constantinou, 2007). .

Research questions

Once the choice of AOP as a teaching methodology for promoting skills in the area of Accounting , in general , and Auditing , more particularly , has been justified , the following research questions are posed, according to the triple aspect referred to in the previous section:

PI₁ : Is AOP useful for students' acquisition of knowledge?

PI₂ : Is AOP useful for the development of skills by students ?

PI₃ : Is the AOP useful for promoting attitudes/values on the part of students?

Additionally, and given the particularities of the teaching experience described in the next section, it is also of interest to evaluate, in a complementary way, the effect on creativity and student satisfaction, as well as the influence of sex and age . personality type on the grades obtained, so the following research questions are added :

PI₄ : Does AOP promote student creativity ? _ _ PI₅ : Does AOP promote student satisfaction ? _ _

PI₆ : Are there significant differences in academic results when considering the sex and personality type of the students?



Contextualization and methodology

Description of the experience

The project to be carried out by the students consisted of the design , elaboration and exhibition of an issue of a professional dissemination magazine . This was carried out within the subject



« Account audit » , of the Degree in Business Administration and Management at the University of Cantabria (Spain) , during the 2015/2016 academic year. It is taught in the first semester of the last year of the degree, has 6 ECTS credits and is mandatory.

The project was developed over a period of approximately four months, during the teaching of the subject between September 2015 and January 2016. The magazines were prepared in teams formed at the beginning of the semester by the students themselves . In total, 41 teams were created made up of 2, 3, 4 or 5 people.

The magazine had to have three contents determined in advance by the teachers: 1) a personal interview of the entire team with a professional working in the Audit; 2) an article on the evolution of the Audit situation in Spain in the last five years , and 3) an article on the internal control system of a real company or business. Furthermore, the magazine had to be complemented with everything that the students considered it appropriate to introduce freely and in accordance with the contents of the subject, such as : interviews with other types of professionals related to Accounting and Auditing, articles on other current topics, commented current news, columns of opinion, job offers , internship grants, training courses, hobbies, advertising, etc.

During the semester , a total of six class hours were dedicated to seminars and workshops, in addition to the four hours of official weekly tutorials . The objective was to dedicate time for personalized attention and monitoring to each team that would serve to clarify doubts and build learning through interaction . of the students with the teaching team of the subject, made up of four teachers , in such a way that they assumed the role of instructors, counselors, facilitators and motivators (Donnelly



and Fitzmaurice, 2005).

The weight of the project in the final grade of the subject was 40 %, distributed as follows : 30% the contents of the magazine and 10% its exhibition. The other 60% were evaluated continuously through three partial theory and practice exams.

In relation to the evaluation of the project, in which the entire teaching team of the subject participated, three fundamental aspects should be highlighted:

- The qualifications were made through rubrics, both of the contents included in the magazine and its public exhibition (see Annex 1). In their preparation , we had the guidance and help of two professors from the area of Research Methods and Diagnosis in Education of the Faculty of Education of the same university .
- The evaluation of the magazine's contents was carried out at two different moments in time . A first time , after the deadline given for the first delivery and before the dates established for the exhibition. The results of this first evaluation are discussed personally in the classroom with the students immediately after each presentation. A second time, fifteen days after having exposed the magazine, after the students would have attended to the comments and observations incorporated in the rubrics.
- The students themselves also participated in the evaluation , through a co-evaluation instrument applied to each of the team members (see Annex 2). In its preparation, we had the guidance and help of a professor from the School of Education, Humanities and Social Sciences of the Institute of Technology and Higher Studies of Monterrey (Mexico).
- *Data collection* _

Information collection was carried out at different moments in time through different instruments . Each of them is referred to specifically and chronologically below : _

- *Personality test.* At the beginning of the course, the Myers-Briggs Typological Inventory (MBTI) was applied nominatively and in person in the classroom. Specifically, form G was used, composed of 126 different items and obtained from the Spanish adaptation of the « Manual : *Aguide to the development and use of the Myers-Briggs type indicator* » carried out by TEA Editions, SA (1995). This test is one of the most widely used to measure personality preferences in the international scope (Briggs, Copeland and Haynes, 2007), having been validated in previous studies carried out in Spain (Montequín, Balsera, Fernández and de Cos Juez , 2010 ; Alberola, de Lval, ~~Sánchez~~ Anguix and Julián , 2016). Thus, its application in Accounting and Auditing education is no exception (see, among others, Wolk and Nikolai, 1997; Wheeler, 2001; Briggs et al., 2007). Its objective is to classify individuals into 16 different personality types, which result from the possible combinations between four bipolar scales: extraversion-introversion, sensation-intuition, thinking-feeling and judgment-perception (Briggs-Myers, 1995) .). To do this, it presents a forced choice format for each element, which is why it is requested subjects to choose between two alternative words or statements that imply preferences for one side or the other of each dimension . The reliability and validity of this instrument have been exhaustively tested in the literature (Harvey, 1996; Nunnally and Bernstein, 1994; Wheeler, 2001).

