Perceptions about the construction of academic and professional competencies in psychologists (1)

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(1) Results obtained in the *UCUA Project, Unidad para la Calidad de las Universidades Andaluzas* [Quality Unit for Andalusian Universities] (UAL-11. 2003). Reprinted with permission.

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Abstract

Introduction. Evaluating competencies required for professional practice is a matter of particular current interest. Its importance lies in improvements that can be made in both preparatory and ongoing training and development processes. This paper summarizes results obtained from a recent investigation regarding this issue.

Method. A total of 76 subjects of varying typology participated. These differed in what degree they had earned, in when they had completed their studies, in their current professional position, and in their level of professional experience. All of them completed an online version of the *Escala para la Evaluación de la Formación Psicológica recibida por los profesionales* [Scale for Evaluating Training in Psychology Received by Practicing Professionals], version 1.00 (De la Fuente, 2003). We performed descriptive analysis and analyses of variance with data obtained.

Results. The academic and professional competencies identified are developed, or constructed, in both developmental environments, although not in proper balance, i.e. there is not always adequate coordination between the two environments. In general, subjects feel that a greater number of competencies are constructed in the *applied-professional context*. Most factual knowledge (*knowing*) is constructed in the degree program environment, while construction of procedural knowledge (*know how*) is produced in the applied environment.

Discussion. We consider this line of work to be quite beneficial in evaluating the quality of training received. By taking a close-up look at the current situation we have been able to discern perceptions of students, teachers and practitioners. This input is quite valuable for redesigning preparatory and ongoing training processes for future psychologists.

Keywords. Academic and professional competencies. Conceptual, procedural and attitudinal sub-competencies.

Introduction

One of the current lines of work of the Consortium for Quality in Andalusian Universities (*UCUA*) focuses on providing universities with tools and strategies to help them validate the quality of various internal aspects.

In the current context of changes, reform and experimentation with new degree programs, prompted by the framework of the European Space for Higher Education (ESHE), obtaining information about the practicing professional's view of the training he or she received during academic studies is quite relevant for making current and future decisions. It is well known that we need to collect this professional feedback as a source of information and knowledge regarding suitability of training; however, little has been done to date.

Different parameters can be addressed when evaluating the degree of satisfaction which professionals feel, from their practical viewpoint, as pertains to training received during their university degree programs. These include planning and development of teaching-learning processes, teaching and organizational behavior, suitability of the degree program itself, and so on (De Miguel, 2003; Fernández Sierra, 1996).

Out of these possibilities, we focused our attention on the series of competencies which are developed, or constructed. We consider this to be a central, defining element of quality in university training, though it has been insufficiently studied. In order to move toward this objective we must define somewhat precisely the concept of competency itself, as well as a possible categorization of competencies.

The input-output model of evaluating competencies

The Roe model (2002, 2003) is based on the need to keep in mind different competencies which are components of adequate training for professional practice. He puts forward a *comprehensive model of competencies* as a tool for building a profile of the psychologist, integrating *input* models (curriculum) and *output* models (professional practice) in the conceptual structure of competencies that a good professional must incorporate in a good practice. This model assumes that the profile of a professional's specific competencies includes both

input elements (personality traits, abilities, knowledge, skills and attitudes) and *output elements* (competencies and subcompetencies).

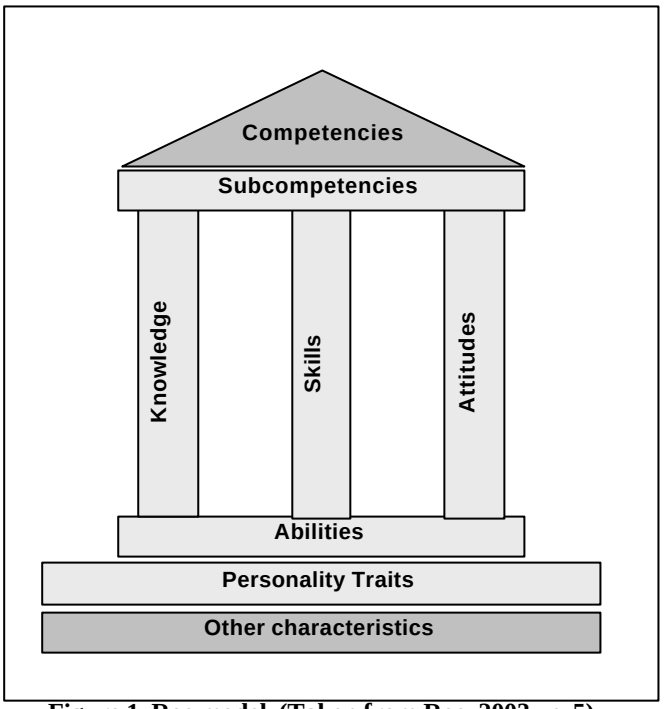

Figure 1. Roe model (Taken from Roe, 2003, p. 5)

In practice, this model considers two types of training elements that are acquired in two different, consecutive periods of time: initial university training and professional practice. Nonetheless, despite this conceptual model's importance as a heuristic for specifying different concepts and for ordering them within the model, it leaves certain questions open, pending resolution:

1. What is the relationship between input and output training? Are the two types of training processes automatically integrated, or, is one superimposed on the other?
2. "Practical know how" competencies – can they only be considered professional competencies (as opposed to academic)?
3. Is it possible, practically speaking, to evaluate abilities and personality traits of the graduates as a means of determining the system's level of quality?

Seeking to overcome these limitations, we proposed a model with some elements common to Roe's model (2002, 2003), although we begin with different assumptions.

The model for evaluating academic-professional competencies

From this perspective, competencies for exercising the profession are defined as a set of *integrated academic-professional knowledge* which would allow for optimal fulfillment of professional requirements (De la Fuente, 2003a, 2003b, in press). Various principles are assumed in this theoretical model:

1. Academic and professional types of knowledge--both of which are necessary for good training and consequently for excellent professional practice--have different, interconnected formats, with transferences between themselves, and do not necessarily belong to the same linear continuum, but rather to two different, superimposed continuums. Thus they are not integrated automatically across time. Instead, a conscious, self-regulated effort is required from the subject in order to produce an integrated reconstruction of both.

Figure 1. *Characteristics of academic knowledge (De la Fuente, 2003a, p. 37).*

- **Knowing:**
  - *what:* facts, concepts, principles, identification of phenomena and problems
  - *why*: principles, theories, explanatory models
  - *what for*: objectives, evaluation and intervention purposes

- **Knowing how:**
  - *what should be done*: aspects
  - *how it should be done*: principles, problem-solving strategies, sequences
  - *research:* academic problems

- **Wanting to know and to know how:**
  - a taste for scientific knowledge of models, theories, research, evaluations, interventions
  - interest in practical psychology skills: therapeutic, preventive, educational…

- **Knowledge of a theoretical-applied order:** deductive

- **Academic thought, especially focused on the conceptual:**
  1. problem identification
  2. evaluation (of a lesser proportion)
  3. intervention (of a lesser proportion)

Figure 2. *Characteristics of professional knowledge (De la Fuente, 2003a, p. 39).*

- **Knowing:**
  - *what is occurring:* facts from the professional context, norms, direct data, problems...
  - *why it is occurring*: specific professional explanations

- **Knowing how:**
  - *decision making*: what for, what, how, when, where and who to evaluate and to intervene
  - *skill execution*: evaluating, intervening
  - *research:* problems referring to professional practice

- **Wanting to know and to know how:**
  - a taste for scientific knowledge of models, theories, research, evaluations, interventions
  - interest in practical psychology skills: therapeutic, preventive, educational…

- **Knowledge of a theoretical-applied order:** inductive

- **Thought format:** decision making for solving practical problems:
  1. evaluation
  2. intervention

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2. If integrated construction of the two knowledge types does not occur, a competency bias is provoked that impedes optimal performance in the professional context, since an epistemological and practical gap is produced between factual, procedural and attitudinal competencies acquired in the academic and professional contexts. Thus it is important to carry out personal, integrated reconstruction.

