

Evaluating Professional Competencies for Labor Placement of the Physical Education Teacher

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Abstract

Introduction: This paper forms part of a group of studies regarding job placement of university graduates. The main objective of this study in particular is to present the extent of job placement among Education graduates with a Physical Education specialty from the University of Granada, Melilla Campus, as well as their acquisition of appropriate professional competencies during their training process.

Method: The target population for this study are all students from the first six graduating classes of the University of Granada, Melilla, who earned a Primary Education degree with a specialty in Physical Education from the College of Education and Humanities. The final sample was made up of 72 subjects. Data was collected using the “Questionnaire for evaluating degree programs and social/labor placement of University of Jaen graduates”, developed as part of the research project “Social/labor placement: an evaluation of ongoing, vocational learning”. The questionnaire was adapted for this study.

Results: Measurement of professional competency acquisition in Physical Education Teachers was carried out for three times: before entering the university program, after completing their degree, and after taking ongoing professional development coursework. Results, then, refer to the degree of acquisition of a list of proposed competences at these three points in time. In addition, the different competencies are compared between those graduates who are working and those who are not.

Discussion or Conclusion: It was confirmed that the competency related to *knowledge of information technologies*, as measured before beginning university training, presents a degree of significance in favour of those graduates who do not work as compared to those who are working. The same occurs at the end of university training. During this second period, significant differences are also seen with regard to the competency *planning one's work and time*. It can be shown that after university training, acquisition of competencies has increased. Likewise, after taking ongoing development coursework, significant differences are obtained for the competency of *knowledge of information technologies*. Finally, we find significant differences regarding *technical knowledge related to physical education*, and *creative, innovative and critical ability*.

Keywords: Labor placement / physical education / teacher development / professional competencies

Introduction

Spain is one of the countries with the greatest number of university students. More than one and a half million students attend Spanish universities in order to acquire a university degree. The imbalance between supply and demand in the labor market has given rise to competition between university graduates and graduates from lower levels for the same occupations (Gómez, 1998).

The teaching process carried out at University seeks to develop citizens intellectually as well as to prepare professionals for their later incorporation into the labor market (Goñi, 2000). This incorporation, in light of the theoretical nature of customary university training, requires students to take on self-training in the difficult transition to this labor environment. To this we must add the general lack of available employment, characteristic of the contemporary world.

Our continuously changing society requires the university to adapt, and to align university training to expected social and labor requirements. This is what Amador (1996) speaks of when affirming that the training-employment binomial should provide a match between the training required by a particular job and the training offered by a university; furthermore, the curriculum framework of each degree program should take into account the professional profile which it seeks to respond to.

The university graduate's situation in the labor market is much more complex than the usual employed/unemployed categorization. As Figuera (1996, p. 124) indicates, "*A review of relevant studies reveals a lack of consensus on what elements should define quality in placement of a university graduate*".

Employment type is what defines a placement situation. Thus, *professional placement* refers to the set of processes by which the individual initiates a stable professional practice, allowing the individual to develop a professional career in line with the proper functioning of someone in his or her field. On the other hand, *job placement* refers to a pattern followed by young people whose professional career does not materialize; their work sequence is charac-

terized by instability, frequent job changes and a lack of prospects of becoming a qualified professional, failing to accumulate specialized experience that can launch a career.

Research concerning job placement of young people has proliferated in recent years, especially regarding university graduates. In addition to attempts at a theoretical development of the concept of placement, there are studies of different aspects of the transition to productive life: routes, representations of placement, use of search techniques for employment, stress in the unemployed, etc. (Lobato, 2001).

The process toward professional placement, the transition from university to the labor market, is the space between acquiring one's degree (the moment at which one can formally exercise professional tasks) and one's actual entrance into the professional world. We can find two different types of placement: (1) inicial placement of those graduates who become part of the work world for the first time upon completion of their university studies, and (2) those graduates who are already involved in the work world before finishing their studies.

Physical activity has been undergoing a change, broadening and becoming much closer to the people now at the beginning of the new millennium, as compared to at the beginning of the twentieth century. At that time, physical education teachers were needed exclusively in the school setting. Today we observe a transformation in the diversity of recreational, sporting, and pleasure-related options, as well as movement-related therapies, all of which require professionals who are adequately trained for today's needs (Pallarola, 1998).

In the twenty-first century we are witnessing a period of structural changes (initiated some years ago), with the subsequent appearance of new, more diversified models of sports activity, and the university-level response to a changing world should be guided by criteria of relevance and clarity.