- *Co-evaluations.* One of the magazines , after the presentation of the work by

each team , the evaluation forms of each student were collected anonymously from the remaining classmates in their group (see Annex 2) . From the results obtained, a correction factor was obtained that was used, based on the team's grade, to grade the students individually.

- *Self-administered questionnaire.* At the same time as the co-evaluations, the ~~subs~~ also anonymously submitted their answers to a series of questions formulated in order to measure the degree of usefulness and satisfaction that, from their own perspective , the elaboration , design , o and exposure of the magazine in the process of teaching - ~~ling~~of the subject . This questionnaire was structured in seven blocks: 1) five questions on personal issues —sex, age , year of starting university, subjects pending completion and average grade on the academic record—, 2) ten specific knowledge about Audit that they tried to address in the magazine; 3) twenty-four relevant skills in Auditing;
- 4) sixteen relevant attitudes/values in Auditing; 5) nine questions related to the promotion of creativity; 6) twenty-two questions related to the student's satisfaction in the development of the work, and 7) ten questions about other aspects —points assigned to the work in the entire subject, teamwork, format of the work and other observations (positive and negative)—. The answers to the questions related to knowledge, skills, attitudes/values, creativity and satisfaction (blocks 2 to 6) were measured using a Likert-type scale from 1 (minimum) to 5 (maximum) points. The questions about competencies were formulated based on the review of international regulations and the previous literature referred to above. Regarding questions about creativity and _ _ _ satisfaction, the items included were adapted to the characteristics that define the teaching experience carried out , taking into consideration

Table 2

Profile of the student sample _

Sexo	Mujeres	61,4%
	Hombres	38,6%
Edad (mínima, máxima y media)	Aprobado	58,7%
		2; 20; 8,8
Asignaturas para acabar		

some previous reference empirical works on both topics (see, for example, Wu, Tennyson and Hsia, 2010; Yeh, Yeh and Chen, 2012; Folgueiras, Luna and Puig, 2013).

- *Ratings*. After the correction of the magazines, in their first and second installment, and the evaluation of the exhibitions, Data was obtained on the qualifications of both the team as a whole and each of its members individually (applying co - evaluations).
- *FocusGroup*. Once the subject was finished and the minutes were issued , æselection was made among all the participating students , trying to obtain a heterogeneous group based on the following questions : sex, morning and afternoon classes , grades and penalty or no of teammates through co - evaluations . _ _ _ _ It was possible to bring together a total of nine students who participated in a dynamic moderated by one of the subject teachers, lasting approximately two hours . Based on four guiding questions , and with balanced intervention by all of them, an attempt was made to delve deeper into the advantages and disadvantages of the work

carried out .

Sample Description _ _

The analysis group is made up of 173 students who participate voluntarily and represent 94.5% of the total. They carried out the work of the magazine, which amounted to 183 students, organized into 41 teams. Table 2 shows some of their basic characteristics that serve to define the profile of the sample . _

The personality test was taken by 160 students, of which 58.8% were women. The majority personality type is ESPJ (extraversion, sensation, thinking, judgment) , which is present in 30.5% of students , followed by ISPJ (the same, but with introversion) , which occurs in 18.9 % . of the cases. For the purposes of subsequent complementary analysis , the distribution of the bipolar scales is as follows: extraversion (61.9%) and introversion (38.1%), sensation (75.6%) and intuition (24.4%), thinking (76.3%) and feeling (23.8%), and judgment (73.7%) and perception (26.3%).

In relation to the grades obtained, the following should be noted: the average grade of all the journals in their first delivery is 7.1 (with a minimum of 3 and a maximum of 10) ; three out of four teams made improvements and a second delivery, resulting in a final average grade of 8.3 (with a minimum of 6 and a maximum of 10) ; the average score of all _ exposures was 8.2 (with a minimum of 4 and a maximum of 10) .