Figure 3. Characteristics of integrated academic-professional knowledge (De la Fuente, 2003a, p. 40).

- **Knowing**:
  - *what is occurring:* facts from the integrated academic and professional context
  - *why it is occurring*: theoretical-practical and practical-theoretical explanations

- **Knowing how:**
  - *Decision making:* problem-solving, based on experience and academic knowledge, in integrated fashion:
    1. identification
    2. evaluation
    3. intervention
  - *Skills* of identification, evaluation and intervention …
  - *Research*: producing one's own research in contrast to and in coordination with complementary research (academic or professional).

- **Wanting to know and to know how:**
  - *A taste* for integrated knowledge of a theoretical-practical and practical-theoretical order.
  - *Interest* in producing knowledge within one's own environment and in contrasting it with knowledge from the other environment.

- **Knowledge:** deductive-inductive and inductive-deductive, integrated

- **Format of investigative thought in decision-making**:
  1. problem detection; 2. identification; 3. evaluation ; 4. intervention; 5. evaluation;
  6. feedback

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3. The competencies (practical know how) are of an academic and professional nature, where each includes knowing (conceptual subcompetencies), skills (procedural subcompetencies) and attitudes (attitudinal subcompetencies), such that in practice, resolving problems and professional situations involves the combined use of academic-professional competencies. Moreover, neither of the two knowledge types can be limited to a school-related or a professional environment (input-output, in Roe's model); rather, it is to be understood that they are to be constructed in both contexts, academic and professional, in sequence and regulated. Since this does not take place, and instead there is an implicit division of competency learnings between the input-output settings, it is very difficult to integrate developmental processes produced at the University and those produced in the Applied Professional context (De la Fuente, 2003b). In synthesis, the practical problem lies in that each developmental context has specialized in developing one competency type, without creating enough coordinated spaces or actions to encourage an integrated construction of both.

Delimitation of academic-professional competencies

As mentioned above, competencies refer to complex behaviors that lead to implicit learnings (other subcompetencies) of a conceptual, procedural or attitudinal order. Although we are aware that the concept of *professional competency* (Roe, 2002) is broader and may encompass other subcompetencies of the three types (conceptual, procedural and attitudinal), for the case that concerns us, assimilating the concept of *competency* to that of *learning content items* has the classification advantage of helping to generate teaching and learning repertories and therefore, competency-type repertories. Similarly, the teacher, the pupil or the professional can quickly categorize competencies in terms of proposed learning content and of learning activities themselves, designed for building these competencies (De la Fuente, 2004).

Conceptual competencies: facts, concepts and principles (knowing)

Competencies of a conceptual order refer to *factual knowledge*, that is, to a *knowing of facts, concepts and principles*, etc.; they can be constructed in both academic and professional environments:

- *Facts* refer to events or occurrences relevant to a given object under study. An *academic* fact may be the phases of development of a discipline. A *professional* fact may

be knowledge of the prevalence of an illness in a given area. Most facts that a graduate should have acquired have both components combined.

- *Concepts* refer to the grid of terminology, vocabulary and theoretical constructions from academic or professional reality. The current concept of Psychology, as a science, is an *academic* concept, while the concept of attention to diversity in the law which regulates Attention to Persons with Disabilities is a *professional* concept.
- *Principles* are the working out of descriptions, explanations and predictions of phenomena, as are developed by each field of study or applied practice. The Premack Principle or Thorndike's Law, in Psychology, are *academic* statements which serve to explain, evaluate and intervene in psychological problems. The principle of "every teacher has his tricks" is a *professional* statement that explains and predicts teaching behavior in the classroom.

Procedural competencies: procedures (knowing how)

These competencies refer to *executable knowing* or to *knowing how*. It is worth noting that any of these competencies can be considered a continuum along which the subject can make progress in both academic and professional training environments, not in just one or the other, but in complementary fashion. This type of knowing is as diverse as the implicit repertories in each dimension of human development:

- *Personal know-how* consists of a knowledge competency for knowing how to carry out actions of a personal nature. Performing self-regulation while studying is *academic* know-how. Exercising self-control while performing a clinical interview is *professional* know-how.
- *Social know-how* refers to a knowledge competency which allows us to interact adequately in social situations. Working in a group on an in-class assignment is *academic* know-how. Coordinating and leading a work team in some department of a corporation is *professional* know-how.

- *Physical-motor know-how* is knowledge that allows one to perform diverse actions of a physical or motor type. Keying an assignment on the computer is *academic* know-how (with an additional cognitive-linguistic component). Producing a computer-based

presentation in order to present a project to an executive staff is *professional* know-how.

- *Cognitive-linguistic know-how* refers to knowing how to use higher-level or cognitive-linguistic skills. Analyzing and producing a conceptual synthesis of the content of a scientific book is *academic* know-how. Carrying out a working session where one explains a behavior analysis and defends an intervention hypothesis is *professional* know-how.

Attitudinal competencies: attitudes, values and norms (wanting to know and wanting to know how)

These competencies are those which define the attitudinal knowledge of subjects. They define whether the attitudes, values and norms which refer to the previous types of knowing have been adequately developed, that is, *wanting to know* and *wanting to know how*. This type of learning is the most difficult of the three types to help establish in subjects.

- *Attitudes* are competencies which include interest, a taste for or enjoyment of a given problem area, an object of study or an aspect of reality. Enjoying learning about the laws of behavior is an *academic* attitude. To have a taste for keeping up to date scientifically in one's applied work is a *professional* attitude.
- *Values* are those competencies by which subjects carry out judgments in accordance to a given ethical/professional model or code. Respect for different psychological and theoretical positions is an *academic* value. The defense of a given user's ethical rights is a *professional* value.
- *Norms* are the competencies that allow subjects to make decisions and to behave according to this personal construction or development. The ethical behavior of not copying others' work refers to fulfillment of an *academic* ethical norm. Choosing to respect the integrity and rights of a person is a behavior corresponding to a *professsional* ethical norm.

Research objectives

Starting from the above integrated conceptual approach, we set the following objectives:

1. Develop a distribution of frequencies showing the competencies most and least developed by professionals.
2. Compare competencies which are preferably developed at University, in the Professional Field, or jointly in both contexts.

METHOD

Subjects

A total of 76 subjects participated (who filled in a total of 152 completions, each item twice). Subjects were of different *typology* (94 students, 34 university professors and 24 practicing professionals), of different *gender* (42 male and 80 female), with different *degree levels* (80 undergraduates, 28 graduates and 20 doctorates) and who had completed their degree program at different points in time (96 subjects in their final year of study, 16 subjects graduated in the last ten years, and 14 subjects graduated more than ten years ago), with different specialties (16 clinical, 18 educational, 8 organizational and 4 other), different current positions (8 non-university, 24 university and 8 in business) and different levels of professional experience (76 subject with no experience, 20 subjects with up to 10 years of experience, 10 subjects with up to 20 years, and 3 subjects with up to 30 years).

