

# Effects of a Service-Learning program on university students

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## Abstract

**Introduction.** The low productivity that prevailing in recent years in Higher Education requires urgently institutional responses aimed to improving quality of university education contributing to the development among students of key competences for lifelong learning. In this sense, the aim of this research was to explore the effects of an intervention program, based on service-learning and peer mentoring methodologies, to enhance social skills and the learn to learn skill of university students.

**Method.** The sample was composed of 78 university students of 5 degrees related to the teaching profession of the University of Huelva (Spain). The methodological design adopted was quasi-experimental pretest-posttest, using standardized tests to evaluate the dependent variables. The intervention consisted of 481 mentoring sessions, 423 individual and 58 in group, among the university students, as mentors, previously trained in 3 sessions of training, and students in Compulsory Education. These sessions spread throughout the second and third quarters of the school year 2013/2014 during out of school time, a weekly mentoring session among the couple of mentors with their mentee lasted for 90 minutes each.

**Results.** The results show statistically significant differences in favour of the posttest phase in social skills and strategies for learning and motivation of the participants.

**Discussion and Conclusion.** These results agree largely whit the empirical evidences from specialized literature show when service-learning and peer mentoring methodology are used as the basis for an intervention program.

**Keywords:** motivation, learning strategies, social skills, competency, service learning.

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## Resumen

**Introducción.** La baja productividad de la Educación Superior requiere urgentemente respuestas institucionales dirigidas a la mejora calidad de la enseñanza universitaria, que contribuyan al desarrollo entre el alumnado de competencias clave para el aprendizaje permanente. En este sentido, el propósito de esta investigación fue explorar los efectos de un programa de intervención, basado en las metodologías aprendizaje-servicio y mentoría entre iguales, dirigido a mejorar las competencias sociales y de aprender a aprender del alumnado universitario.

**Método.** La muestra estuvo compuesta por 78 alumnos/as universitarios/as de 5 titulaciones relacionadas con la profesión docente de la Universidad de Huelva (España). El diseño metodológico adoptado fue un diseño cuasi-experimental pretest-postest, empleando pruebas estandarizadas para evaluar las variables dependientes. La intervención consistió en 481 sesiones de mentoría, 423 individuales y 58 grupales, entre el alumnado universitario participante, en calidad de mentores, previamente entrenados en 3 sesiones de formación, y alumnado de educación obligatoria. Estas sesiones se extendieron a lo largo del segundo y tercer trimestre del curso escolar 2013/2014 en tiempo extraescolar, con una frecuencia de una sesión de mentoría semanal entre cada pareja de mentores y su correspondiente alumno/a, con una duración de 90 minutos.

**Resultados.** Los resultados obtenidos arrojan diferencias estadísticamente significativas, a favor de la fase postest en habilidades sociales y de las estrategias de aprendizaje y motivación de los participantes.

**Discusión y conclusión.** Estos resultados coinciden con las evidencias empíricas que la literatura especializada arroja cuando se emplean las metodologías de aprendizaje-servicio y mentoría entre iguales como base de un programa de intervención.

**Palabras Clave:** motivación, estrategias de aprendizaje, habilidades sociales, competencia, aprendizaje servicio.

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## Introduction

In recent years, Europe has been immersed in a crisis that has revealed weaknesses of economic, political, educational and social systems, as they reflect the data from the European Union-27 regarding the great risk of social exclusion, dropout rates, high number of unemployed and young people entering the labour market without sufficient qualification (European Commission, 2013; Instituto Nacional de Estadística, 2015; Ministerio de Educación, Cultura y Deporte, 2015). A clear indicator of this situation is the large number of young people that is not thriving in his formative-educational transition to quality employment and social integration, due to barriers such as the quality of the education system and training (Jurado, Olmos, & Perez, 2014).

In this sense, the low productivity of university teaching, both in immediate academic performance (e.g., success rate of 86.7%, performance rate of 76.3%, dropout rate of 26.9% and graduation rate of 83.2%, only 10% of the population with higher education reached appropriate performance levels, according to the International Evaluation Skills of the Adult Population Programme) (Ministerio de Educación, Cultura y Deporte, 2014, 2015) and deferred (e.g., 55.5% of the graduates 4 years later occupy a position commensurate with their qualifications; negative views of graduates with respect to the possibilities offered their training to prospect of employment and employers on the training of graduates, etc.) (Consejo Económico y Social de España, 2014; Freire, Teijeiro, & País, 2013; Ministerio de Educación, Cultura y Deporte, 2015), it clearly enhances the need for further progress in the university reforms with effective and efficient actions which eventually improve these and other indicators of quality and excellence.