Data analysis techniques _ _



The analysis of results is carried out in the next section, following the research questions posed . For numerical data , different statistical techniques are used, fundamentally the study of means and standard deviations, as well as the univariate general linear model (GLM) of analysis of variance of one and two factors to examine the relationships between the dependent variables and the characteristics of the students. For all this

Table 3

Knowledge

Variables	(H	D	t
descending	order	al	e	y
according	to	f	v	p
mean)			.	.
Relevance	of	3.	0.	
control		9	9	
mechanisms _ _		4	5	
		*	3	
		*		
		*		
internal	in			
companies				
Utility of the audit		3.	0.	
		8	8	
		8	6	
		*	8	
		*		
		*		
Social and public		3.	0.	
interest	function	8	8	



of the _	6	7
	*	4
	*	
	*	
audit		
Audit objective _	3.	0.
—	8	8
	6	8
	*	7
	*	
	*	
Requirements to	3.	1,
be able to be an	8	0
auditor in Spain	6	1
	*	0
	*	
	*	
Types of auditors	3.	0.
in Spain	8	9
	4	3
	*	0
	*	
	*	
Type of audit	3.	0.



Vol. 1 No. 1 (2013)

work in Spain _	8	9
	2	0
	*	7
	*	
	*	
Representative	3.	0.
auditor	8	9
corporations _	1	6
	*	7
	*	
	*	
in Spain		
Billing of auditors	3.	0.
and companies _	7	9
	4	6
	*	1
	*	
	*	
audit in Spain		
Contents included	3.	0.
in the new Law of	4	9
	7	5
	*	1
	*	

*

Account Audit _

Average values on a Likert scale of 1 to 5 points. All the means obtained are significantly different from the neutral point 3 (T test for one sample:

*** $p < 0.01$).

SPSS v.22 program is used. In addition, the qualitative information obtained from the open - response questions of the self-administered questionnaire and the Focus Group is analyzed with the support of the NVivo v.11 program. This software helps compile, organize and analyze content from surveys, interviews, focus group discussions, audio, social media and web pages , as It has powerful search, query and visualization tools. Once the information is entered and coded, patterns can be identified, emerging themes discovered, and word frequency queries, for example.

Results

Impact on skills development _ _

This section analyzes the results obtained with the experience on the development of competencies in the participating students : knowledge, skills and attitudes/values.

Knowledge (PI_1)

In relation to the acquisition of knowledge (table 3), the creation of the magazine fundamentally helped the students to learn about the relevance of internal control mechanisms in companies . In addition, they were able to reinforce what was explained in the master classes about the usefulness, the social function , the public interest and the objective of the audit.

When comparing the responses according to the previous academic performance and the sex of the students, no statistically significant difference was obtained.

Skills (PI_2)

Regarding the development of skills (table 4), the students consider that they were mainly able to reinforce their ability to work cooperatively as a team and to interview people . In addition, five other skills obtain an average rating above 4 , such as organizing yourself to meet deadlines, having an open mind, thinking innovatively, reviewing the work done, and making an effort and being consistent

Comparing the responses according to previous academic performance , statistically significant differences were only obtained for written communication, with the average rating being higher for students with a notable or outstanding academic record (4.08) compared to those with a passing grade (3.08) . 82). When considering sex, a greater number of statistically significant differences were obtained .

Table 4

Skills

Variables (descending order according to mean)	H	D
Work cooperatively as a team _	4.29*	0.88
Interview people _	4.26*	0.74
Get organized to meet deadlines _	4.08*	0.48



	*	
	*	
fixed		
Have an open	4.	0.
mind	0	8
	6	9
	*	7
	*	
	*	
Think	4.	0.
innovatively _ _	0	9
	3	3
	*	0
	*	
	*	
Review the work	4.	0.
done	0	8
	3	5
	*	2
	*	
	*	
Try hard and be	4.	0.
consistent	0	9
	2	4



Vol. 1 No. 1 (2013)

	*	3
	*	
	*	
Manage time _	4.	0.
	0	9
	0	1
	*	5
	*	
	*	
Manage available	4.	0.
resources _	0	8
	0	7
	*	9
	*	
	*	
Use computing _	3.	0.
	9	9
	7	6
	*	4
	*	
	*	
Propose solutions	3.	0.
to specific	9	8
problems	6	7



Vol. 1 No. 1 (2013)