Instruments

For this research we used the *Escala para la Evaluación de la Formación Psicológica recibida por los profesionales* [Scale for Evaluating Psychology Training Received by Practicing Professionals], version 1.00 (De la Fuente, 2004). Validity and reliability data are acceptable and can be found in the *UCUA* Report. The scale is designed to collect professionals' perception about the degree to which training received at University and in later Professional Practice has helped the subject to construct each of 130 competencies. Its overall rational structure marked off the following aspects for evaluation:

1. *Basic academic competencies:*
   - Basic instrumental cognitive-linguistic competencies (39 items)
   - Basic socio-personal competencies (12 items)
2. *Professional intervention competencies:*
   - Applied instrumental cognitive-linguistic competencies (23 items)
   - Advanced applied cognitive-linguistic competencies (31 items)
   - Applied socio-personal competencies (24 items)

Each competency type implicitly includes different categories of subcompetencies:

1. *knowing*: facts, concepts and principles
2. *wanting to know*: attitudes, values and norms about knowing
3. *knowing how*: skills and abilities pertaining to procedures
4. *wanting to know how*: attitudes, values and norms about knowing how.

The empirical structure, obtained in exploratory factorial analyses performed, in the first experimental version of the instrument, classifies each item based on two parameters: 1. *academic and professional knowledge*, and 2. *conceptual, procedural and attitudinal sub-competency*. This allows for a double classification for each item, as indicated to the right of the items (see Appendix 1).

There were two aspects to be filled in for each competency, since the subject is asked to indicate the degree to which he or she has developed each competency in the University column (degree program) and in the Professional Practice column (applied practice), on a likert scale from 1 (not at all) to 5 (very much).

Procedure

Having previously developed this instrument of *academic-professional competencies*, we developed an electronic version so that it could be filled in online. We then established two evaluation levels which would be important when it came to collecting the information:

1. Closed questions. These questions refer to different aspects of the sample under evaluation, in order to collect information about their degree as well to establish possible normative comparisons with other degrees from other universities.

1.1. Subject variables (independent).

1) Personal data: age, gender.

2) Academic data: degree obtained, university, training received, etc.

3) Professional data: current position, experience or professional profile.

1.2. General degree-program assessment variables: academic and professional satisfaction with respect to training receiving during the degree program.

1.3. Competency variables (dependent variables). These refer to the degree of development of the competencies listed previously.

2. Open questions. These left open the possibility for subjects to give their input on issues which the Scale brought to mind, or to make suggestions for improvement.

The data collection procedure was carried out online, in a manner coherent with current trends in evaluation using information technology (Cook, Health & Thomson, 2000; Shannon & Bradshaw, 2002; Sheehan & Hoy, 1999; Smith, 1997). The *UCUA* online tool allows for evaluation of academic-professional competencies for any degree. All information submitted by subjects is recorded in the software-enabled website. By importing results into generic and Excel-based databases, we could later perform statistical processing with SPSS 10.0 (Pérez, 2004).

Statistical analysis

Analyses performed were essentially descriptive and inferential, in order to show general profiles of competency development in both training environments, as well as significant differences which exist between them.

Results

Total competencies constructed according to developmental context (Degree Program and Applied Practice)

In general, competencies developed were rated between somewhat (3) and substantially (4), given the answer range (1-5) for both contexts, although ratings are higher for the applied practice context (response 2) than for the degree program context (response 1). A significant principal effect is found, $F(1.59)= 10.48$ ($p<.002$) in the Anova, in favor of the mean for competencies developed in the applied professional context (see Table 1).

Table 1. Descriptive results of total competencies developed

Response	*N*	*mean*	*sd*	*minimum*	*maximum*	*error*	*post*
Resp1 (Degree)	46	3.14	(.63)	2.01	4.68	0.093	2 >1 **
Resp2 (Practice)	15	3.80	(.82)	1.82	4.64	0.211	
Total	61	3.30	(.73)	1.82	4.68	0.094	

Competencies developed, both academic (dimension 2) and professional (dimension 1), in the context of one's Degree (Response 1) and in Practice (Response 2)

The Anova showed a principal effect, F (2.59)= 7.86, p<.0000, in favor of the mean for competencies from the applied context (response 2). Later analysis revealed the existence of greater competency development in the applied setting, by means of the following significant statistical effect in the Anova, F(1.60)=12.58, p<.001. However, there are no significant differences regarding the contexts in which academic competencies are constructed.

Table 2. Academic and professional competencies developed

Dimension	*Response*	*N*	*Mean*	*sd*
1. Professional Comp.	1. Degree	47	3.09	(.70)
	2. Practice	15	3.91	(.98)
	total	62	3.29	(.85)
2. Academic Comp.	1. Degree	47	3.34	(.58)
	2. Practice	15	3.59	(.70)
	total	62	3.40	(.62)

Subcompetencies developed (conceptual, procedural and attitudinal) in each developmental context

Subcompetencies developed in the Degree Program

In this developmental context, conceptual and attitudinal competencies are more developed. Results from analyses of differences of paired means show, on the right side of the Table, the statistical significance of the differences. Specifically, in the second part of the Table, academic conceptual and attitudinal competencies appear as more developed in the developmental context of the degree program. The least developed competencies are those of a procedural nature (knowing how), both academic and professional ones (see Table 3).

Table 3. Subcompetencies developed in the Degree Program

Subcompetency	*N*	*minimum*	*maximum*	*Avg*	*sd*	*post*
1. Procedural	51	1.59	4.68	2.96	(.71)	3>1****
2. Attitudinal	58	1.46	4.63	3.04	(.76)	3>2*
3. Conceptual	57	2.29	4.97	3.57	(.61)	
1. Academic procedural	61	1.00	5.00	2.06	(1.13)	6>5 ****
2. Professional procedural	52	1.57	4.67	2.97	(.70)	6>4**
3. Prof. conceptual	62	1.25	4.75	3.29	(.83)	6>3****
4. Prof. attitudinal	59	1.32	4.64	3.37	(.77)	6>2****
5. Academic attitudinal	58	1.46	4.63	3.40	(.76)	6>1****
6. Academic conceptual	57	2.29	5.00	3.61	(.61)	

Subcompetencies developed in professional practice

In this developmental context, competencies are built in a more balanced fashion, with no statistically significant differences appearing in the analyses of differences of paired means. Specifically, results shown in the second part of the Table show that competencies most developed are academic attitudinal competencies and conceptual and procedural professional knowledge. Note the lesser development of academic knowledge and procedures (see Table 4)

Table 4. Subcompetencies developed in the applied environment

Subcompetency	*N*	*minimum*	*maximum*	*Mean*	*sd*	*post*
1. Conceptual	21	1.68	4.97	3.76	(.78)	n.s.
2. Procedural	18	1.44	4.86	3.78	(1.12)	
3. Attitudinal	17	1.29	4.83	3.89	(.86)	
1. Academic procedural	21	1.00	5.00	3.28	(1.27)	1 < 2, 3 *
2. Academic conceptual	21	1.71	4.97	3.75	(.78)	1 < 4,5,6****
3. Professional attitudinal	18	1.23	4.82	3.77	(.98)	
4. Professional procedural	18	1.46	4.89	3.80	(1.13)	
5. Professional conceptual	21	1.25	5.00	3.83	(1.02)	
6. Academic attitudinal	17	1.29	4.83	3.89	(.86)	

Specific subcompetencies constructed in each developmental context

Specific subcompetencies constructed in the Degree Program

1) Specific conceptual subcompetencies

The list in Table 5 shows the ranking of development of these subcompetencies. Note the greater development of basic cognitive-linguistic competencies, as well as the lesser development of subcompetencies referring to knowledge of a second language, of the profession in other countries or the use of relevant databases (see appendix for specific items).