Such basic questions as identifying one's acquired skills, defending and demonstrating these during the job search process, developing a curriculum vitae or a rudimentary knowledge of the reality of the work world, all seem so distant that the student must face these with scarcely any assistance from the university institution (Goñi, 2000).

Since the Physical Education degree was first made available, several models of pre-professional training have been followed (Moreno & Conte, 2006). Thus, different authors have done research regarding the changing itineraries of degree coursework (Romero, 1995; López et al., 1994; Peralta et al., 1994 and Moreno & Rodríguez, 1996).

In professional placement of Primary Education graduates with a Physical Education specialty, we have obtained a series of competencies which degree-holders should manifest (Gallardo, 2003). These competencies should have been acquired over the course of one's university program. They are as follows:

- Technical knowledge related to Physical Education
- Practical knowledge related to Physical Education
- Knowledge of information technologies
- Autonomous information retrieval
- Planning one's work and time
- Problem-solving ability
- Leadership
- Coordination of teamwork
- Tolerance, an ability to appreciate different points of view
- Ability to communicate orally in public
- Ability to communicate correctly in writing
- Self-confidence in one's competencies
- Creative, innovative and critical ability
- Knowledge of foreign languages

Method

Subjects

Our target population comprises all students who completed a Primary Education degree with a specialty in Physical Education at the College of Education and Humanities of the University of Granada, Melilla campus.

The study was performed using six graduating classes, from schoolyears 1993-1994 to 2000-2001. The total number of graduates from these six classes is 95 students, distributed as shown in Table 1.

Table 1. Students who graduated

1993-1996	1994-1997	1995-1998	1996-1999	1997-2000	1998-2001	TOTAL
6	9	16	21	26	17	95

Among this population, a generous 78.95% of graduates were receptive and provided information, resulting in a sample of 72 students.

Instrument

The main instrument for data collection was an adaptation of the “*Questionnaire for evaluating degree programs and social/labor placement of University of Jaen graduates*”, developed within the research project entitled “*Social/labor placement: an evaluation of on-going, vocational learning.*” The questionnaire was adapted for the current study.

The resulting questionnaire was validated by a group of experts from the Universities of Jaén and Granada, using the system of judges. Likewise, validity of the construct was calculated by carrying out a factorial analysis for the 16 professional competencies under consideration, for the purpose of delimiting the main components and determining the total variance explained by these.

Finally, reliability was calculated in order to determine internal consistency. Cronbach’s Alpha coefficient for the total of all variables came to 0.8682, with a confidence level of 95%.

Graduates were asked about three moments during their personal and professional development: before initiating university studies, upon completion of university studies, and after ongoing developmental activity.

Results

Descriptive study of the competencies and labor situation variables

Table 2 summarizes the degree to which the subjects claim to have possessed competencies before initiating their university studies.

Table 2. Description of competencies before initiating university studies

COMPETENCIES	%			
	Not at all	Somewhat	Quite a bit	Very much
Technical knowledge related to Physical Education	5.6	61.1	30.6	2.8
Practical knowledge related to Physical Education	0	41.2	44.1	14.7
Knowledge of information technology	5	41.7	16.7	16.7
Autonomous information retrieval	11.1	50	19.4	19.4
Planning one's work and time	2.8	50	38.9	8.3
Problem-solving ability	0	30.6	41.7	27.8
Leadership	16.7	30.6	27.8	25
Coordination of teamwork	0	38.9	52.8	8.3
Tolerance, ability to appreciate different points of view	0	8.3	52.8	38.9
Ability to communicate orally in public	11.1	41.7	22.2	25
Ability to communicate correctly in writing	0	17.1	60	22.9
Self-confidence in one's competencies	0	19.4	69.4	11.1
Creative, innovative and critical ability	5.6	25	58.3	11.1
Knowledge of foreign languages (English)	25	44.4	27.8	2.8
Knowledge of foreign languages (French)	69.4	25	5.6	0
Knowledge of foreign languages (Other)	88.9	5.6	5.6	0

We consider the following to be the most essential aspects:

- Most of the graduates (61.1%) indicate that when beginning their program they already had some technical knowledge. However, in the section on *practical knowledge related to Physical Education*, where they claim to possess the highest level of competencies, 58.8% answer *quite a bit* or *very much*. All subjects from the sample claim to have a minimum level of competency in practical knowledge, perhaps because “*the large majority of them carry out physical/sporting activities with a certain frequency...*” (Granda, 1997).
- This situation can likewise be observed for items referring to “*problem-solving ability*”, “*coordination of teamwork*”, “*tolerance, ability to appreciate differ-*

ent points of view”, “*ability to communicate correctly in writing*” and “*self-confidence in one’s competencies*”, where 100% of the sample respond that they possessed these competencies at least “*somewhat*”.