The same Economic and Social Council of Spain (2014), or authors as Mourshed, Patel, & Suder (2014), recommended to university education to incorporate innovative educational methodologies that stimulate the improvement of key competences, for the personal development of students, active participation in society, and to succeed in the world of work, enhancing those skills demanded from labour market (e.g., practical work experience, market ethical, teamwork, analysis and resolution of problems, creativity, communication skills and social interaction, self-regulation in learning, etc.).

In this context arises the Huelva Educa Program (PHE), an innovative educational experience aimed to improving the development of skills and abilities of university students, especially social skills and learning to learn. Therefore, the social skills are conceived as those specific skills employed in a given interpersonal situation, including those behaviors that prepare individuals for effective participation in social and professional life (Comunidades Europeas, 2007; Gismero, 2000). Moreover, the learning to learn competence, in the terms defined as a skill key to lifelong learning (Comunidades Europeas, 2007), refers to the expert learning and self-regulation in learning, that is, the active participation in learning in meta-cognitive, motivational and behavioral terms, where learning strategies and motivation play a crucial role (Zimmerman, 2002).

To achieve this double goal, PHE incorporates in its design of intervention two instructional methodologies capable of transmitting these learnings to the students. On the one hand, the alternative methodology called Service-Learning (s) (Westover, 2012; Wilczenski & Coomey, 2007), understood as a methodology where participants develop abilities, skills, competencies, etc., performing a service to their community. And, on the other hand, the peer-learning, in its version of mentoring (Herrera, Sipe, & McClanahan, 2000; Sandford, Copps, & Yeowart, 2007), where an experienced person helps another younger on essential aspects of his life.

Among the benefits of this type of instructional methodologies are included: (a) an increase in the commitment of the students with learning (Maloney & Griffith, 2013; McIntyre & Sellnow, 2014), (b) an improvement in the acquisition of the contents by the students (McIntyre & Sellnow, 2014; Vaknin & Bresciani, 2013), (c) the promotion of certain aspects of the personal and social development of students (e.g., responsibility, self-esteem, etc.) (Knapp, Fisher, & Levesque-Bristol, 2010; McIntyre & Sellnow, 2014), (d) the stimulation of reflection and critical thinking among students (Stanton, 2014; Vaknin & Bresciani, 2013), (e) an increase of the motivation and satisfaction of the teaching staff, generating changes in attitude to education (e.g., improving the educational content and academic environment, increases the commitment and creativity of teachers, etc.) (Wilczenski & Coomey, 2007), (f) a greater connection of teaching in the classroom with the needs of the environment (McIntyre & Sellnow, 2014), and (g) the reinforcement of social ties and links between different generations belong to a community (Maloney, Myers & Bazyk, 2014; McIntyre & Sellnow, 2014).

### *Aims and Hypotheses*

The aim of this study was to explore the effectiveness of the PHE for improve social skills and the strategies of learning and motivation in the university students' participant. The established hypotheses were: (1) there will be statistically significant differences in the average direct scores obtained by university students in social skills during the post-test phase regarding the pretest phase as a result of their participation in the program; and (2) the university students will improve a statistically significant level their average direct scores achieved on motivation and learning strategies in the post-test phase regarding the pretest phase after participating in the PHE.

## **Method**

### *Participants*

The sample of this research was formed by 78 university students of the University of Huelva (UHU) with a mean age of 21.05 years (range between 18 and 35 years). Their distribution by qualifications was: (a) 27 of Degree in Social Education (18 of second, 4 of third and 5 of fourth year), (b) 29 of Degree in Psychology (18 of second, 3 of third and 8 of fourth year), (c) 7 of Degree in Primary Education (7 of third year), (d) 14 of the Degree in Social Work (12 of second and 2 third year), and (e) 1 of Degree in of Physical Activity and Sport Sciences (1 of third year). By sex, 64 were female and 14 males.