Table 5. Specific conceptual subcompetencies

Descriptive Statistics

	N	Min.	Max.	Mean	St. dev.
VAR067	63	1,00	5,00	2,174	1,3623
VAR109	62	1,00	5,00	2,290	1,2464
VAR108	61	1,00	5,00	2,459	1,2724
VAR071	63	1,00	5,00	2,619	1,4304
VAR058	64	1,00	5,00	2,843	1,1577
VAR069	63	1,00	5,00	2,952	1,4857
VAR052	64	1,00	5,00	3,203	1,2621
VAR035	64	1,00	5,00	3,218	1,0460
VAR098	62	1,00	5,00	3,225	1,0149
VAR012	70	1,00	5,00	3,242	1,0691
VAR080	63	1,00	5,00	3,254	1,1909
VAR070	63	1,00	5,00	3,285	1,3250
VAR040	66	1,00	5,00	3,287	1,1995
VAR053	64	1,00	5,00	3,296	1,2431
VAR005	70	1,00	5,00	3,342	1,1149
VAR077	63	1,00	5,00	3,396	1,0086
VAR099	62	1,00	5,00	3,403	1,1082
VAR081	63	1,00	5,00	3,444	,9964
VAR020	70	1,00	5,00	3,471	1,0864
VAR011	70	1,00	5,00	3,485	1,1260
VAR076	62	2,00	5,00	3,500	,8636
VAR072	63	1,00	5,00	3,507	1,3425
VAR010	70	2,00	5,00	3,514	,9742
VAR054	64	1,00	5,00	3,531	1,0536
VAR079	62	1,00	5,00	3,548	,9352
VAR073	63	1,00	5,00	3,571	1,2275
VAR055	64	1,00	5,00	3,593	,9548
VAR078	61	1,00	5,00	3,639	,9492
VAR037	66	1,00	5,00	3,666	1,0278
VAR025	69	2,00	5,00	3,724	,9056
VAR008	70	1,00	5,00	3,742	1,0026
VAR019	70	1,00	5,00	3,757	1,0826
VAR007	70	2,00	5,00	3,771	,8370
VAR038	66	1,00	5,00	3,772	1,0347
VAR009	70	2,00	5,00	3,814	,8894
VAR004	70	1,00	5,00	3,985	,8596
VAR002	70	1,00	5,00	4,057	,8662
VAR003	70	2,00	5,00	4,100	,7829
VAR006	70	2,00	5,00	4,142	,7476
valid N (accd to list)	57				

[*Note from Translator: in this and subsequent tables, commas are used for decimals.*]

2) Specific procedural subcompetencies

The most developed competencies refer to general aspects of psychological conceptualization and identification, as is reflected in Table 6. The least developed ones refer to processes of adjustment, change and responding to the demands of work situations which require a large number of skills (see appendix for specific items).

Descriptive Statistics

	N	Min.	Max.	Mean	Std dev.
VAR125	62	1,00	5,00	2,0000	1,18737
VAR065	63	1,00	5,00	2,1587	1,15293
VAR124	62	1,00	5,00	2,3710	1,16273
VAR115	62	1,00	5,00	2,4032	1,24742
VAR066	63	1,00	5,00	2,4286	1,22756
VAR118	61	1,00	5,00	2,4426	1,08819
VAR110	61	1,00	5,00	2,4590	1,37324
VAR063	62	1,00	5,00	2,4677	1,30218
VAR064	63	1,00	5,00	2,4762	1,34233
VAR123	62	1,00	5,00	2,4839	1,14150
VAR120	62	1,00	5,00	2,5000	1,21129
VAR113	62	1,00	5,00	2,6452	1,28161
VAR061	63	1,00	5,00	2,6508	1,20695
VAR117	62	1,00	5,00	2,6935	1,09528
VAR059	63	1,00	5,00	2,6984	1,17274
VAR068	63	1,00	5,00	2,7619	1,38790
VAR086	63	1,00	5,00	2,7619	1,11752
VAR116	62	1,00	5,00	2,7903	1,10345
VAR094	62	1,00	5,00	2,8065	1,09901
VAR033	67	1,00	5,00	2,8358	1,16251
VAR036	66	1,00	5,00	2,8485	1,23091
VAR119	61	1,00	5,00	2,8689	1,25798
VAR093	62	1,00	5,00	2,8710	1,13778
VAR062	63	1,00	5,00	2,8730	1,23774
VAR114	62	1,00	5,00	2,8871	1,25587
VAR088	63	1,00	5,00	2,9048	1,22756
VAR121	62	1,00	5,00	2,9516	1,31108
VAR122	61	1,00	5,00	2,9672	1,23784
VAR095	62	1,00	5,00	2,9677	1,05532
VAR085	61	1,00	5,00	2,9836	,88491
VAR089	63	1,00	5,00	2,9841	1,09974
VAR047	64	1,00	5,00	3,0000	1,15470
VAR112	61	1,00	5,00	3,0328	1,44876
VAR026	68	1,00	5,00	3,0588	,94446
VAR087	63	1,00	5,00	3,0794	1,16815
VAR090	63	1,00	5,00	3,0952	1,14602
VAR102	62	1,00	5,00	3,0968	1,12657
VAR027	69	1,00	5,00	3,1014	1,07300
VAR100	62	1,00	5,00	3,1452	1,21259
VAR034	67	1,00	5,00	3,1642	1,09540
VAR091	62	1,00	5,00	3,1774	1,01665
VAR096	62	1,00	5,00	3,1774	1,03265
VAR060	64	1,00	5,00	3,1875	1,05221
VAR029	68	1,00	5,00	3,1912	1,04034
VAR022	69	1,00	5,00	3,2029	1,02297
VAR043	66	1,00	5,00	3,2424	1,11024
VAR045	64	1,00	5,00	3,2656	1,17165
VAR044	66	1,00	5,00	3,2727	1,14416
VAR041	66	1,00	5,00	3,2879	1,22494
VAR031	66	1,00	5,00	3,3182	1,04010
VAR028	69	1,00	5,00	3,3188	1,05011
VAR101	62	1,00	5,00	3,3226	1,15623
VAR032	67	1,00	5,00	3,3582	,99547
VAR049	64	1,00	5,00	3,3750	1,27864
VAR021	69	2,00	5,00	3,3913	1,01775
VAR105	62	1,00	5,00	3,4032	1,07825
VAR092	62	1,00	5,00	3,4677	1,09721
VAR048	64	1,00	5,00	3,5000	1,00791
VAR023	69	1,00	5,00	3,6522	,98258
VAR030	67	1,00	5,00	3,6567	,96220
VAR042	66	1,00	5,00	3,7879	1,07439
VAR024	69	2,00	5,00	3,8551	,87909
VAR046	63	1,00	5,00	3,9048	1,01146
Valid N (accd to list)	51				

3) Specific attitudinal subcompetencies

These subcompetencies show that ethical commitment to knowledge and to the rights of users is the most developed (see Table 7). Note the low score for attitudes of knowledge about the profession in other countries, and the theoretical-practical integration of knowledge (see appendix for specific items).