- More than half the subjects possessed “*quite a bit*” of the following more general competencies: “*coordination of teamwork*” (52.8%); “*tolerance, ability to appreciate different points of view*” (52.8%); “*ability to communicate correctly in writing*” (60%); “*self-confidence in one’s competencies*” (69.4%); and, “*creative, innovative and critical ability*” (58.3%).
- As for “*knowledge of foreign languages*”, the highest percentages obtained were for knowledge of English.

The second point of time for which the survey measured competency acquisition was upon completion of university studies.

Data obtained for this second time point of our study are summarized in the following table.

Table 3. Description of competencies upon completion of university studies

COMPETENCIES	%			
	Not at all	Somewhat	Quite a bit	Very much
Technical knowledge related to Physical Education	0	8.3	72.2	19.4
Practical knowledge related to Physical Education	0	8.3	66.7	25
Knowledge of information technology	0	27.8	55.6	16.7
Autonomous information retrieval	0	30.6	33.3	36.1
Planning one’s work and time	0	30.5	47.2	22.2
Problem-solving ability	0	17.1	48.6	34.3
Leadership	5.9	26.5	38.2	29.4
Coordination of teamwork	0	22.2	63.9	13.9
Tolerance, ability to appreciate different points of view	0	8.3	38.9	52.8
Ability to communicate orally in public	0	27.8	44.4	27.8
Ability to communicate correctly in writing	0	11.4	54.3	34.3
Self-confidence in one’s competencies	0	16.7	66.7	16.7
Creative, innovative and critical ability	2.8	27.8	50.0	19.4
Knowledge of foreign languages (English)	19.4	52.8	25.0	2.8
Knowledge of foreign languages (French)	66.7	27.8	5.6	0
Knowledge of foreign languages (Other)	88.9	5.6	5.6	0

In Table 3, we can observe that for almost all competencies, graduates have acquired at least something more of each one by the time they completed university training, most responses showing “*quite a bit*”, with the exception of competencies related to “*knowledge of foreign languages*” where the highest number of responses falls in the category of “*not at all*”, for French and other languages, and “*somewhat*” for English, a reasonable response since the study of foreign languages in the Primary Education program for Physical Education teachers is only 4.5 credits.

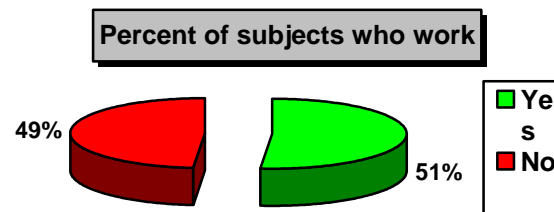
Finally, graduates were asked about their competency acquisition after completing ongoing developmental activity. Table 4 shows the data we obtained.

Table 4. Description of competencies upon completion of ongoing developmental activity.

COMPETENCIES	%			
	Not at all	Somewhat	Quite a bit	Very much
Technical knowledge related to Physical Education	0	9.4	56.3	34.4
Practical knowledge related to Physical Education	0	6.3	56.3	37.5
Knowledge of information technology	0	34.4	62.5	3.1
Autonomous information retrieval	0	9.4	71.9	18.8
Planning one's work and time	0	15.6	46.9	37.5
Problem-solving ability	0	12.9	61.3	25.8
Leadership	3.1	31.3	50	15.6
Coordination of teamwork	3.1	15.6	56.3	25
Tolerance, ability to appreciate different points of view	3.1	6.3	50	40.6
Ability to communicate orally in public	3.1	5.6	56.3	25
Ability to communicate correctly in writing	0	12.9	41.9	45.2
Self-confidence in one's competencies	0	9.4	46.9	43.8
Creative, innovative and critical ability	0	21.9	56.3	21.9
Knowledge of foreign languages (English)	25	43.8	28.1	3.1
Knowledge of foreign languages (French)	68.8	31.2	0	0
Knowledge of foreign languages (Other)	87.5	3.1	9.4	0

We can observe that for almost all competencies the graduates say that after ongoing developmental activity they possess *quite a bit* of all competencies except those referring to “*knowledge of foreign languages*”, where the option “*somewhat*” is most used for English and French, and “*not at all*” for other languages.