The procedure for the selection of the sample was based on a type of non-probability called "convenience samples" (Martinez, 2010), by first selecting the population sampling which had access, i.e., university students belonging to the Campus "El Carmen" of the University of Huelva (Spain). Secondly, we selected qualifications related to the teaching profession who participated in the PHE. Thirdly, a plan of outreach and recruitment was undertaken, which consisted of several group sessions that were reported to university students, about the characteristics and conditions of participation in the program, at the same time requesting their voluntary participation, was carried out resulting in an inscription of 102 university students. And, fourthly, we selected mentors ( $N = 78$ ), whereas for this purpose the following criteria: complete the agreement, the protocol and standardized tests, show interest, enough time to develop the different sessions of mentoring throughout the academic year, attend 3 training sessions and, finally, successful completion the practices of such training activities.

### *Instruments*

*Agreement of participation for mentors PHE.* Document consisting of 17 clauses and a one compliance section. This agreement, by reference to other similar materials (Fernández, 2007), was prepared *ad hoc* for the development of the program, with the aim of establishing the rights and duties of the university students participating in the PHE.

*Protocol for collecting information.* Self-report consisting of 23 items, of which 17 items were open response, and 6 different alternatives, grouped in 8 areas: (a) demographic data, (b) academic information, (c) training to participate in the program of mentoring, (d) reason for request, (e) justification for their participation, (f) level of commitment, (g) availability, and (h) a clause indicating that the information provided was accurate. This protocol, was developed *ad hoc* for the program from other similar materials (Fernández, 2007), it was used to collect information demographic, academic and interest of the university students participating.

*Scale of Social Skills.* Instrument composed of 33 items grouped into 6 scales: (a) self-expression in social situations (SeSS), (b) defense of their rights as a consumer (DRC), (c) expression of anger or dissatisfaction (EA/D), (d) say no and cut interactions (SNCI), (e) making requests (MR), and (f) initiate positive interactions with the opposite sex (IPISS). Scale was developed by Gismero (2000), which was used to assess the social skills of university students, due to its high reliability (Alpha model: 0,89 points) and acceptable validity (confirmatory factorial analysis of adjustment suitable rates on the structural model and measures of concurrent validity on self-descriptions and adjectives).

*Motivated Strategies for Learning Questionnaire.* Instrument composed of 81 items comprising 15 subscales: (a) intrinsic orientation (IO), (b) extrinsic orientation (EO), (c) value of the task (VT), (d) control over beliefs (CB), (e) self-efficacy (Se), (f) anxiety (A), (g) repetition and trial (RyT), (h) elaboration (E), (i) organization (O), (j) critical thinking (CT), (k) metacognitive self-regulation (MSr), (l) time and study environment (TSE), (m) regulation of the effort (RE), (n) request for assistance (RA), and (n) learning by peers (LP). It was developed by Pintrich, Smith, Garcia, & McKeachie (1991) and was used to assess motivation and strategies for learning of university students, which presents a reliability (Alpha model-Cronbach -: 0,52 and 0,93 points at different scales) and acceptable validity (confirmatory

factorial model appropriate fit indices and evidence of predictive validity of academic performance).

*Workbook for mentors PHE.* Material that is presented in a structured way mentoring sessions: objectives, tasks performed, materials used, difficulties encountered and pending tasks for the next session, evaluation and observations. Was prepared *ad hoc* for the program from other materials (Fernandez, 2007; Herrera et al., 2000; Permaul, 2009) and is used during the sessions of mentoring and the plan of follow-up of the program.

*Monitoring Protocols 1, 2 and 3.* Instruments composed of 13 closed response items and 3 open response, for the case of monitoring protocol 1, and by 21 items of open response, in the case of monitoring protocols 2 and 3, which were grouped into 3 areas which included the identification information, valuation-perception of sessions and observations. These protocols, which were developed *ad hoc* for the development of the monitoring plan of the program, with reference to other similar protocols (Fernández, 2007), were used to identify the deviations that occur in mentoring sessions.

*Sheet of groups of discussion.* This instrument is composed by 2 items of open response that was used to collect the perceptions of university students in monitoring session 4 about the difficulties encountered in the development of mentoring sessions and possible solutions. This instrument was prepared *ad hoc* for the development of such program by Fernández (2007).

### *Procedure*

This research work was conducted in four phases (Annex 1): analysis of needs, design and planning program, implementation of the program (procedure of sample selection, intervention plan, monitoring and evaluation of results), and evaluation of the program (Arco & Fernandez, 2007; Fernandez & Arco, 2011).

