Workshop 5

NEW PROFESSIONAL PROFILE FOR THE RURAL EXTENSION AREA

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ABSTRACT

The redefinition of the State role, through economy deregulation and privatization, and the emergence of the Market as a more efficient agent of resource allocation, have given shape to a scenario in which the **reconversion of the production system and social changes** are processed. In addition to it, the international context thoroughly permeated by the scientific-technological revolution, the increasing globalization and the substitution of the comparative advantages by competitive ones imposes major restrictions and challenges.
Within this context, the **relationship between Education and Employment** becomes specially significant. Currently education systems seem to be stirred by new employment demands, completely different in quantity and quality from the ones in the past. The process of a productive re-structuring is questioning not only the traditional definitions of job positions, but also the professional profiles. The so-called "professional crisis" is the consequence of a transition to a new model which brings about new scientific and technical problems, new ways of working, and new ways of work organization. In this framework, traditional discipline boundaries become blurred, and the unambiguous correspondence between the grade and the professional performance seems to vanish. The search for concepts allowing to link educational and occupational structures has taken the focus to **work competence**. The objective of this paper was to develop a new professional profile for the rural extension area based on the competence that the new economic-productive paradigms demand. Besides, the role of the university in the demand satisfaction was analyzed.

INTRODUCTION

The redefinition of the State role, through economy deregulation and privatization, and the emergence of the Market as a "more efficient" agent of resource allocation, have given shape to a scenario in which the **reconversion of the production system and social changes** are processed. In addition to it, the international context thoroughly permeated by the scientific-technological revolution, the increasing globalization and the substitution of the comparative advantages by competitive ones imposes major restrictions and challenges. Within this context, the **relationship between Education and Employment** becomes specially significant. Currently education systems seem to be stirred by

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new employment demands, completely different in quantity and quality from the ones in the past.

The process of a productive re-structuring is questioning not only the traditional definitions of job positions, but also the professional profiles. The so-called "professional crisis" is the consequence of a transition from a model, which favors the best routines, to another one that incorporates change as a permanent factor. The new model brings about new scientific and technical problems, new ways of working, and new ways of work organization. In this framework, traditional discipline boundaries become blurred and the unambiguous correspondence between the grade and the professional performance seems to vanish (Panaia, 1996).

This is specially valid for the agronomic profession. We may even wonder if there is a specific area for the agronomist or a new profession should be created (Obtschatco, 1995). The primary production integration with the agroindustrial and agribusiness systems, the demands for differentiated products, management, market strategies, environment awareness, and sustainability are deconstructing the professional identities based on the previous productive model, leading to a **new social construction of the profession** (Bocchicchio *et al,* 1998).

The Argentine agricultural sector has also gone through the same process. The opportunities and limitations of the international markets, and the national policies have generated a critical process in the heterogeneous group of social agents, among which are the small and medium sized farmers. They represent a main concern for both research and extension. The crisis also has an impact on the university agronomy programs. From the educational standpoint, the concerns about the professional development have increased so much that we may affirm that in Argentina agronomy is currently in a state of controversy and reflection.

TOWARD THE DEFINITION OF A NEW PROFILE

In most of Argentina's public universities, professional profiles were structured according to the agricultural modernization needs of a developing period. They responded to the "fordism" model, which had the aim of increasing production and productivity. In this situation, agronomists had their own niche in the productive system. The change of the economic-productivist paradigm modified the professional field bringing about a lack of adjustment between the university supply and demand.

In this situation, the educational system appears controversial. University is questioned and not only from the political side. Debate has been installed in the society and is assumed by the actors of the university system. From the rampant optimism of the past decades, based on steady markets and professions matching employment, we have come to the perception of the crisis. It is showing itself in the lack of articulation between productive and intellectual factors, between knowledge and action, amidst education, economy, and society.