Descriptive statistics

	N	Min.	Max.	Mean	Std. dev.
VAR111	61	1,00	5,00	2,5082	1,44479
VAR103	62	1,00	5,00	2,8710	1,32422
VAR126	62	1,00	5,00	3,0806	1,33427
VAR104	61	1,00	5,00	3,0820	1,29480
VAR084	63	1,00	5,00	3,1270	1,21140
VAR074	63	1,00	5,00	3,1746	1,15758
VAR016	70	1,00	5,00	3,2429	1,26761
VAR127	62	1,00	5,00	3,2742	1,18970
VAR015	70	1,00	5,00	3,3000	,99782
VAR075	63	1,00	5,00	3,3175	1,26778
VAR050	64	1,00	5,00	3,3437	1,15770
VAR017	70	1,00	5,00	3,3571	1,12978
VAR018	70	1,00	5,00	3,3857	1,03969
VAR105	62	1,00	5,00	3,4032	1,07825
VAR130	62	1,00	5,00	3,4194	1,20855
VAR020	70	1,00	5,00	3,4714	1,08643
VAR083	63	1,00	5,00	3,4921	,99795
VAR082	63	1,00	5,00	3,5873	1,04163
VAR051	64	1,00	5,00	3,6719	1,15545
VAR013	70	1,00	5,00	3,7000	1,17152
VAR056	64	1,00	5,00	3,7031	,98689
VAR057	63	1,00	5,00	3,7143	1,03843
VAR129	62	1,00	5,00	3,7419	,95704
VAR019	70	1,00	5,00	3,7571	1,08261
VAR039	66	1,00	5,00	3,8182	1,03640
VAR128	61	1,00	5,00	3,8689	1,07200
VAR014	70	1,00	5,00	3,9286	1,13344
VAR106	62	1,00	5,00	3,9677	1,05532
Valid N (accd to list)	58				

Specific subcompetencies developed in the professional context

1) Specific conceptual subcompetencies

The most developed subcompetencies refer to the terminology of the profession, staying up to date scientifically, and to one's own personal possibilities and limitations. Those least developed refer to knowledge of the profession in other countries and to knowledge of data-bases (see Table 8).

Descriptive statistics

	N	Min.	Max.	Mean	Std. dev.
VAR067	22	1,00	5,00	2,2727	1,35161
VAR071	22	1,00	5,00	2,5909	1,56324
VAR108	21	1,00	5,00	2,6190	1,43095
VAR109	21	1,00	5,00	2,7143	1,41926
VAR002	28	1,00	5,00	2,9286	1,18411
VAR004	28	1,00	5,00	2,9286	1,30323
VAR072	22	1,00	5,00	3,0909	1,60087
VAR035	25	1,00	5,00	3,1600	1,24766
VAR058	23	1,00	5,00	3,2609	1,32175
VAR008	28	1,00	5,00	3,3214	1,38921
VAR003	28	1,00	5,00	3,3571	1,12922
VAR073	22	1,00	5,00	3,3636	1,29267
VAR069	22	1,00	5,00	3,3636	1,73330
VAR009	28	1,00	5,00	3,4643	1,10494
VAR077	22	2,00	5,00	3,5000	1,05785
VAR070	22	1,00	5,00	3,5000	1,14434
VAR038	25	1,00	5,00	3,5600	1,19304
VAR098	21	1,00	5,00	3,6190	1,07127
VAR099	21	1,00	5,00	3,6667	1,35401
VAR012	28	1,00	5,00	3,6786	1,18801
VAR010	28	2,00	5,00	3,6786	,81892
VAR079	22	1,00	5,00	3,6818	1,12911
VAR052	23	1,00	5,00	3,6957	1,45960
VAR053	23	1,00	5,00	3,6957	1,14554
VAR055	23	2,00	5,00	3,6957	1,06322
VAR011	28	1,00	5,00	3,7143	1,08379
VAR078	22	1,00	5,00	3,7273	1,27920
VAR080	22	1,00	5,00	3,7273	1,35161
VAR007	28	1,00	5,00	3,8214	1,21879
VAR054	23	1,00	5,00	3,8261	1,11405
VAR005	28	1,00	5,00	3,8571	1,17739
VAR020	28	1,00	5,00	3,8929	1,03062
VAR081	22	1,00	5,00	3,9091	1,01929
VAR076	22	2,00	5,00	3,9545	,84387
VAR019	28	1,00	5,00	3,9643	,88117
VAR040	25	1,00	5,00	4,0000	1,29099
VAR025	28	2,00	5,00	4,0714	1,08623
VAR006	28	1,00	5,00	4,0714	1,01575
VAR037	25	3,00	5,00	4,3200	,74833
Valid N (accd to list)	21				

2) Specific procedural subcompetencies

The least developed subcompetencies refer to work in international contexts and in other countries. They also include advising organizations and to involving subjects in organizational work (see Table 9).

Descriptive Statistics

	N	Min.	Max.	Mean	Std dev.
VAR125	21	1,00	5,00	2,6667	1,68325
VAR110	21	1,00	5,00	2,9524	1,43095
VAR123	21	1,00	5,00	3,0000	1,48324
VAR033	26	1,00	5,00	3,3462	1,12933
VAR066	22	1,00	5,00	3,4545	1,33550
VAR118	21	1,00	5,00	3,4762	1,47034
VAR124	21	1,00	5,00	3,4762	1,47034
VAR119	21	1,00	5,00	3,4762	1,47034
VAR120	21	1,00	5,00	3,4762	1,36452
VAR068	22	1,00	5,00	3,5000	1,73891
VAR112	21	1,00	5,00	3,5238	1,36452
VAR122	21	1,00	5,00	3,5238	1,53685
VAR034	26	1,00	5,00	3,5385	1,39229
VAR091	22	1,00	5,00	3,5455	1,43849
VAR116	21	1,00	5,00	3,5714	1,36277
VAR117	21	1,00	5,00	3,5714	1,46872
VAR094	22	1,00	5,00	3,5909	1,18157
VAR036	25	1,00	5,00	3,6000	1,32288
VAR064	22	1,00	5,00	3,6364	1,46533
VAR088	22	1,00	5,00	3,6364	1,52894
VAR095	21	1,00	5,00	3,6667	1,35401
VAR113	21	1,00	5,00	3,6667	1,19722
VAR087	21	1,00	5,00	3,6667	1,35401
VAR101	21	1,00	5,00	3,6667	1,35401
VAR115	21	1,00	5,00	3,6667	1,27802
VAR121	21	1,00	5,00	3,6667	1,49443
VAR041	25	1,00	5,00	3,6800	1,40594
VAR049	23	1,00	5,00	3,6957	1,14554
VAR092	21	1,00	5,00	3,7143	1,38358
VAR100	21	1,00	5,00	3,7143	1,30931
VAR043	25	1,00	5,00	3,7200	1,24231
VAR032	26	1,00	5,00	3,7308	1,21845
VAR047	23	1,00	5,00	3,7391	1,09617
VAR027	28	1,00	5,00	3,7500	1,26564
VAR090	22	1,00	5,00	3,7727	1,41192
VAR021	28	1,00	5,00	3,7857	1,28689
VAR063	21	1,00	5,00	3,8095	1,28915
VAR096	21	1,00	5,00	3,8095	1,20909
VAR085	22	1,00	5,00	3,8182	1,25874
VAR046	23	1,00	5,00	3,8261	1,19286
VAR023	28	1,00	5,00	3,8571	1,17739
VAR086	22	1,00	5,00	3,8636	1,32001
VAR045	23	1,00	5,00	3,8696	1,09977
VAR065	22	1,00	5,00	3,9091	1,34196
VAR089	22	1,00	5,00	3,9091	1,34196
VAR062	22	1,00	5,00	3,9091	1,30600
VAR031	26	1,00	5,00	3,9231	1,23038
VAR022	28	1,00	5,00	3,9286	1,11981
VAR026	28	1,00	5,00	3,9286	1,33135
VAR048	23	1,00	5,00	4,0000	1,12815
VAR029	27	1,00	5,00	4,0000	1,20894
VAR044	25	1,00	5,00	4,0000	1,08012
VAR105	21	2,00	5,00	4,0000	1,09545
VAR114	21	1,00	5,00	4,0000	1,22474
VAR102	21	2,00	5,00	4,0000	,94868
VAR030	26	1,00	5,00	4,0385	1,07632
VAR060	23	1,00	5,00	4,0435	1,29609
VAR093	22	1,00	5,00	4,0455	1,25270
VAR028	28	2,00	5,00	4,0714	,97861
VAR059	22	1,00	5,00	4,0909	1,47710
VAR061	22	1,00	5,00	4,0909	1,37699
VAR042	25	2,00	5,00	4,1200	,88129
VAR024	28	1,00	5,00	4,2857	1,01314
Valid N (accd to list)	18				