The *intervention plan* was composed of two activities, the first, training of mentors, developed with university students enrolled in the PHE and selected to attend the training. And, the second, the sessions of mentoring, which were carried out after (MENTOR/National Mentoring Partnership, 2005): (a) selecting the sample of mentors (fourth stage of sampling), (b) establish mentoring pairs ( $N = 39$ ), under certain criteria (e.g., preferences, academic



schedule, qualifications and previous experience), (c) select students of compulsory education or "mentees", registered by their teachers as tutors, with the consent of the families, in the second quarter of the school year, and (d) perform the assignment of "mentees" to the mentors, under certain criteria (e.g., availability and experience equivalence of life and interests of mentors-"mentees").

With regard to the course of mentors training, first activity of the intervention plan, its purpose was to train university students participating in tasks that were going to play in the development of mentoring sessions (Gopee, 2011). Therefore, was opted for training in those contents that contributed to the success of such programs (Jekielek, Moore, Hair, & Scarupa, 2002; MENTOR/National Mentoring Partnership, 2005). This activity consisted of 3 sessions of 3 hours duration spread over a week, which is worked, through expository teaching, analysis of cases and modeling, the following contents: (a) session 1: course training plan, justification of the program and use of the Workbook for mentors PHE, (b) session 2: development of the script's phone call to arrange the first meeting of mentoring session among mentors and students compulsory education participating and the first meeting with "mentees" them and their families, and design, planning and implementation of needs assessment of "mentees", and (c) session 3: contents and learning activities for co-curricular extra-curricular activities with "mentees", depending on the needs identified, i.e., school support in instrumental areas, intervention in learning disabilities, learning strategies training, application and evaluation of personal guidance, vocational-professional orientation, and management of leisure and free time activities.

On the other hand, the sessions of mentoring between every pair of mentors and their corresponding "mentee", second activity of the intervention plan, began in January and continued until June of the school year during after-school hours, with a weekly frequency of 90 minutes of duration, at times and places fixed from the program. There were a total of 481 sessions, with an average of 12.33 sessions (range: 5-17 sessions) for a couple of mentors-"mentee" ( $DT = 2.98$ ), of which 423 were individually (pairs of mentors with their respective "mentee"), with an average of 10,84 sessions ( $DT = 2.50$ ) and a range of between 5 and 14 sessions, and 58 were in group (several pairs of mentors with their respective "mentees" in common activities, as for example, leisure) with an average of 1.48 sessions ( $DT = 0.88$ ) and a range of between 1-3 sessions. However, it is necessary to mention that these differences in the number of session implemented by couple of mentors-"mentee" are due to the different

moments in which "mentees" were enrolled them in the program, as well as to the sessions that were cancelled ( $N = 77$ ), of which 58 were individual ( $M = 1.48$ ;  $DT = 0.94$ ; range between 1-3 sessions) and 18 were in group ( $M = 0.46$ ;  $DT = 0.55$ ; range between 1-2 sessions).

The contents worked by mentors in the sessions of mentoring (Workbook for mentors PHE) were adapted to the identified needs of the "mentees", which were identified from information provided by families and teachers as tutors, and the information collected by mentors in the first mentoring session, although the level of coincidence with the levels recommended by the specialized literature is high, highlighting (Boland, 2010): performance school (e.g., school support, cognitive learning and metacognitive strategies, anxiety before examinations, oral and written expression, etc.), orientation personnel (e.g., management of emotions, social skills, etc.), vocational-professional orientation (e.g., transition of educational stage, training courses, visits to Secondary Education Institutions and University to understanding the characteristics of the centers, information about qualifications, etc.), and management of leisure and free time (e.g., group activities for a better socialization of students in their class-group, conflict resolution, learn about different alternatives of leisure, etc.).

Parallel to the development of mentoring sessions, was implemented a *monitoring plan* in order to monitor the possible deviations that occur in the execution of the same (Arco & Fernandez, 2007). This plan consisted of 4 mandatory follow-up measures, implemented by the responsible of the program for the mentors: (a) monitoring 1, 2 and 3: a group session of two hours after the second (monitoring protocol 1), seventh (monitoring protocol 2) and twelfth (monitoring protocol 3) session, respectively, where they were valued the actions undertaken from workbooks and verbal contributions of mentors as well as provide appropriate recommendations for the development of the following sessions of mentoring, and (b) monitoring 4: a group session of two hours after the end of the session of mentoring, in which mentors valued global development in them, and collected their perceptions, such as difficulties and improvements (sheet discussion groups).