Finally, we present data obtained for the variable *currently working*, a variable which we use subsequently to perform the comparative study and to carry out the t test.

Graph 1. Percentage of subjects who are working

With regard to their labor situation, data indicate that 51% of subjects work, as opposed to 49% who are not working.

Comparative study of the competencies variable and the currently working variable

Next we present the comparative study performed with our two variables (competencies and currently working).

Table 5 presents data obtained for the competency “*technical knowledge related to Physical Education*” and “*currently working*”. Regardless of whether the subjects are working or not, we observe an increase in these competencies at each level of training (before initial university training, after initial training and after ongoing training).

Table 5. Contingencies: *technical knowledge related to Physical Education and currently working*

		Currently working	Unemployed
Technical knowledge related to Physical Education before beginning university studies	Not at all	11.4%	
	Somewhat	45.7%	75.0%
	Quite a bit	37.1%	24.3%
	Very much	5.7%	
Technical knowledge related to Physical Education upon completion of university studies	Not at all		
	Somewhat	11.4%	5.4%
	Quite a bit	62.9%	81.1%
	Very much	25.7%	13.5%
Technical knowledge related to Physical Education after ongoing training	Not at all		
	Somewhat	11.4%	6.9%
	Quite a bit	28.6%	89.7%
	Very much	60.0%	3.4%

Note that the highest proportion of responses “*very much*”, at the three points in time, is presented by graduates who are not working, reaching as high as 60% for those not working at the present time, and as low as 3.4% for those who are employed, when measuring acquisition of *technical knowledge related to Physical Education* after the ongoing training. This may be due to the fact that subjects who are working, and in contact with the real situation, realize that their preparation is not complete.

Table 6. Contingencies: *practical knowledge related to physical education and currently working*

		Currently working	Unemployed
Practical knowledge related to Physical Education before beginning university studies	Not at all		
	Somewhat	32.3%	48.6%
	Quite a bit	61.3%	29.7%
	Very much	6.5%	21.6%
Practical knowledge related to Physical Education upon completion of university studies	Not at all		
	Somewhat	11.4%	5.4%
	Quite a bit	68.6%	64.9%
	Very much	20.0%	29.9%
Practical knowledge related to Physical Education after ongoing training	Not at all		
	Somewhat	11.4%	
	Quite a bit	34.3%	82.8%
	Very much	54.3%	17.2%

Here we observe that the graduates, both with or without employment, have progressively improved their *practical knowledge related to physical education* over the course of their training and development process. In the case of graduates who are currently working, this type of knowledge has not improved as much as for the graduates who are not working, if we focus on the option “*very much*”, where percentages obtained are 17.2% and 54.3% respectively.

Table 7. Contingencies: *knowledge of information technologies and currently working*

		Currently working	Unemployed
Knowledge of information technology before beginning university studies	Not at all	22.9%	27.0%
	Somewhat	28.6%	54.1%
	Quite a bit	20.0%	13.5%
	Very much	28.6%	5.4%
Knowledge of information technology upon completion of university studies	Not at all		
	Somewhat	22.9%	32.4%
	Quite a bit	48.6%	62.2%
	Very much	28.6%	5.4%
Knowledge of information technology after ongoing training	Not at all		
	Somewhat	22.9%	48.3%
	Quite a bit	71.4%	51.7%
	Very much	5.7%	

As for *knowledge of information technologies*, one can observe that university training helped all graduates in this area of knowledge, while the opposite seems to be true for the ongoing training. Percentages increase after initial preparation, and decrease after the ongoing training.

Table 8. Contingencies: *autonomous information retrieval and currently working*

		Currently working	Unemployed
Autonomous information retrieval before beginning university studies	Not at all	11.4%	10.8%
	Somewhat	51.4%	48.6%
	Quite a bit	8.6%	29.7%
	Very much	28.6%	10.8%
Autonomous information retrieval upon completion of university studies	Not at all		
	Somewhat	28.6%	32.4%
	Quite a bit	22.9%	43.2%
	Very much	48.6%	24.3%
Autonomous information retrieval after ongoing training	Not at all		
	Somewhat	11.4%	6.9%
	Quite a bit	68.6%	75.9%
	Very much	20.0%	17.2%

Regarding *autonomous information retrieval*, we observe a similar situation. The percentage increases considerably with initial training, as compared to the degree of knowledge which graduates possessed prior to their university program. Ongoing training also improved these percentages, although the “*very much*” option is less represented than after the initial training, especially for those graduates who are not currently working. The decline is more than 20%.