	*	2
	*	
	*	
Apply your	3.	0.
personal criteria or	9	8
judgment	5	6
	*	8
	*	
	*	
Lead , motivate	3.	0.
and influence	9	8
other people	4	4
	*	0
	*	
	*	
Search and	3.	0.
analyze	9	8
information	4	8
	*	7
	*	
	*	
Reason and	3.	0.
analyze critically _	9	8
_	4	7



	*	0
	*	
	*	
Communicate	3.	0.
effectively orally	9	8
--	4	9
	*	7
	*	
	*	
Anticipate	3.	0.
problems and plan	9	8
--	3	4
	*	2
	*	
	*	
possible solutions		
Communicate	3.	0.
effectively in	9	8
writing	2	5
	*	6
	*	
	*	
Actively listen	3.	0.
	9	8



Vol. 1 No. 1 (2013)

	1	6
	*	4
	*	
	*	
Delegate tasks	3.	0.
	8	9
	7	6
	*	4
	*	
	*	
Learn continuously	3.	0.
--	8	9
	3	0
	*	3
	*	
	*	
Consult specialists	3.	0.
to resolve	7	9
	7	1
	*	8
	*	
	*	
issues		
Negotiate	3.	1,

	5	1
	7	0
	*	1
	*	
	*	
Be aware of	3.	1,
cultural	3	1
differences	9	4
	*	4
	*	
	*	
and languages _		

Average values on a Likert scale of 1 to 5 points. All the means obtained are significantly different from the neutral point 3 (T test for one sample:

*** $p < 0.01$).

significant, with women giving a higher score to ten of the twenty-four variables considered (table 5).

Regarding the promotion of attitudes/values (table 6), students especially highlight creativity and commitment, followed by responsibility, truthfulness, loyalty and respect .

Comparing the responses according to previous academic performance, no statistically significant difference was obtained. When considering sex , a greater number of statistically significant differences were obtained , with women giving a higher score to nine of the sixteen variables considered (table 7) .

Table 5

Differences in skills according to sex

Variables	W	M	N
	o	a	e
	m	n	x
	e		t
	n		.
Search and	4	3	0
analyze	.	.	.
information	0	7	0
	8	4	1
			6
Propose	4	3	0



solutions to	.	.	.
problems	0	7	0
	9	6	1
			6
specific			
Try hard and	4	3	0
be consistent	.	.	.
	1	8	0
	6	0	1
			5
Have an open	4	3	0
mind	.	.	.
	1	8	0
	9	6	2
			0
Communicate	4	3	0
effectively in	.	.	.
writing	0	7	0
	8	0	0
			5
Be aware of	3	3	0
the differences	.	.	.
	5	1	0
	5	4	2



			1
cultural and			
language _			
Actively listen	4	3	0
	.	.	.
	0	7	0
	1	4	4
			8
Review the	4	3	0
work done	.	.	.
	1	8	0
	5	5	2
			3
Think	4	3	0
innovatively _	.	.	.
_	1	8	0
	6	5	3
			1
Manage	4	3	0
available	.	.	.
resources _	1	8	0
	3	0	1
			6



Average values on a Likert scale of 1 to 5 points. Statistically significant differences (one-way ANOVA: $p < 0.05$).

Table 6

Attitudes/Values

Variables	a	h	H	D	t
(c	a	al	e	y
descendi	c	l	f	v	p
ng order	c	f		.	.
	r)			
	d				
	i				
	n				
	g				
	t				
	c				
Creativity	4.22	***		0.	
				8	
				7	
				7	
Commitm	4.20	***		0.	
ent				9	
				4	
				0	



Vol. 1 No. 1 (2013)

Responsi bility	4.08 ***	0. 8 6 3
Veracity	4.05 ***	0. 8 8 8
Loyalty	4.03 ***	0. 9 7 0
I respect	4.01 ***	0. 9 2 8
Toleranc e	3.99 ***	0. 9 6 1
Integrity	3.98 ***	0. 9 4 0



professional judgment	3.97 ***	0.885
Honesty	3.97 ***	0.977
Service attitude _	3.95 ***	0.920
Reflection capacity _	3.94 ***	0.903
Solidarity	3.92 ***	1.003
Proactivity	3.89 ***	0.897

Professio	3.88 ***	0.
nal		8
skepticis		8
m		4
Internatio	3.55 ***	1,
nalization		1
		8
		6

Average values on a Likert scale of 1 to 5 points. All the means obtained are significantly different from the neutral point 3 (T test for one sample:

*** $p < 0.01$).

Impact on creativity and satisfaction _ _

This section analyzes the results obtained with the experience on the creativity and satisfaction of the participating students.