3) Specific attitudinal subcompetencies

The largest deficit in subcompetencies once more refers to attitudes of work with other countries and with professionals abroad. The most developed attitudes are those referring to deontological norms of the profession (see Table 10).

Descriptive Statistics

	N	Min	Max	Mean	Std. dev.
VAR111	21	1,00	5,00	2,6667	1,46059
VAR126	21	1,00	5,00	3,5714	1,36277
VAR051	23	1,00	5,00	3,6522	1,26522
VAR018	28	1,00	5,00	3,7143	1,21281
VAR016	28	1,00	5,00	3,7500	1,26564
VAR082	21	1,00	5,00	3,7619	1,33809
VAR074	22	1,00	5,00	3,7727	1,41192
VAR103	21	1,00	5,00	3,8095	1,32737
VAR127	21	1,00	5,00	3,8095	1,16701
VAR015	28	1,00	5,00	3,8214	1,15642
VAR129	21	1,00	5,00	3,8571	1,38873
VAR130	21	1,00	5,00	3,8571	1,23635
VAR083	22	1,00	5,00	3,8636	1,12527
VAR020	28	1,00	5,00	3,8929	1,03062
VAR104	20	1,00	5,00	3,9000	1,16529
VAR056	23	2,00	5,00	3,9130	,99604
VAR039	25	1,00	5,00	3,9600	1,36870
VAR014	28	1,00	5,00	3,9643	1,13797
VAR019	28	1,00	5,00	3,9643	,88117
VAR105	21	2,00	5,00	4,0000	1,09545
VAR084	22	1,00	5,00	4,0455	1,25270
VAR128	20	1,00	5,00	4,0500	1,27630
VAR017	28	1,00	5,00	4,0714	1,08623
VAR050	23	1,00	5,00	4,0870	1,12464
VAR057	22	2,00	5,00	4,1364	,88884
VAR075	22	1,00	5,00	4,1364	1,20694
VAR013	28	1,00	5,00	4,1429	1,14550
VAR106	21	2,00	5,00	4,2381	,99523
Valid N (accd to list)	17				

Discussion and conclusions

Results have opened the way for us to look more closely at an area well worth examining. They have allowed us to confirm several aspects which we consider important. First, as proposed in our initial models (De la Fuente, 2003; Roe, 2002, 2003), we verified that academic and professional competencies are developed in both developmental environments, in

complementary fashion, although there is an imbalance, or rather, a training specialization in each environment.

In general, subjects feel that a larger number of competencies are developed in the applied-professional context. Most factual knowledge (*knowing*) is constructed in the Degree Program environment, while construction of procedural knowledge (*knowing how*) is developed in the applied setting.

But the most interesting information comes from evaluation of subcompetencies, allowing us to delve more deeply into finer distinctions. As we have seen, there are very clear differences in the developmental context of the Degree Program, with greater construction of academic and attitudinal conceptual subcompetencies *–knowing and wanting to know and to know how* – to the detriment of procedural academic competencies, and generally of professional knowledge of a conceptual and procedural nature. In the applied context, however, conceptual and procedural professional competencies are developed par excellence. Note the low score assigned to academic procedural competencies, in both the Degree Program setting as well as the applied setting, indicating an important training deficit in *academic know how*, essential for optimal development and integration of academic-professional knowledge.

In the case of specific competencies, results concur with others seen in a sample of school psychologists (De la Fuente, in press) and reveal the goodnesses and the deficits characterizing the initial and ongoing developmental training of psychologists as professionals, especially those referring to the international environment and to competencies of *professional know how*, in some cases addressed neither in initial training nor in ongoing development (De la Fuente, 2000a).

We do not wish to close this research report without first mentioning several important limitations. First, we know that it is necessary to continue widening our study sample to increase its representation and the generalization of results, and likewise to attain a broader validation of the experimental version of the measuring instrument we used. Second, we should clarify that we find general results from the analyses to be modulated by personal and professional subject variables, aspects which were not the object of this report, but should be studied in future research.

The above results lead us to consider that this line of work is very beneficial, both in the present and in the future. A close-up look at the current situation has allowed us to see how professionals, teachers and students perceive the training they have received, as a quality criterion of their degree program. In the future, it would be desirable to continue with this evaluation criterion to know whether changes made due to implementation of the European Space for Higher Education have brought about an increase in the developmental quality of the degree programs, on the part of applied professionals and students. From the perspective of ongoing professional development, it would be desirable that organizations charged with further training of professionals were aware of this important feedback which we make available as a screening process. An integrated, coordinated plan of initial and ongoing training for our professionals continues to be urgently needed.

Acknowledgments

This work was carried out thanks to the anonymous participation of practitioners, students and professors, as well as to the express participation of the Official Psychologists' Association and of several Provincial Departments of Education of the Regional Government of Andalusia.

References

Cook, C., Health, F., & Thomson, R. (2000). A meta-analysis of response rates in Web – or Internet-based surveys. *Educational & Psychological Measurement, 60*(6), 821-826.

De la Fuente, J. (2003a). ¿Por qué los alumnos no construyen un conocimiento académico y profesional integrado? Reflexiones para una investigación necesaria. [Why do students not construct integrated academic and professional knowledge? Reflections on some needed research.] *Papeles del Psicólogo, 24 (*86), 34-41.

De la Fuente, J. (2003b). *Competencias académico-profesionales para la formación psicológica*. [Academic-professional competencies for training in psychology.] Unpublished manuscript.

De la Fuente, J. (2004). *Escala para la evaluación de la formación psicológica desde la perspectiva de los profesionales.* [Scale for evaluating psychology training from the perspective of practicing professionals], Almería: RPI-18-04.