Moreover, with the *evaluation plan* of results were taken measures of the dependent variables before and after the implementation of the program to know the impact of it (Arco & Fernandez, 2007).

*Analysis statistical*

The methodological design was adopted a quasi-experimental design pretest-posttest (Ato, 2010). The data were analyzed through the "*Statistical Package for the Social Sciences*", version 20.0, making the *t* test for related samples and the Wilcoxon signed ranks test, proven once the normality of the distribution of scores through the Kolmogorov-Smirnov test.

**Results**

The results of comparisons pretest-posttest on social skills, hypothesis 1, reveal statistically significant differences in favor of the posttest phase between average direct scores obtained in the majority of the scales and global direct score of EHS (Gismero, 2000), although the DNCI scale differences are in favor of the pretest phase ( $M = 15.63$ ;  $DT = 3.74$ ) opposite the posttest phase ( $M = 12.29$ ;  $DT = 2.20$ ) (Tables 1 and 2).

Table 1. *Comparisons Pretest-Posttest on Social Skills (t Test)*

<i>Scale /Phase</i>	<i>N</i>	<i>Media</i>	<i>Typical D.</i>	<i>t</i>	<i>Sig. (bilateral)</i>	
Scale SeSS	Pretest	78	23,55	4,26	47,25	0,00**
	Posttest	78	25,34	3,33		
Scale EA/D	Pretest	78	10,44	2,57	36,04	0,00***
	Posttest	78	14,62	2,55		
Scale SNCI	Pretest	78	15,63	3,74	37,15	0,00**
	Posttest	78	12,29	2,20		
Scale MR	Pretest	78	12,48	3,16	34,63	0,00***
	Posttest	78	17,73	3,39		
Scale IPISS	Pretest	78	11,76	3,20	32,78	0,00**
	Posttest	78	14,64	2,76		
Scale DRC	Pretest	78	8,33	1,54	-7,68	0,00***
	Posttest	78	13,92	2,75		
Global direct score	Pretest	78	82,19	18,47	53,31	0,00**
	Posttest	78	98,24	11,85		

Note: \* $p < 0,05$ ; \*\* $p < 0,01$ ; \*\*\*  $p < 0,001$

Table 2. Comparisons on Social Skills Pretest-Posttest (*z* test)

Scale / Phase		<i>N</i>	Media	Typical <i>D.</i>	<i>z</i>	Sig. (bilateral)
Scale DRC	Posttest	78	14,64	2,76	-7,68	0,00***
	Pretest	78	8,33	1,54		

Note: \*\*\*  $p < 0,001$

For its part, intra-group comparisons on motivation and learning strategies, hypothesis 2, shed also statistically significant differences in favor of the posttest phase in much of the subscales of the MSLQ (Pintrich et al., 1991), although in the subscales A and RE these differences are in favor of the pretest phase ( $M = 4.46$ ;  $DT = 1.38$  and  $M = 4.49$ ;  $DT = 0.64$  respectively) facing the posttest phase ( $M = 3.80$ ;  $DT = 1.40$  and  $M = 3.88$ ;  $DT = 0.61$ , respectively) (Table 3).

Table 3. Comparison of Pretest-Posttest on Motivation and Learning Strategies

Subscale / Phase		<i>N</i>	Media	Typical <i>D.</i>	<i>z</i>	Sig. (2-tailed)
Motivation						
Scale IO	Pretest	78	2,93	0,95	-6,68	0,00**
	Posttest	78	5,06	1,06		
Scale EO	Pretest	78	3,30	1,24	-5,99	0,00**
	Posttest	78	4,80	1,20		
Scale VT	Pretest	78	2,55	0,80	-18,68	0,00***
	Posttest	78	5,57	0,77		
Scale CB	Pretest	78	3,04	0,94	-10,16	0,00***
	Posttest	78	5,04	0,94		
Scale Se	Pretest	78	2,64	0,80	-7,44	0,00***
	Posttest	78	5,48	0,78		
Scale A	Pretest	78	4,46	1,38	2,20	0,03*
	Posttest	78	3,80	1,40		
Learning strategies						
Scale CT	Pretest	78	3,92	1,18	-2,26	0,03*
	Posttest	78	4,42	0,95		
Scale MSr	Pretest	78	3,41	0,72	-11,65	0,00***
	Posttest	78	4,91	0,60		
Scale TSE	Pretest	78	3,53	0,61	-9,60	0,00***
	Posttest	78	4,64	0,57		
Scale RyT	Pretest	78	3,42	1,24	-5,41	0,00**
	Posttest	78	4,68	1,01		
Scale E	Pretest	78	2,79	1,00	-13,80	0,00***
	Posttest	78	5,31	0,80		
Scale O	Pretest	78	2,99	1,10	-9,13	0,00***