Creativity (PI_4)

Trying to delve into the elements that contributed to the promotion of creativity (table 8) , the students emphasize, above all, what is related to the magazine 's exhibition , in which through the rubrics they were given the possibility of rely on material means, other people outside the team and audiovisual means, obtaining in

the case of doing so a greater qualification. Additionally, they value positively that they are given total freedom when choosing the way to present the work .

Comparing the responses according to previous academic performance, statistically significant differences were only obtained for the possibility of adding value to the magazine 's exposure with the support of audiovisual media , with the average rating being higher for students with a notable academic record . or outstanding (4.28) compared to those passing (4.00). When considering sex, statistically significant differences were obtained for the possibility of adding value to the magazine 's exhibition with the support of both audiovisual and material means , with women giving higher ratings (4.29 compared to 3.83 in the first case and 4.36 compared to 3.88 in the second).

Satisfaction (PI₅)

Regarding the degree of satisfaction of the students , firstly they were asked the two questions specified _ _ _ _

Table 7

Differences in attitudes/values according to sex

Variables	W	Ma	N
	o	n	e
	m		x
	en		t



			.
I respect	4.	3.7	0
	14	9	.
			0
			1
			5
Loyalty	4.	3.8	0
	15	3	.
			0
			3
			6
Tolerance	4.	3.6	0
	20	7	.
			0
			0
			0
Creativity	4.	4.0	0
	35	3	.
			0
			2
			2
professional	4.	3.7	0
	10	6	.
judgment			0

			1
			3
Professio	3.	3.7	0
nal	99	1	.
skepticis			0
m			4
			2
Internatio	3.	3.2	0
nalization	74	4	.
			0
			0
			7
Veracity	4.	3.8	0
	17	3	.
			0
			1
			5
Service	4.	3.7	0
attitude _	07	6	.
			0
			3
			2

Average values on a Likert scale of 1 to 5 points. Statistically significant differences (one-way ANOVA: $p < 0.05$).

Table 8

Creativity

Variables (descending order according to mean)	H	D
Possibility of adding value to the exhibition	4 .1 1 7 *	0. 8 6 8 *
of the magazine with the support of media materials		
Possibility of adding value to the exhibition	4 .1 1 3	0. 9 4 6



*

*

*

of the magazine
with the support of
other people
outside the team

Possibility of 4 0.
adding value to the . 8
exhibition 1 9

2 7

*

*

*

of the magazine
with the support of
media
audiovisual

Total freedom 4 0.
granted when _ _ . 9
_ _ _ 0 7

8 6

*

*



*

choose the way to
display the
magazine

" Free content " 4 0.
section , which . 9
allows _ 0 4

2 3

*

*

*

include
differentiating
elements and
contents of interest
to oneself
student

Contact with 3 0.
auditors or others . 9
_ 9 6

7 7

*

*

*



professionals

outside the subject

, who

They provide a

complementary

vision to the

received by

teachers in the

classroom _

Work 3 0.

cooperatively with . 9

others _ _ 9 7

6 5

*

*

*

classmates , which

allows generating ,

share and contrast

ideas

Own « magazine » 3 1,

format , which . 0

allows 9 1

2 7



	*
	*
	*
further customize	
the _ _	
job content _	
Have been able to	3 1,
consult the works	. 0
	7 8
	8 0
	*
	*
	*
made by the	
companions of the	
year	
past, which allows	
developing new	
ideas from them _	
_	

Average values on a Likert scale of 1 to 5 points. All the means obtained are significantly different from the neutral point 3 (T test for one sample:

*** $p < 0.01$).

in table 9 . _ As can be seen , the participants show a relatively high level of agreement that the realization of the magazine increased his interest in Auditing and his preference for AOP over master classes . When comparing the responses according to the previous academic performance and the sex of the students , no statistically significant difference was obtained .