De la Fuente, J. (in press). La construcción de las competencias académico-profesionales para el asesoramiento educativo. [Construction of academic-professional competencies for educational advising.] In J. I. Pozo & C. Monereo (Coords), *El asesoramiento educativo a examen*. Barcelona: Graó.

De la Fuente, J. & cols. (2004). *Guía metodológica para la evaluación en–línea de la construcción del conocimiento profesional, promovido desde las titulaciones oficiales.* [Methodological guide for online evaluation of the construction of professional knowledge, as addressed in official degree programs.] Proyecto UCUA. UAL-11. Córdoba: UCUA.

De Miguel, M. (Coord) (2003). *Evaluación de la calidad de las titulaciones universitarias*. [Quality evaluation of university degree programs.] Madrid: Ministerio de Educación, Cultura y Deporte.

Fernández Sierra, J. (1996). *La evaluación del profesorado de la Universidad de Almería.* [Evaluation of teaching staff at the University of Almeria.] Almería: Servicio de Publicaciones.

Pérez, C. (2004). *Técnicas estadísticas con SPSS.* [Statistical techniques with SPSS.] Madrid: Pearson-PrenticeHall.

Proyecto EuroPsyT (2003). Una propuesta marco para la educación y formación del psicólogo en Europa. [A framework proposal for the education and development of the psychologist in Europe.] *INFOCOP, 86*, 65-76.

Roe, R. A. (2002). Competencies-A key towards the integration of theory and practice in work psychology. *Gedrag en Organisatie, 15*, 203-224.

Roe, R. A. (2003). ¿Qué hace competente a un Psicólogo?. [What makes a Psychologist competent?] *Papeles del Psicólogo, 24* (86), 1-12.

Shannon, D. M., & Bradshaw, C. C. (2002). A comparison of response rate, response time, and costs of mail and electronic surveys. *The Journal of Experimental Education, 70*(2), 179-192.

Sheehan, K. B. & Hoy, M. G. (1999). Using e-mail to survey Internet users in the United States: Methodology and assessment. *Journal of Computer Mediated Communication, 4*(3). From http://www.ascusc.org/jcmc/vol4/issue3/sheehan.html.

Smith, C. (1997). Casting the net: surveying the Internet population. *Journal of Computer Mediated Communication, 4*(3).
From: http://www.ascusc.org/jcmc/vol3/issue1/smith.html

Appendix 1

Items from the ESCALA PARA LA EVALUACIÓN DE LA FORMACIÓN PSICOLÓGICA DESDE LA PERSPECTIVA DE LOS PROFESIONALES. [Scale for evaluating training in psychology from the perspective of practicing professionals.] **Version 1.00 (2004)**
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Types of competencies evaluated

CA= conceptual academic
PA= procedural academic
AA= attitudinal academic
CP= conceptual professional
PP= procedural professional
AP= attitudinal professional

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1. BASIC ACADEMIC COMPETENCIES	**Degree**	**Practice**	
1. 1. Basic cognitive-linguistic competencies.			
Knowing: *Facts*			
1. Be familiar with a sufficiently broad range of general knowledge.	__	__	
2. Be familiar with the historical evolution of psychology.	__	__	CA
Concepts			
3. Know the characteristics of explanatory theoretical models of psychology.	__	__	CA
4. Know relevant psycho-physiological structures and processes in order to understand behavior and physiological processes.	__	__	CA
5. Have a solid basic understanding of the profession.	__	__	CA
6. Know the scientific terminology pertaining to the field of psychology.	__	__	CA
7. Know different methods of psychological evaluation, diagnosis and treatment in the different areas of psychology.	__	__	CA
8. Know different research designs for professional work in psychology	__	__	CA
Principles			
9. Know the basic principles of psychological development and of educational phenomena, of personality and psycho-pathological functioning, of groups and of organizations.	__	__	CA
Wanting to know:			
Attitudes and values			
10. Show interest in knowledge and in understanding.	__	__	CA
11. Respect the theoretical and methodological diversity of psychology.	__	__	CA
12. Value knowledge obtained from different scientific methodologies.	__	__	CA
13. Value the profession as a field of work that requires specific, concrete competencies, different from other types of professionals.	__	__	AP
Norms			
14. An ethical commitment to knowledge.	__	__	AP
Know-how:			
Ability to learn to learn (self-regulation)			
15. Plan and control the learning process autonomously.	__	__	AP
16. Self-evaluate and reflect on the learning process.	__	__	AP
17. Learn from mistakes and carry out one's intentions to change.	__	__	AP

18. Use flexible learning strategies, adapting them to learning objectives.	__	__	AP
Analysis, synthesis and identification			
19. Know the principal sources of information and documentation.	__	__	CA
20. Analyze, synthesize, and summarize information from scientific/ professional documents.	__	__	CA
21. Perform functional analyses that link various aspects of the psychological processes involved to each other.	__	__	PP
Ability to organize, plan and make decisions in problem-solving			
a) identification:			
22. Identify needs of the individual, group, community, institution and organization.	__	__	PP
23. Identify the behavior or psychological process which is under study, what its variants are and the behaviors or processes associated with them.	__	__	PP
24. Identify the context in which the behavior takes place.	__	__	PP
25. Identify causal explanatory variables for a given psychological problem.	__	__	CA
26. Identify and define psychological problems in the workplace setting.	__	__	PP
b) evaluation:			
27. Generate alternatives for evaluating and diagnosing psychological problems.	__	__	PP
28. Evaluate and assess results of a psychological intervention.	__	__	PP
c) intervention:			
29. Generate alternatives for evaluating and solving psychological problems.	__	__	PP
30. Define the objectives of a psychological intervention.	__	__	PP
31. Develop psychological intervention strategies to address the individual, the group or the community.	__	__	PP
32. Choose the best psychological intervention technique in order to meet proposed objectives.	__	__	PP
33. Master strategies and techniques that will allow users, clients or target populations in general to be actively involved in the intervention that is being carried out.	__	__	PP
d) follow-up:			
34. Establish ways to control, evaluate and follow-up an intervention.	__	__	PP
d) research:			
35. Apply research designs that allow one to deduce relevant and scientifically pertinent results.	__	__	CA
36. Acquire decision-making skills regarding professional and scientific results.	__	__	PP

Wanting to know how:

Attitudes and values			
37. Interest in studying and in staying up to date with ongoing Psychology developments.	__	__	CA
38. Interest in research and the creation of new Psychology data.	__	__	CA
Norms			
39. Possess ethical commitment in performing research tasks.	__	__	AA

1.2. Basic personal competencies.

***Knowing*:**

Facts

40. Be familiar with one's personal strengths and limitations.	__	__	CP

Principles

41. Be familiar with personal competencies which the profession of psychologist entails.	__	__	PP

Wanting to know:

42. Have an interest in personal improvement.	__	__	PP

Know-how:

Self-regulation and personal self-control

43. Exercise self-regulation of personal behavior.	__	__	PP

Achievement motivation

44. Motivate oneself to work, resisting frustration.	__	__	PP
45. Define academic, personal and professional improvement goals.	__	__	PP

Initiative and enterprising spirit

46. Propose and recognize the usefulness of Psychology in different areas of intervention.	__	__	PP
47. Develop one's own initiatives, aimed at resolving problem situations of psychological interest.	__	__	PP