Table 9. Contingencies: *planning one’s work and time and currently working*

		Currently working	Unemployed
Planning one’s work and time before beginning university studies	Not at all	5.7%	
	Somewhat	51.4%	48.6%
	Quite a bit	42.9%	35.1%
	Very much		16.2%
Planning one’s work and time upon completion of university studies	Not at all		
	Somewhat	34.3%	27.0%
	Quite a bit	57.1%	37.8%
	Very much	8.6%	35.1%
Planning one’s work and time after ongoing training	Not at all		
	Somewhat	17.1%	13.8%
	Quite a bit	45.7%	48.3%
	Very much	37.1%	37.9%

According to the above table, we can affirm that all graduates present an increasing degree of acquisition of *planning one's work and time* as their training progresses, with the best scores obtained by those who are currently working. Their percentages rise progressively as they advance in their studies.

Table 10. Contingencies: *problem solving ability and currently working*

		Currently working	Unemployed
Problem-solving ability before beginning university studies	Not at all		
	Somewhat	34.3%	27.0%
	Quite a bit	31.4%	51.4%
	Very much	34.3%	21.6%
Problem-solving ability upon completion of university studies	Not at all		
	Somewhat	17.1%	17.1%
	Quite a bit	45.7%	51.4%
	Very much	37.1%	31.4%
Problem-solving ability after ongoing training	Not at all		
	Somewhat	17.1%	7.4%
	Quite a bit	62.9%	59.3%
	Very much	20.0%	33.3%

As in the prior case, one observes an increase in percentages for the acquisition of this competency over the course of the graduates' training, with a greater increase seen in those who are currently working.

Table 11. Contingencies: *leadership and currently working*

		Currently working	Unemployed
Leadership before beginning university studies	Not at all	22.9%	10.8%
	Somewhat	22.9%	37.8%
	Quite a bit	25.7%	28.7%
	Very much	28.6%	21.6%
Leadership upon completion of university studies	Not at all	6.5%	5.4%
	Somewhat	19.4%	32.4%
	Quite a bit	38.7%	37.8%
	Very much	35.5%	24.3%
Leadership after ongoing training	Not at all	5.7%	
	Somewhat	28.6%	34.5%
	Quite a bit	57.1%	41.4%
	Very much	8.6%	24.1%

As for *leadership*, one can also observe an increase over the course of the training processes, with most of the higher percentages presented by graduates who are currently working.

Table 12. Contingencies: coordination of teamwork and currently working

		Currently working	Unemployed
Coordination of teamwork before beginning university studies	Not at all		
	Somewhat	28.6%	48.6%
	Quite a bit	60.0%	45.9%
	Very much	11.4%	5.4%
Coordination of teamwork upon completion of university studies	Not at all		
	Somewhat	22.9%	21.6%
	Quite a bit	68.6%	59.5%
	Very much	8.6%	18.9%
Coordination of teamwork after ongoing training	Not at all		6.9%
	Somewhat	17.1%	13.8%
	Quite a bit	62.9%	48.3%
	Very much	20.0%	31.0%

Regarding *coordination of teamwork* we can observe an improvement for all graduates at the end of pre-university studies vs. on completion of university studies. After post-university training, percentages also improve, although 6.9% of those currently working still claim not to have acquired this competency at all.

Table 13. Contingencies: tolerance, ability to appreciate different points of view and currently working

		Currently working	Unemployed
Tolerance, ability to appreciate different points of view before beginning university studies	Not at all		
	Somewhat		16.2%
	Quite a bit	60.0%	45.9%
	Very much	40.0%	37.8%
Tolerance, ability to appreciate different points of view upon completion of university studies	Not at all		
	Somewhat	5.7%	10.8%
	Quite a bit	34.3%	43.2%
	Very much	60.0%	45.9%
Tolerance, ability to appreciate different points of view after ongoing training	Not at all	5.7%	
	Somewhat		13.8%
	Quite a bit	57.1%	41.4%
	Very much	37.1%	44.8%

With regard to *tolerance, ability to appreciate different points of view*, we observe that acquisition of this competency increases with university training, while after ongoing training we note a decline, most notably in graduates who are not working.