The aspects that help to explain this satisfaction to a greater extent are located in the upper part of table 10 . Above the others , two issues directly related to the magazine 's rating stand out . On the one hand , that they maintain their grade for the extraordinary September call in case of not passing the subject in the ordinary February call . On the other hand, they are given the possibility of improving the content of the magazine within a period of 15 days after its presentation , once feedback from the teachers has been obtained . Additionally , it is observed that six other variables They obtain an average rating higher than 4 on the Likert scale , placing a greater positive emphasis on the satisfaction that comes from having had contact with professional reality through the interview with the auditor . _ have been able to form the work teams themselves and

Table 9

Satisfaction (I)

Variables	(H	D	t
-----------	---	---	---	---

descending order	al	e	?
according to	f	v	1
mean)		.	.
The creation of the	3.	1,	
magazine has	6	1	
increased my	4	8	
interest in the	*	1	
subject	*		
I prefer this	*	1,	
methodology		2	
teaching/learning	3.	8	
than traditional	6	5	
master classes	3		
	*		
	*		
	*		

Average values on a Likert scale of 1 to 5 points. All the means obtained are significantly different from the neutral point 3 (T test for one sample:

*** $p < 0.01$).

Table 10

Satisfaction (II)

Variables (descending order according to mean)	H	D
Maintenance of the magazine note for _ _	4.26*	0.893
the september call _		
Possibility of improving the content of the	4.20*	0.902
magazine within 15 days _ _ _		



Vol. 1 No. 1 (2013)

Interview with the	4.	0.
Account Auditor	1	8
	7	4
	*	0
	*	
	*	
Team formation	4.	0.
ourselves _ _ _	1	9
	7	0
	*	5
	*	
	*	
Explanations	4.	0.
given by teachers	1	7
after _ _	6	9
	*	0
	*	
	*	
magazine		
exhibition _ _		
Relationship with	4.	1,
other team	0	0
members _ _	8	3
	*	1



	*	
	*	
Free magazine	4.	1,
content _ _	0	0
	5	3
	*	0
	*	
	*	
Help provided by	4.	0.
teachers during _ _	0	8
	3	8
	*	5
	*	
	*	
preparation of the		
magazine		
Peer evaluation _ _	3.	0.
	9	9
	8	9
	*	4
	*	
	*	
Exhibition	3.	0.
evaluation rubric _	9	9



— — — —	1	2
	*	3
	*	
	*	
magazine		
Rubrics for	3.	0.
evaluating the	9	9
content of the	0	0
	*	6
	*	
	*	
magazine		
The three points of	3.	1,
the final grade of	8	0
the	9	5
	*	4
	*	
	*	
subject assigned to		
the content of the		
magazine		
Instructional guide	3.	0.
with guidelines for	8	9
—	7	5



	*	8
	*	
	*	
preparation of the magazine		
Time spent	3.	1,
preparing _ _ _ _	8	0
	6	0
	*	8
	*	
	*	
magazine exhibition _ _		
The point of the	3.	1,
final grade of the	8	0
subject	5	7
	*	4
	*	
	*	
assigned to magazine exhibition _ _ _		
Instructional guide	3.	0.
with guidelines for	8	9



Vol. 1 No. 1 (2013)

—	4	3
	*	6
	*	
	*	
magazine		
exhibition _ _		
Analysis of	3.	0.
control	7	9
mechanisms _ _	9	6
	*	3
	*	
	*	
internal in		
companies		
Time spent	3.	1,
preparing the _ _ _	7	0
	7	6
	*	8
	*	
	*	
magazine		
Seminars	3.	1,
dedicated in	7	0
classes to	5	3

	*	7
	*	
	*	
magazine follow		
up _		
Analysis of the	3.	1,
evolution of the	4	0
situation of the	1	2
	*	5
	*	
	*	
Account Audit in		
Spain _		

Average values on a Likert scale of 1 to 5 points. All the means obtained are significantly different from the neutral point 3 (T test for one sample:

*** $p < 0.01$).

having received comments and observations directly from the teachers after the presentation of their work.

Comparing the responses according to previous academic performance,

statistically significant differences were only obtained for the free content of the magazine and the help provided by the professors during the completion of the work, with the average rating of students with an academic record being higher. of notable or outstanding versus those of approved (4.28 versus 3.89 in the first case and 4.23 versus 3.91 in the second) . When considering sex , _ obtained statistically significant differences in three of the twenty variables considered, with women giving a higher score to nine of the sixteen variables considered (table 11) .

Table 11

Differences in satisfaction according to sex

Variables	W	M	N
	o	a	e
	m	n	x
	e		t
	n		.
Free content of the magazine	4	3	0
	.	.	.
Maintaining the magazine note	1	8	0
	8	3	3



for	4	4	2
the September	.	.	0
call Possibility of	3	0	.
improving the	8	8	0
content of the			3
magazine within	4	4	0
15 days _ _ _	.	.	
	3	0	0
	3	0	.
			0
			1
			9

Average values on a Likert scale of 1 to 5 points. Statistically significant differences (one-way ANOVA: $p < 0.05$).