The search for concepts that may help articulate educational and occupational

structures has brought to light the issue of professional qualifications. However, job position transformation in contexts of technological and organizational changes has taken the focus to **work competence.**

It is not easy to define competence. Firstly, because there is a lack of consensus about the meaning of the term (Cariola and Quiroz, 1997). Secondly, because this issue is often raised when dealing with the lower levels of the occupational and educational ranks. Within the scope of this study, **competence** covers the **knowledge deployed by professionals in solving work problem situations.** The process of knowledge acquisition may be further analyzed into different categories:

- **"know"**, knowledge constructed and articulated with learning (related to academic and disciple learning);
- **"know to do"**, practical or problem solving skills (related to in-work training);
- **"know to be"**, refers to social interchanges (related to interactive and social relationships) (Lichtenberger, 1992).

Of course, in reality these kinds of knowledge are embedded. Anyhow, although theoretical knowledge seems to be linked with the academic background, practical and attitudinal knowledge is also developed in educational institutions. Competence acquisition in university includes the different types of knowledge. To have competence in one field is to actualize in the professional performance the different types of knowledge acquired. Competence demands knowledge, but is linked with action (Mertens, 1996). It is half-way between theoretic knowledge and concrete skills.

Competence is related to an effective intervention in real life and is exerted through different categories:

- **Technical Competence**: it refers to the scientific-technological component of the activity
- **Social Competence**: it relates to the insertion in a productive organization and to the understanding of an amplified reality.

The need for a permanent adjustment of the professional activities implies a new category: the **meta-competence.**

The objective of this paper was to develop a new professional profile for the rural extension area based on the competence that the new economic-productive paradigms demand. Besides, the role of the university in satisfying these demands was analyzed.

MATERIALS AND METHODS

An exploratory study was conducted in the Agronomy College of the University of Buenos Aires. It consisted of a qualitative search of primary information through in-depth interviews with some of the actors involved in the activities: the agronomists. They were chosen out a data base provided from a tracer study of

the 1993/94 graduates from the agronomy program of the college. Fifteen interviews were conducted corresponding to the total graduate population working in extension in the years under analysis.
They were asked mainly about:

a) their perception of the knowledge required to perform their professional activity;
b) the role of the university in acquiring such knowledge.

Most of the agronomists come from the government area and also from NGO's. Information was checked with secondary data from different sources related to the sector. Additionally, documents produced by the institutions developing extension programs were analyzed using the content analysis technique. This approach allowed to define the scenarios of the activities under study in which the interviewed agronomists develop their activities.

RESULTS AND DISCUSSION

The answers given by the agronomists were organized into the different types of knowledge:

Knowledge

Agronomists referred to the knowledge needed at both the agronomic level and the socioeconomic one.

- From the agronomic point of view, they emphasized the need to master the **stages of productive processes in different systems:**

"… poultry and fruit production on a small scale …"
"… organic orchard, ecological pest management, …"
"… Know systems of production of camelidae (goats, llamas), ..."

Small farmers heterogeneity as regards agroecological areas and cultural practices imply the recognition of such heterogeneity in their production systems.

"... suitable technologies related to irrigation, soil conservation …"

When agronomists mentioned **suitable technologies,** they refer to small farmers scarce resources and to the multiplicity of goals they seek to achieve through their production (sales, self-consumption, animal feeding, etc.). Likewise, it also asks for a technology management that makes production **sustainable**, especially in single crop practices, which exert pressure on the ecosystem.

- From the economic standpoint, this knowledge would comprise:

management of the **agricultural establishment**;
credit and **market management** (health standards, taxation) and **commercialization** channels

"… small farmers do not know their production costs and have no information about price fixation mechanisms. Nor about the links of the agroindustrial chains in which they participate …";

association management (organizational, legal, and accounting problems)

"… individual strategies do not solve these farmers problems …"

"… at present the economic issue is of basic importance. Although production must be increased and quality standards must be raised, it is necessary to make an economic and financial analysis and to manage markets, …a wider vision of the food business.";

project design and evaluation;
development theories.

- Finally, since they must conduct training processes, they need to manage **social technologies**: adult training, teaching and learning processes, communication, group dynamics.