Table 14. Contingencies: *ability to communicate orally in public and currently working*

		Currently working	Unemployed
Ability to communicate orally in public before beginning university studies	Not at all		21.6%
	Somewhat	57.1%	27.0%
	Quite a bit	8.6%	35.1%
	Very much	34.3%	16.2%
Ability to communicate orally in public upon completion of university studies	Not at all		
	Somewhat	22.9%	32.4%
	Quite a bit	40.0%	48.6%
	Very much	37.1%	18.9%
Ability to communicate orally in public after ongoing training	Not at all	5.7%	
	Somewhat	11.4%	20.7%
	Quite a bit	68.6%	41.4%
	Very much	14.3%	37.9%

As for *ability to communicate orally in public*, we observe that graduates who are not currently working show better percentages for this competency both before and after their university training. The best percentages for graduates who are working are seen after ongoing training.

Table 15. Contingencies: *ability to communicate correctly in writing and currently working*

		Currently working	Unemployed
Ability to communicate correctly in writing before beginning university studies	Not at all		
	Somewhat	24.2%	10.8%
	Quite a bit	39.4%	78.4%
	Very much	36.4%	10.8%
Ability to communicate correctly in writing upon completion of university studies	Not at all		
	Somewhat	18.2%	5.4%
	Quite a bit	39.4%	67.6%
	Very much	42.4%	27.0%
Ability to communicate correctly in writing after ongoing training	Not at all		
	Somewhat	12.1%	13.8%
	Quite a bit	30.3%	55.2%
	Very much	57.6%	31.0%

As seen in the above table, data obtained for *ability to communicate correctly in writing* show scores increasing as the graduates' training progresses, with unemployed graduates showing higher scores than graduates who are working.

Table 16. Contingencies: *self-confidence in one's competencies and currently working*

		Currently working	Unemployed
Self-confidence in one's competencies before beginning university studies	Not at all		
	Somewhat	5.7%	32.4%
	Quite a bit	88.6%	51.4%
	Very much	5.7%	16.2%
Self-confidence in one's competencies upon completion of university studies	Not at all		
	Somewhat	5.7%	27.0%
	Quite a bit	85.7%	48.6%
	Very much	8.6%	24.3%
Self-confidence in one's competencies after ongoing training	Not at all		
	Somewhat	11.4%	6.9%
	Quite a bit	34.3%	62.1%
	Very much	54.3%	31.0%

Regarding *self-confidence in one's competencies*, all graduates improve their scores as their training progresses, while greater percentages are seen in graduates who are not currently working, as compared to those who are.

Table 17. Contingencies: *creative, critical and innovative ability and currently working*

		Currently working	Unemployed
Creative, innovative and critical ability before beginning university studies	Not at all		10.8%
	Somewhat	45.7%	5.4%
	Quite a bit	48.6%	67.6%
	Very much	5.7%	16.2%
Creative, innovative and critical ability upon completion of university studies	Not at all		5.4%
	Somewhat	28.6%	27.0%
	Quite a bit	62.9%	37.8%
	Very much	8.6%	29.7%
Creative, innovative and critical ability after ongoing training	Not at all		
	Somewhat	28.6%	13.8%
	Quite a bit	62.9%	48.3%
	Very much	8.6%	37.8%

We can confirm above that graduates improve their scores in this competency after completing university education, while only those graduates who are working improve their scores after ongoing training. Unemployed graduates maintain the same percentages in this case.

Table 18. Contingencies: *knowledge of foreign languages (English) and currently working*

		Currently working	Unemployed
Knowledge of foreign languages (English) before beginning university studies	Not at all	25.7%	24.3%
	Somewhat	28.6%	59.5%
	Quite a bit	45.7%	10.8%
	Very much		5.4%
Knowledge of foreign languages (English) upon completion of university studies	Not at all	25.7%	13.5%
	Somewhat	51.4%	54.1%
	Quite a bit	22.9%	27.0%
	Very much		5.4%
Knowledge of foreign languages (English) after ongoing training	Not at all	25.7%	24.1%
	Somewhat	34.3%	55.2%
	Quite a bit	40.0%	13.8%
	Very much		6.9%

Regarding *knowledge of foreign languages (English)*, one can observe above that graduates who are not working maintain more or less equal scores over the course of their training, while those who are currently working show percentages which rise slightly.

Table 19. Contingencies: *knowledge of foreign languages (French) and currently working*

		Currently working	Unemployed
Knowledge of foreign languages (French) before beginning university studies	Not at all	74.3%	64.9%
	Somewhat	25.7%	24.3%
	Quite a bit		10.8%
	Very much		
Knowledge of foreign languages (French) upon completion of university studies	Not at all	68.6%	64.9%
	Somewhat	31.4%	24.3%
	Quite a bit		10.8%
	Very much		
Knowledge of foreign languages (French) after ongoing training	Not at all	68.6%	69.0%
	Somewhat	31.4%	31.0%
	Quite a bit		
	Very much		

More or less similar scores are observed for the two groups of graduates (with and without work), for *knowledge of foreign languages (French)*, while graduates without work are those who improve in this area after initial training.