	Postest	78	5,03	1,04		
Scale RE	Pretest	78	4,49	0,64		
	Postest	78	3,88	0,61	4,24	0,00**
Scale LP	Pretest	78	3,16	1,19		
	Postest	78	5,19	1,00	-10,86	0,00***

Note: \* $p < 0,05$ ; \*\* $p < 0,01$ ; \*\*\* $p < 0,001$

## Discussion and conclusions

This educational experience emerged with the purpose of offering to the university students access to a type of learning experiences facilitators of the acquisition and domain of two groups of skills and key competencies related with the teaching profession, as are the social skills and of learning to learn. In this line, in the light of the results obtained, we can be drawn the following conclusions. First, the statistically significant differences between the average direct scores obtained by university students participating during the posttest regarding the phase pretest in most of the scales of the EHS (Gismero, 2000), allow to accept the hypothesis one partially. Second, regarding the hypothesis 2, the significant nature of the differences found in the posttest phase with respect to the pretest phase in much of the subscales of the MSLQ (Pintinch et al., 1991), also allows accepting this hypothesis partially.

These results coincide to a large extent that is branched from specialized literature when using S-L and peer mentoring as the basis for an intervention program (McIntyre & Sellnow, 2014; Weiler, Zarich, Haddock, Krafchick, & Zimmerman, 2014; Westover, 2012). For example, the promotion of issues related to personal and social development of the students as the increase in responsibility, improves self-esteem, as well as a greater connection of teaching in the classroom with the needs of the environment, in addition to providing significant opportunities with the community in which is taught, civic responsibilities and promote citizen participation throughout life, and where are provided opportunities for meaningful learning of real life, the practice of important skills and a vital social compression for students, also the increase of competencies such as communication and problem solving, as well as increase their interpersonal skills, academic success, professional development and appropriate emotional responses.

The results achieved are aligned with those raised by Betina & Contini (2011), indicating the importance of the context in its multiple meanings as a determinant of how you learn the skill and how much practiced the skill to become competencies. Therefore, similar to pose

Garcia (2010), Gomes & Soares (2013), Ordaz (2013), and Soares, Francischetto, Peçanha, Miranda, & Dutra (2013), the fact of practicing assertive behavior in academic circles has a positive impact on social skills.

In this sense, participation in the PHE has implied for university students a change and constant adaptation to the difficulties that have arisen during the development of the same, conflict resolution, decision making, greater engagement with their work, etc., which are at the basis of the improvements that have been generating on their social skills. However, the results obtained, compared to other works with similar objectives (e.g., Gaeta & Lopez, 2013), reveal a level low self-expression skills in social situations and make requests, implying that there has been obvious progress in the student participating when it comes to recognizing emotions in others, also producing a decline in skills say no and cut you interactions. These results can be explained as a result of a too high perception of themselves on their social skills in the pretest phase, before undergoing situations of educational practice, what has been able to generate downward readjustment in their beliefs regarding the domain of some of their social skills.

Moreover, the strategies of learning and motivation (e.g., critical thinking, regulation of the effort, metacognitive self-regulation, etc.) are associated with, not only the learning to learn competence, but also to other key competences for lifelong learning (e.g., sense of initiative and entrepreneurship) (European Communities, 2007), so the results derived from the participation in the PHE, as well as generating improvements in competition approaches to learning of university students, it is possible that they have stimulated the development of other key competencies (e.g., digital competencies). Also, the improvements achieved in the intrinsic motivation (e.g., intrinsic orientation goals, value of the task and the beliefs of learning control) of the participants, and its strong relationship with the use of cognitive and self-regulation strategies, have generated greater motivation to learn, as they have shown other previous studies (Pintrich & De Groot, 1990). However, we must also consider the deterioration that has occurred in regulation of the effort, which again can be explained by a high perception of the competence level of mentors in the pretest phase, generating a reset in the beliefs after participating in real situations of professional teaching practice raised from the PHE.