Knowledge to do
Graduates pointed out the difference between just knowing a procedure theoretically and knowing how to do something.
" … it is important to operationalize knowledge in concrete situations …"
"… evaluate when to apply specific techniques (opportunity sense) …"
They stated the need of knowledge integration and the development of procedures and intervention strategies.

Besides, they also referred to knowledge transference since
"… academic discourse is not enough to describe the aspects of reality in which you may insert …"

Learning to be
The interviewed agronomists referred to the interaction among farmers, groups, and associations, and other actors, both public and private; besides, they made reference to:

empathy, to manage time and communication codes.
"*… you have to know how to listen and learn, and understand why the farmer is doing what he or she is doing …"*
"… *have a good feedback with people* …"
"… *the idea is to work with farmers and not for them* …";

formal or informal net integration with research institutions, other extensionists, other farmer organizations or agri-food groups.
"… inter-institutional relationships are established more at a personal level than at an institutional one …";

conflict management and negotiation.
"… you have to know how to negotiate bottom-up with the municipality, the program coordination, and with the other programs; and top-down with the target groups and with other extensionists …"
"…the extensionist role is complex. You must have technical excellence as well as personal conditions…";

commitment with the working reality seems to be a key factor.
"… *you have to commit yourself and believe that change is possible, and that farmers may improve, this gives you strength…"*

"… it is important to maintain the utopia…"
"… the direct contact with the farmer situation sensitizes you. You don ´t see yourself as an employee, it is almost like your own enterprise…".

The perception of the agronomists of the level of **competence** demanded refers to the skills to put knowledge into practice, in a real context, with limited time, information and resources. These skills imply: to generate, collect and interpret data; identify problems, evaluate alternatives, make proposals; encourage organizational ways; apply suitable technologies; generate learning situations and participatory diagnosis; understand different productive systems; mediate between knowledge and techniques, between global and local problems, etc.

This issue seems to be crucial since there is not a full competence if theory is not submitted to the solving of concrete working problems within situations of uncertainty and technical complexity. In that sense, an extensionist from one of the programs pointed out that at the beginning of his work:
"… I had the feeling that I had a lot of knowledge but also the difficulty of transferring it to concrete situations, to demonstrate the importance of some practices…"

Apparently, agronomists felt that **technical competence** should go beyond technical-productive skills. It should incorporate commercial and organizational aspects. All the extensionists considered **"soft technologies"** of major importance. On the other hand, due to the increasing importance given to the processes of preservation, transformation, and commercialization of raw materials, the dependency on suppliers and buyers, the exigencies of quality, quantity, and market differentiation, impose the need for horizontal integration. The organization of small and medium sized farmers was perceived as a tool to gain scale and/or advance in the value chain. Above all, it is one way to transform their life and production conditions. To accomplish self-managed organizations through participative methodologies which may empower their members is the core of the present intervention ways.
"... *(have) the utopia that from the organization, and facing any problem, they may be the actors …"*

Graduates experienced the need for **interdisciplinary work**. This approach has been used by the NGO's. However, only 3% of the extensionists in the country work in such organizations. In the government programs, due to budget restrictions, it seems difficult to develop interdisciplinary teams.
" ... agronomists are alone to tackle the organizational issue, although it is an interdisciplinary approach …"
"… *group building was difficult, it was a very slow process …"*

The interviewed remarked how important the extensionist-farmer relation is, and also the interaction with multiple social actors. The perception of the **social competence** demand appears since new ways of intervention and new institutional systems are been tried, allowing farmers to play an important role and interact with the other government and non government social actors or agri-food groups.