Table 20. Contingencies: *knowledge of foreign languages (other)* and *currently working*

		Currently working	Unemployed
Knowledge of foreign languages (other) before beginning university studies	Not at all	94.3%	83.8%
	Somewhat		10.8%
	Quite a bit	5.7%	5.4%
	Very much		
Knowledge of foreign languages (other) upon completion of university studies	Not at all	94.3%	83.8%
	Somewhat		10.8%
	Quite a bit	5.7%	5.4%
	Very much		
Knowledge of foreign languages (other) after ongoing training	Not at all	94.3%	79.3%
	Somewhat		6.9%
	Quite a bit	5.7%	13.8%
	Very much		

Finally, with regard to *knowledge of foreign languages (other)*, it can be said that the group of graduates without employment maintains a constant score over the course of their training, while the group which currently is working increases their percentages after ongoing training.

Differences for the competency variable according to current employment situation

In order to observe whether there are significant differences in these competencies at each time point and for each employment situation (working or not working), a *t test* for the given time points was deemed pertinent. Three *t tests* for *student* were carried out in order to determine whether significant differences exist with respect to the graduates' situation. In all cases there is variance equality and the data are distributed normally.

Table 21. *t* test for competency variables (before initial training) and currently working

COMPETENCIES	Statistics				t test for equality of means	
	Mean		s.d.		<i>t</i>	Sig. (bi-lateral)
	No	Yes	No	Yes		
Technical knowledge related to Physical Education	2.37	2.24	.77	.43	.876	.384
Practical knowledge related to Physical Education	2.74	2.73	.58	.80	.071	.944
Knowledge of information technology	2.54	1.97	1.15	.80	2.458	.016
Autonomous information retrieval	2.54	2.41	1.04	.83	.621	.536
Planning one's work and time	2.37	2.68	.60	.75	-1.900	.062
Problem-solving ability	3.00	2.95	.84	.70	.296	.768
Leadership	2.60	2.62	1.14	.95	-.087	.931
Coordination of teamwork	2.83	2.57	.62	.60	1.814	.074
Tolerance, ability to appreciate different points of view	3.40	3.22	.50	.71	1.267	.211
Ability to communicate orally in public	2.77	2.46	.94	1.02	1.349	.182
Ability to communicate correctly in writing	3.12	3.00	.78	.47	.796	.429
Self-confidence in one's competencies	3.00	2.84	.34	.69	1.255	.214
Creative, innovative and critical ability	2.60	2.89	.60	.81	-1.727	.089
Knowledge of foreign languages (English)	2.20	1.97	.83	.76	1.207	.232
Knowledge of foreign languages (French)	1.26	1.46	.44	.69	-1.469	.146
Knowledge of foreign languages (other)	1.11	1.22	.47	.53	-.857	.394

As for competencies (before initial training) and whether or not one is currently working, Table 21 shows that there are significant differences between graduates in the two employment situations only with respect to *knowledge of information technology*, in favor of those not currently working.

Table 22. *t* test for competency variables (after university training) and currently working

COMPETENCIES	Statistics				t test for equality of means	
	Mean		s.d.		<i>t</i>	Sig. (bi-lateral)
	No	Yes	No	Yes		
Technical knowledge related to Physical Education	3.14	3.08	.60	.43	.502	.617
Practical knowledge related to Physical Education	3.09	3.24	.56	.55	-1.204	.233
Knowledge of information technology	3.06	2.73	.73	.56	2.151	.035
Autonomous information retrieval	3.20	2.92	.87	.76	1.465	.147
Planning one's work and time	2.74	3.08	.61	.80	-2.016	.048
Problem-solving ability	3.20	3.14	.72	.69	.339	.736
Leadership	3.03	2.81	.91	.88	1.018	.312
Coordination of teamwork	2.86	2.97	.55	.64	-.818	.416
Tolerance, ability to appreciate different points of view	3.54	3.35	.61	.68	1.259	.212
Ability to communicate orally in public	3.14	2.86	.77	.71	1.587	.117
Ability to communicate correctly in writing	3.24	3.22	.75	.53	.170	.866
Self-confidence in one's competencies	3.03	2.97	.38	.73	.403	.688
Creative, innovative and critical ability	2.80	2.92	.58	.89	-.664	.509
Knowledge of foreign languages (English)	1.97	2.24	.71	.76	-1.569	.121
Knowledge of foreign languages (French)	1.31	1.46	.47	.69	-1.036	.304
Knowledge of foreign languages (other)	1.11	1.22	.47	.53	-.857	.394