Concern for quality

48. Feel a liking for quality in work performed, as a reference point for one's own action.	__	__	PP

Wanting to know how:

Attitudes and values

49. Interest in succeeding.	__	__	PP
50. Have an enterprising spirit and a desire for quality in work.	__	__	AP

Norms

51. Ethical commitment in the attainment of personal achievements	__	__	AP

2. PROFESSIONAL INTERVENTION COMPETENCIES.

2.1. Cognitive-linguistic competencies instrumental in professional practice.

Knowing:

Facts

52. Be familiar with problems relevant to the professional field where one will be working.	__	__	CP
53. Be familiar with the most relevant journals in one specific area of psychological intervention.	__	__	CA

Concepts

54. Understand scientific terminology from disciplines most closely related to Psychology.	__	__	CA

Wanting to know:

Attitudes and values

55. Interest in contributions to Psychology from other fields, and in Psychology's contributions to other fields.	__	__	CA
56. Show a respectful attitude toward other scientific disciplines.	__	__	AA

Norms

57. Fulfillment of ethical norms in the use of scientific terminology and of information in the professional field of Psychology.	__	__	AA

Know-how:

Oral and written communication

58. Conceptually plan a composition and convert it to text.	__	__	CA
59. Write psychology reports addressing users, whether they be individuals, agencies, businesses, or institutions, as well as to write research reports.	__	__	PP
60. Assess, interpret and synthesize information that comes from psychology evaluation techniques and diagnosis.	__	__	PP
61. Communicate psychology results orally, adapting their presentation to the receiving audience.	__	__	PP
62. Master data presentation methods (oral, computer, other technologies)	__	__	PP
63. Have communication and persuasion skills.			
64. Speak correctly in public.	__	__	PP
65. Advise other professionals.	__	__	PP
66. Inspire interest from persons or institutions who receive reports for application of psychology results.	__	__	PP

Knowledge of a second language

67. Use a foreign language (usually English).	__	__	CA

Basic computer skills

68. User-level computer skills (word-processing, spreadsheets, etc.), as well as Internet (searches on the Net, handling e-mail, transferring data and files, etc.)	__	__	PA
69. Know how to handle a statistics program commonly used in Psychology (SPSS or similar).	__	__	CA

Information-management skills

70. Identify sources of Psychology data.	__	__	CA
71. Handle databases relevant to Psychology (PsyClit, Psicodoc, Medline, Current Contents, Social Sciences Citation Index, etc.)	__	__	CA
72. Know how to search for documentation in a scientific library or archive	__	__	CA
73. Plan a bibliography search or reference search.	__	__	CA

Wanting to know how:

Attitudes and values

74. Interest in learning instrumental competencies required in the profession .	__	__	AP

Norms

75. Fulfill of deontological norms in handling psychological information and data	__	__	AP

2.2. Cognitive-linguistic competencies for professional intervention

Knowing:

Facts			
76. Be familiar with pertinent professional and scientific psychological data.	__	__	CA
Concepts			
77. Be familiar with different professional research designs.	__	__	CA
78. Be familiar with the most common concepts and vocabulary specific to the professional field where one will be working.	__	__	CA
79. Be familiar with explanatory and conceptual models which the professional practice entails.	__	__	
Principles			
80. Be familiar with psychology principles generated from the professional field itself.	__	__	CA
Wanting to know:			
Attitudes and values			
81. Respect for the theoretical and critical diversity of Psychology resulting from a thoughtful weighing of scientific advances in the profession.	__	__	CA
Norms			
82. Acquire an ethical commitment to advances in scientific knowledge in Psychology	__	__	AP
Know how:			
Independent vocational learning			
83. Have self-awareness of knowledge acquired and of professional skills.	__	__	AP
84. Work independently.	__	__	AP
85. Individually and actively apply one's knowledge and skills to resolving psychological problems.	__	__	PP
Applying knowledge to practice			
86. Transfer academic knowledge to different real situations found in various areas where psychology interventions are applied.	__	__	PP
a) detection and explanation:			
87. Detect risk populations or populations of interest.	__	__	PP
88. Identify and give explanations for problems in real contexts.	__	__	PP
b) evaluation:			
89. Apply different evaluation and diagnostic methods in applied areas of psychology (educational, clinical and health, socio-community, legal and organizational etc.)	__	__	PP
c) intervention:			
90. Apply psychological strategies and techniques in individual, group and community contexts.	__	__	PP
d) research:			
91. Apply the most common scientific methodologies in Psychology to solve psychological problems.	__	__	PP
Innovation and creativity			
92. Identify problems and show interest in putting forward a solution.	__	__	PP

93. Generate new ideas and offer different solutions to professional problems. __ __ PP
94. Attack a problem from new and different perspectives. __ __ PP

Criticism and Self-criticism
95. Assess the applied relevance of a psychological result. __ __ PP
96. Use psychological data analysis skills. __ __ PP
98. Critically apply Psychology principles to the analysis of social problems. __ __ CP

Professional research
99. Define the research problem and look for relevant information. __ __ CP
100. State and refute working hypotheses. __ __ PP
101. Interpret results and generalize them by relating them to previous results. __ __ PP

Wanting to know how:

Attitudes and values
102. Attitude of innovation and professional improvement. __ __ PP
103. Attitude which integrates theoretical and practical knowledge. __ __ AP
104. Consider personal self-criticism to be important. __ __ AP
105. Value the need to carry out research in one's own professional practice. __ __ PP

Norms
106. Exercise ethical commitment and respect for the rights of clients and users. __ __ AP

2.3. Social competencies of professional intervention

Knowing:

Facts
107. Be familiar with other cultures and other countries' customs. __ __
108. Be familiar with professional practice in other countries. __ __ CA

Wanting to know:

Attitudes and values:
109. Show interest in knowing about other cultures and other countries' customs. __ __ CA
110. Show interest in development of the profession in other countries. __ __ PA

Norms
111. Ethical commitment in handling comparative information about the culture and the profession in other countries. __ __ AC

Knowing how:

Interpersonal skills
112. Have social skills. __ __ PP
113. Have negotiation and persuasion skills. __ __ PP
114. Have communication skills. __ __ PP

Leadership and teamwork
115. Lead and coordinate psychologically relevant work. __ __ PP
116. Be familiar with handling groups from a psychological perspective. __ __ PP

117. Carry out a group dynamic.	__	__	PP
118. Adequately coordinate groups.	__	__	PP
119. Apply motivation and incentivation techniques.	__	__	PP
120. Have negotiation skills and strategies and know how to apply them.	__	__	PP
121. Master psychological strategies and techniques for problem-solving.	__	__	PP
122. Know in which context each technique has a greater differential effectiveness.	__	__	PP
123. Advise businesses or institutions in the use of psychology intervention models.	__	__	PP
Adjustment to new professional situations			
124. Adjustment to new situations in the work setting.	__	__	PP
125. Demonstrate an ability to work in an international context.	__	__	PP
Wanting to know how:			
Attitudes and values			
126. Recognize diversity and multiculturality as important.	__	__	AP
127. Have compassion and appreciation for cultural diversity.	__	__	AP
128. Respect the rights of clients and users.	__	__	AP
Norms			
129. Show an ethical and deontological commitment in the use of interpersonal skills.	__	__	AP
130. Show an ethical and deontological commitment in leadership, teamwork and interdisciplinary situations.	__	__	AP