Technology Journal of Management , Accounting and Economics (TECH)

ISSN: 2311-3995

Vol. 1 No. 1 (2013)

Table 12

Mean differences in grades according to sex

Variables	W	M	N
	o	an	e
	m		x
	e		t.
	n		
Magazine	7	6.	0
rating	.	47	.
(issue 1)	5		0
	5		0
			0
			*
			*
			*
Magazine	8	7.	0
rating	.	56	.
(delivery 2)	6		0
	5		0
			0
			*
			*

			*
Exhibition	8	7.	0
rating	.	93	.
	4		0
	3		6
			7
			*
			*
Final	8	7.	0
overall	.	51	.
rating	4		0
	2		0
			0
			*
			*
			*

Average grade values between 0 and 10 points. Statistically significant differences (two-way ANOVA: ** $p < 0.05$; *** $p < 0.01$).

Differences in ratings according to sex and personality type (PI 6)

This section briefly presents the main differences in the analysis of the final

grades obtained when taking into consideration the sex and personality type of the students . Regarding the first of these attributes , it is clearly observed that it is women who obtain better academic results , producing statistically significant differences in the case of the magazine 's notes , in its first and second installment, as well as the final overall note (table 12).

When considering the personality type of the students, statistically significant differences were only obtained in the case of the magazine 's exhibition grade for the bipolar scale referring to extraversion - introversion, with the students having an extroverted attitude . those who obtain a better academic result (table 13).

Regarding the intersection of both attributes, there are only statistically significant differences in the magazine 's score in its second issue, such that extroverted women obtain better results than introverted women (8.77 and 8.37, respectively).) and introverted men obtain better results than extroverted men (7.85 and 7.26, respectively).

Other aspects of interest derived from teaching experience _

Along with the above, the answers to the open questions of the questionnaire and the assessments made in the Focus Group are also analyzed. This is done with the objective of providing additional qualitative information that allows complementing and enriching the numerical results obtained. Below are the distributions of the keywords most mentioned by students, as well as their most representative comments, about the positive and negative aspects of the teaching experience in which they participated.

Figure 1 shows the main positive aspects highlighted by the students about their

participation in this experience. teaching experience. Mainly, the focus is on the usefulness of this activity to promote teamwork and to have contact with professional reality, also emphasizing its innovative and original nature. The contributions of two students are transcribed below and serve to summarize the main ideas in this regard:

Table 13

Mean differences in ratings according to personality type _

Variables	int	Ex	N
	ro	tra	e
	ve	ver	x
	rsi	sio	t
	on	n	.
Magazine	6.	7.	0
rating	91	23	.
(issue 1)			2
			2
			5
Magazine	8.	8.	0
rating	08	28	.
(delivery			4
2)			3
			0

Exhibition	7.	8.	0
rating	80	48	.
			0
			1
			3
			*
			*
Final	7.	8.	0
overall	80	19	.
rating			1
			2
			8

Average grade values between 0 and 10 points. Statistically significant differences (two-factor ANOVA: ** $p < 0.05$).

- As a project I find it original and different from the rest of the work that we must do in other subjects. This increases the level of interest and dedication when working.
- I liked being able to complete the subject by completing this work or project in the form of a magazine, since in this way you learn things and ways of doing things that you can use in your professional life.

Figure 2 shows the main negative aspects highlighted by the students about their participation in this teaching experience. It mainly refers to the excessive workload

that it entails, as well as the difficulties in coordinating, organizing and collaborating with teammates and in completing the work in magazine format The contributions of three students are transcribed below and serve to summarize the main ideas in this regard:

- I consider that it requires a lot of time and effort for such a low percentage of the total subject.
- It takes an excessive amount of time and sometimes is complex to balance schedules with colleagues to carry out some parts.
- The magazine format is quite difficult to fit using Word. Some free program could be provided to facilitate the adaptation of the format.

Discussion of the results

Implications

This work provides additional empirical evidence that coincides with previous research that maintains that active teaching methodologies that imply more demands, activity and autonomy for students, such as AOP in this specific case, are the ones ~~in~~ They have greater effectiveness in the formation of skills (Robledo, Fidalgo, Arias and Álvarez, 2015). The teaching experience has ~~been~~ carried out in Spain within the field of Business Administration and Management, although its approach and development are perfectly transferable to any area of knowledge, where there have

recently been experiences with very similar positive results (Ausín, Abella, Delgado and Hortigüela , 2016; Costa, Puig and Blesa, 2016; González, Castro, González and Cendón, 2016).