Agronomists were also asked about the **role played by the University** in building competence:

"… *the training grade program was too technical and rather narrow-minded, because at present labor market is rather marginal, in both the economic and productive aspects …"*
"… *nowadays in the work environment you have to develop activities related to project management, development and administration, to public and inter-institutional relationships, and to negotiation. These skills were not learnt in the grade program."*
"… *most of the contents related to social* aspects was learnt through extracurricular activities (in students ´ centers) *and work experience."*
"… *the grade program is not much related to this kind of work market, which has its peculiarities. In any work related with poverty, challenges, imagination, and the search for alternatives are greater…"*

This may obey to multiple causes. Most of the extensionists are agronomists trained according to a profile, common to all the public universities in the country: a generalist, strongly oriented to disciplines in virtue of the productivist and technological paradigm. This paradigm, which has been installed since the 1960s, has a low level of processing and differentiation. This implies a professional identity more linked to the biological and technical processes than to an amplified agricultural reality.

On the other hand, unlike in most Latin American countries, rural development in Argentina has not been completely institutionalized. This may be due to some characteristics that small farmers have. They do not produce grain or other main exports, having a weak or non existent organization and location in the regional economies. Whereas the historical development of the country has been linked to the central pampean area, agricultural policies have been concentrated on technology and technical assistance to the modern sector located in the area. The chronic "underdevelopment" of rural extension has taken to a scarce valuation of it as a curriculum modality. So subjects oriented to it (economy, sociology, and rural extension) have a minor significance compared to the rest of the subjects.

Considering methodology used in the university, agronomists indicated that:

*"… it has only **one** direction";*
"… it is too theoretical, it lacks practice";
"… it is **academic-centered**…"; *"…the world is seen through the University mirror "; "… is not connected to agricultural reality…";*
*"… there is a disciplinary **lack of coordination**. Courses about production are not integrated with economy. "… the syllabus is oriented to production, the regional dimension - the region as an integrated system- is not considered ".*

They were very critical at evaluating their program of studies in relation with work. As regards contents, they recognized that they had a good scientific and technological background, which seemed to be more suitable for research than for extension.

CONCLUSIONS

Within the globalization panorama, characterized by complexity and uncertainty, the productive sector generates demands which are not entirely satisfied by the traditional profile of the extensionist. In the first place, it seems to be necessary to enlarge the concept of technological domains pertaining to Extension. System heterogeneity and the multiple technological problems it has demands for a differentiated technical assistance. Anyway a professional profile exclusively centered on these aspects is useless. Extensionists should be fluent in soft technologies, such as marketing and organization strategies, and in participatory group methodologies. Secondly, the profile must take into account skills to generate/integrate nets and team work, conflict management and negotiation. Finally, extensionists should need to review and build their new roles continuously, in order to update their professional interventions. In doing so, they would be able to accompany farmers en problem identification, in their goal achievements and demands within the present context.
University plays an important role in establishing this profile.
The difficulties detected in the integration of knowledge in work situations may show the lack of adjustment between undergraduate programs and the knowledge necessary for a good professional performance.
The university development of technical and social competence should be reviewed in terms of content and methodology selection, trying to bridge the gap between academic knowledge and professional practice. This implies to incorporate pre-grade exercises which may facilitate learning in real work settings.
The curriculum should consider the need for:

- **Knowledge creation and re-creation:** "learning" does not only imply knowledge reproduction. " Learning to learn " is the meta-competence: the competence of building competence. Learning to learn implies learning to research. Research as an educational principle favors the critical approach of reality, knowledge recreation and the possibility of intervention.
- **Holistic understanding of reality:** conventional agronomy had a disciplinary development that favored deep analyses, and neglected systemic approaches. It is necessary to have a sound background in several disciplines, overcoming a “mosaic” development by integrating knowledge (interdisciplinarity). Thus a general view of production systems and the rural sector may be achieved.
- **Work analysis and problem solving:** to be able to identify productive opportunities *in situ*, and team work.
- **Practice in prospective and anticipation:** to project future scenarios from different contexts and diverse ways of intervention.
- **Creativity and innovation:** to think, evaluate processes, face reality creatively towards autonomous interventions.

In order to achieve this background, all social actors involved in the process of formation should participate actively. Teaching roles are very important, since any curriculum change – no matter how excellent - is doomed to failure if teachers are not involved in it. Training and updating programs must be considered in order to overcome fragmented teaching and foster interdisciplinary approaches. To favor research projects may enrich teaching and extension.

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