Table 22 presents the data for the *t test* performed for competency variables (following university training) and *currently working*. By observing the data we can conclude that for only two of the competencies are there significant differences, since a p-value less than 0.05 was obtained. These competencies are *knowledge of information technologies* and *planning one's work and time*. In the first case the differences are in favor of those graduates who are not working, and in the second case, in favor of the graduates who are employed. For the remaining competencies there are no differences.

In order to complete this section, we present the last *student t* study that was carried out for the competency variables (after ongoing training) and whether or not the individual was working.

Table 23. *t test* for competency variables (after ongoing training) and *currently working*

COMPETENCIES	Statistics				t test for equality of means	
	Mean		s.d.		<i>t</i>	Sig. (bi-lateral)
	No	Yes	No	Yes		
Technical knowledge related to Physical Education	3.49	2.97	.70	.33	3.674	.000
Practical knowledge related to Physical Education	3.43	3.17	.70	.38	1.765	.082
Knowledge of information technology	2.83	3.52	.51	.51	2.425	.018
Autonomous information retrieval	3.09	3.10	.56	.49	-.133	.894
Planning one's work and time	3.20	3.24	.72	.69	-.233	.816
Problem-solving ability	3.03	3.26	.62	.59	-1.482	.144
Leadership	2.69	2.90	.72	.77	-1.130	.263
Coordination of teamwork	3.03	3.03	.62	.87	-.032	.975
Tolerance, ability to appreciate different points of view	3.26	3.31	.74	.71	-.291	.772
Ability to communicate orally in public	2.91	3.17	.70	.76	-1.412	.163
Ability to communicate correctly in writing	3.45	3.17	.71	.66	1.613	.112
Self-confidence in one's competencies	3.43	3.24	.70	.58	1.154	.253
Creative, innovative and critical ability	2.80	3.24	.58	.69	-2.773	.007
Knowledge of foreign languages (English)	2.14	2.03	.81	.82	.529	.599
Knowledge of foreign languages (French)	1.31	1.31	.47	.47	.033	.974
Knowledge of foreign languages (other)	1.11	1.34	.47	.72	-1.538	.129

In Table 23 we observe three competencies which present significant differences: *technical knowledge related to Physical Education*, *knowledge of information technology* and *creative, innovative and critical ability*. In the case of technical knowledge, the differences are in favor of the graduates not currently working; for the other two competencies the significant differences are in favor of those graduates who have a job.

Discussion and Conclusions

Regarding competencies which graduates acquired prior to initiating university training, we found significant differences for the general education competency *knowledge of information technology*. Graduates not currently working showed an average score (2.54) greater than those who are working (1.97).

With regard to the extent of acquisition of these same competencies following university training, significant differences are sustained for *knowledge of information technologies*, to which we now add the procedural competency *planning one's work and time*. For the first competency the difference is in favor of the non-working graduates, while for the competency *planning one's work and time*, the difference is in favor of graduates who are currently working.

One observes that initial training has helped to improve the degree of acquisition of almost all competencies, since both the employed and unemployed graduates present higher average scores.

Finally, when considering the extent of competency acquisition after ongoing training, we can conclude that scores improve and means continue to increase as compared to the two prior periods, indicating that ongoing training is suitable for improving not only one's knowledge, but also for improving competencies which Education professionals must possess.

Knowledge of information technology continues to appear as a competency where significant differences are observed between unemployed graduates and graduates currently working. We can therefore conclude that mastery of this competency is important for labor placement: graduates who are working show a higher mean score than those who are unemployed.

After ongoing training, we find significant differences for the prior competency, and additionally, for two others. One of these is *technical knowledge related to Physical Education*, which falls in favor of graduates not currently working. This may be due to the situation

where those currently working are more connected with reality and understand that they are insufficiently prepared in technical knowledge of Physical Education.

The other competency which falls into this category is that of *creative, innovative and critical ability*, which shows significant differences in favor of those who are working. This value underscores the importance of these abilities for practicing this profession.

By way of a final conclusion, we can observe that after each stage of training, graduates present a greater degree of competency acquisition, regardless of whether they are currently employed. However, workers' and non-workers' perception of the different competencies sometimes differs, since being in contact with the work world affects our estimation of competencies possessed.

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