Specifically , the results obtained are indicative that the AOP is useful for the development of a set of knowledge, skills and attitudes/values that, according to previous literature and international regulations, are relevant in the field of Audit . (Arquero, 2000; Kavanagh and Drennan, 2008; Frecka and Reckers, 2010; Hancock et al., 2010; Pan and Perera, 2012; Tempone et al., 2012; IFAC, 2014a, 2014b). Additionally, its contribution to stimulating student creativity in university classrooms is evident, something that is being increasingly demanded from the professional field (Expansión , 2016) . Additionally, the degree of satisfaction from the students themselves, an issue that has been widely investigated in recent years as it is related to motivation and academic performance (Elliott and Shin , 2002) . ; Sinclaire, 2011).

Despite all this , this methodology , as designed in this subject , ~~do~~ has some drawbacks from the point of view of the students , such as the time it takes and the workload it entails , the ~~plus~~ of coordination , organization and collaboration between colleagues within the team and the computer difficulties to materialize the work in format . magazine. Furthermore, from the teachers' perspective it is difficult to provide adequate individual follow-up to each and every one . one of the students before such large groups (between 150 and 200 people each course). A large investment of time and effort is required in planning, organization , supervision and evaluation, which in the framework of a university system like the current one is not entirely " profitable . " However , for all those teachers involved in university teaching and wanting to carry out innovative proposals , the AOP is a useful and

highly satisfactory methodology in order to see how students truly value the effort made and learn to cope with carrying out diverse and complex tasks . long distance with support _ collaborative work.

Limitations and future lines of research

All of the above must be interpreted with the necessary caution , as there are mainly two limitations in the study carried out. On the one hand , the teaching experience has been carried out in a specific subject, degree , university and academic year , so the extrapolation of the considerations made to areas different requires obtaining additional evidence. On the other hand, the analysis of the results is solely based on the perception of the participating students, although it is true that their opinion regarding the teaching- learning processes is essential to understand and improve the reality of the way - university training (Struyven, Dochy and Janssens, 2005), and that there are current relevant publications based exclusively on this methodology (Molina, Valencia and Suárez, 2016).

From the discussion of the results and these limitations, some lines of current and future work emerge. Firstly, the teaching experience is being repeated in successive academic years, with the aim of accumulating data that allows for a longitudinal study that provides greater consistency and robustness to the results. The results could also be evaluated using an alternative validated questionnaire that measures the perception of the effectiveness of the AOP from another approach (Carrasco et al., 2015). Besides, It would be advisable to open joint collaboration fronts with other research groups and other areas of knowledge , in order to ratify the transferability of the teaching experience to other subjects and disciplines. It would also be interesting to compare the effectiveness of AOP for the training of Audit competencies

against other active teaching methodologies , such as Based Learning . in Problems, Research-Based Learning or Case Studies. Finally, another suggestive future line would be to obtain information on the points of view of other groups involved, such as university professors and professionals practicing Audit.

Bibliography

Archer, J. L. (2000). Non- technical capabilities in the professional profile in Accounting: the opinions of teachers and professionals. Spanish Journal of Financing and Accounting , 29(103) , 149–172 .

Arquero, JL, Fernández-Polvillo, C., Hassall, T. and Joyce, J. (2017). Relationships between communication apprehension, ambiguity tolerance and learning styles in accounting students. Spanish Accounting Review , 20 (1), 13–24.

Ausín, V., Abella, V., Delgado, V. and Hortigüela, D. (2016). Project-based learning through ICT An experience of teaching innovation from university classrooms. University Training , 9 (3), 31–38.

Azofra, V. T., Prieto, B. and Santidrián, A. (2004). Empirical verification and the case method : Review of some experiences in management accounting in light of its methodology . _ Spanish Journal of Financing and Accounting , 33(121) , 349–378 .
Blanco, P., Jové, M. C. and Reverter, J. (2012). Strategic paradigm for the development of competency skills Descriptive study on the variability in the perception of competency skills of 40 physical education students _



in initial training phase . Education XXI , 15 (2), 231–248.

Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M. , & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. Educational Psychologist , 26 (3-4), 369–398.

Boaler, J. (1999). Mathematics for the moment, or the millennium. Education Week ,



Abayadeera, N. and Watty, K. (2014). The expectation-performance gap in generic skills in accounting graduates: Evidence from Sri Lanka. Asian Review of Accounting , 22 (1), 56–72.