For a more accurate interpretation of the results obtained, it is necessary to make reference to the possible presence of some factors linked to the methodological design employed that can weaken the internal validity of the data (e.g., history, maturation, administration of tests, etc.), among which can be highlighted: (a) the different reasons for university students to participate in the program, (b) the time of participation in the program, and even more so, the differences in the number of mentoring sessions carried out with students in compulsory education, (c) the participation of mentors in different types of mentoring sessions, individual and group character, and (d) the diversity of mentors' learning experiences, determined by the needs of "mentees" and the contents addressed in mentoring sessions.

Therefore, for future editions of the PHE, in order to increase the internal validity and, hence, the power of the results, it would be appropriate to select methodological designs with a higher degree of experimentation (e.g., quasi-experimental with non-equivalent control group pretest-posttest design) and make changes that allow the mentors longer participation, as well as a similar number of sessions (e.g. start implementing mentoring sessions at the beginning of the school year with all the participants, which would imply changes in the timing of the program, especially in the procedure of selection of the sample, where it would be necessary to improve the efficiency of the process of dissemination and uptake), with equal participation in different types of mentoring sessions.

In essence, this experience could be considered, despite the limitations mentioned, an example of good practices on the complex and claimant task of how to introduce in upper education, methodologies of teaching that facilitate the transfer of the knowledge acquired by the students in the formal field to the real context and to the needs of the community, stimulating to the same time the acquisition and improves of the skills planned in the plans of study of the degrees (Miñaca et al., 2011). In this way, in the same terms raised Blázquez, Chamizo, Cano, & Gutierrez (2013), we will be contributing efficiently and clear to the development of the so-called third mission of the University. Especially, in its dimensions to facilitate students to develop appropriate skills to your professional profile, to improve their profile of employability and, therefore, satisfy the demand of the labor market.



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## Annex 1

<i>PHE Structure</i>		
<i>Phase</i>	<i>Performances</i>	
<i>Analysis of needs and diagnostic conclusion</i>	<ul style="list-style-type: none"> <li>- Definition of the context in which the program will be integrated</li> <li>- Identification of the population target and resource analysis</li> <li>- Detection of needs, establishing the type of needs and its dimensions</li> <li>- Establishment of priorities and the issuance of a diagnostic conclusion</li> </ul>	
<i>Goals and objectives</i>	<ul style="list-style-type: none"> <li>- Establishment of goals and objectives that respond to needs identified</li> </ul>	
<i>Design and planning of the program</i>	<ul style="list-style-type: none"> <li>- Determination of the organizational chart of the responsible staff for the program</li> <li>- Model of impact elaboration: causal, intervention and action hypotheses</li> <li>- Definition of the population target</li> <li>- Selection of the designs of intervention methodological</li> <li>- Procedure for selection of the sample</li> <li>- Intervention plan</li> <li>- Monitoring plan</li> <li>- Evaluation plan of results</li> </ul>	
<i>Implementation of the program</i>	<i>Procedure for selection of the sample</i>	<ul style="list-style-type: none"> <li>- Stage 1: selection of sample units</li> <li>- Stage 2: outreach and recruitment plan</li> <li>- Stage 3: selection of students who enter training of mentors</li> <li>- Stage 4: selection of the sample, pairs of mentors and assignment of "mentees"</li> </ul>
	<i>Activities of the intervention plan</i>	<ul style="list-style-type: none"> <li>- Training mentors' session</li> <li>- Mentoring individual and group sessions between pairs of mentors and "mentees": performance school, personal guidance, vocational-professional orientation, and management of the leisure and time free</li> </ul>
	<i>Monitoring plan measures</i>	<ul style="list-style-type: none"> <li>- Monitoring group session 1: assessment of the actions of 1-2 mentoring sessions</li> <li>- Monitoring group session 2: assessment of the actions of 3-7 mentoring sessions</li> <li>- Monitoring group session 3: assessment of the actions of 8-12 mentoring sessions</li> <li>- Monitoring group session 4: assessment of the development global of the mentoring sessions</li> </ul>
	<i>Proceedings of the evaluation plan of results</i>	Take measurements of the dependent variables before and after the implementation of the program through standardized tests
<i>Evaluation process</i>	Provide information about the development of activities, and assessment of the program (deficiencies and effects of design, etc.)	
<i>Impact assessment</i>	Establish the type, direction and magnitude of the changes brought by the implementation of the program	
<i>Results evaluation</i>	Communication of results	