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Development of Competencies at the University through Service-Learning

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Abstract:

The following article describes an evaluative case study of a service-learning initiative implemented in Los Piletones, an impoverished neighborhood of Buenos Aires, Argentina. Specifically, the study focuses on identifying and analyzing nine general competencies (social responsibility and civic engagement, capacity to apply knowledge for practice, ability to communicate with a non-expert public, etc.) that the program manages to develop in participating students from an undergraduate Veterinary program.

Introduction

In recent years, political concerns with respect to marginalization and a desire to guarantee societal inclusion to all people have generated a debate over the concepts of citizenship, multiculturalism and democratic society. Many concepts related to these terms have been proposed: differentiated citizenship, intercultural citizenship, multicultural citizenship, cosmopolitan citizenship, global citizenship, and equal citizenship, among others. One of the objectives of these new concepts is to amplify the meaning of citizenship proposed by T.H. Marshall (1950), and also to explore new meanings, especially those having to do with participation. It is not without reason that participation in society has been included in debates between liberal, communitarian and republican thinkers, with this topic often converted into the focus of discussions. Thus, although parting from different schools

of thought, authors such as Habermas (2002), Rawls (2003), Kymlicka (1996), Taylor (1996) and Walzer (1996, 2004) accept and vindicate the importance of participation processes. A model is being defined in which citizens are those people who, holding a recognized right to participate in deliberations concerning the resolution of problems or affairs that affect the public space, assume this right with responsibility. Citizenship comes to represent a process of construction undertaken by all participating persons; as such, it remains unfinished, with *participation* -the essence of democracy- the key to its continued construction. Democratic citizenship is therefore connected to the participation of individuals in the system of rights and responsibilities of democratic societies.

Citizenship, it follows, is a practice (Bárcena, 1997) as well as a process that is being constructed (Bartolomé, 2002), and it



needs formative, self-interrogating processes that seek answers to the following questions: “how can citizens be made conscious of their responsibilities and commitments? How are civically active citizens formed? And, how can we create and develop the cultural and structural spaces and conditions necessary for participation?” (Cabrera, 2002, p. 89)

For this democratic citizenship learning to occur, adequate time must be devoted to its study, and educational spaces with appropriate and differentiated methodologies are needed across all levels of education. This includes the university setting, which is where programs of this sort of learning are historically least developed, especially in technical and medical fields. In agreement with Martínez (2006), we propose that one of the functional goals of the university should be to help students learn the meaning of democratic citizenship: “A high-quality university education cannot separate vocational training from civic training” (Martínez, 2006, p.85).

From this perspective, service-learning constitutes one of the principal methodological approaches to the promotion of citizenship learning through participation, creating a bi-directional relationship between the community and the educational entity through a process of curricular integration, which causes specific course content to also play a role in the process.

Parting from these reflections, this article has a five part structure: The first part will illustrate cross-curricular or general competencies of the Veterinary School of the Universidad de Buenos Aires (UBA). The second part will present the methodological foundations of service-learning, emphasizing its effectiveness in the development of skills associated with civic education. The third part will describe a service-

learning project carried out by the Veterinary School of UBA in a marginal neighborhood of Buenos Aires. The fourth part will be a case study that was completed during the months of September and October, 2007. Finally, in the fifth part, the principal results of the study will be presented in accordance with its stated objectives.

University—level competency—based learning

At present, teaching and learning processes in higher education must seek to reduce the latent gaps that exist between the educational establishment and the ever-growing needs of society. From this perspective, the educational role of the university should be expanded to not only prepare the student for the specialized and innovative needs of the dynamic job market, but also to contribute to his or her civic education through the development of a series of skills, capacities and competencies related to the student’s educational and professional profiles. It is therefore relevant to know and clearly define the shared competencies that may be generated across different degree programs, as well as the specific competencies of each career, in this case veterinary medicine. In this study we will focus on general or cross-curricular competencies, and in order to identify and define these competencies we will use as a framework the proposals of the new European Higher Education Area (EHEA) and of the Tuning Latin America Project.

General or cross-curricular competencies

The degree in veterinary science has a generalist character that permits the graduate to rapidly join the job market with a diversity of valuable skills. For this reason, the education of the veterinary graduate, independent of his or



her specialization or professional profile, should contain all of the knowledge, capacities and skills recognized under the name of generic or cross-curricular competencies.

Thirty cross-curricular or generic competencies, representative of European consensus, have been identified in the models found in both the final report of the European Tuning Project and the White Paper of the EHEA. This European classification of competencies could very well be used to respond to the necessity of a more comprehensive education among veterinary students. However, due to the fact that the Service-Learning project that we will later present was carried out in Argentina, we believe that it is necessary to analyze and compare the list of European generic or cross-curricular competencies with the competencies defined by the Tuning Latin America Project¹.

It is interesting to note that, when comparing the lists of general competencies formed by the European and Latin American projects, there are twenty two convergent and easily comparable competencies, although the competencies on the Latin America list are more precisely defined. On the other hand, five competencies from the European project were recombined and redefined into two competencies in the Latin American project, and three competencies of the former were not included by the latter (knowledge of foreign cultures and customs, initiative and enterprising spirit, and motivation to achieve). Still, special attention

must be given to three new concepts pertinent to Latin America, which merited incorporation in the Tuning Latin America Project: social responsibility and civic obligation, commitment to the preservation of the environment, and commitment to one's sociocultural surroundings (González, J., Wagenaar, R., Beneitone, P., 2004). These three competencies are especially relevant to the Service-Learning project that will be analyzed later in this work.

In the following table, the list of cross-curricular or generic competencies of the European Tuning Project is presented in the first column. Using this first column as a base for comparison, the second column presents the generic or cross-curricular competencies of the Tuning Latin America Project. The third column includes new competencies specifically included in the Tuning Latin America project, which were not included in the European project.

In the present context, beyond the development of knowledge through competencies, students should become protagonists in their education, with the professor becoming a guide or counselor in the competency-based learning process. The student becomes the center of the learning process and must "learn to be competent" (Zabalza, 2004).

In order to contribute to the methodological change from an education centered in the activity of the professor to one oriented toward student learning, it is necessary



European generic or cross-curricular competencies	Tuning Latin America competencies (based in the European competencies, but with added details)	New competencies incorporated for Latin America
G1. Capacity to analyze and synthesize	Same	
G2. Capacity to apply knowledge to practice	Same	
G3. Planning and time management skills	Ability to organize and schedule time	
G4. Basic general knowledge of the work area	Knowledge of the area of study and the profession	
G5. Basic professional knowledge	Same	Social responsibility and civic commitment
G6. Oral and written communication and language skills	Capacity for oral and written communication	
G7. Knowledge of a second language	Capacity to communicate in a second language	
G8. Basic management abilities	Abilities in the use of information technology and communication	
G9. Ability to conduct research	Capacity to conduct research	
G10. Capacity to learn	Capacity to learn and keep knowledge up to date	
G11. Abilities in the management of information	Abilities to search, process and analyze information from diverse sources	
G12. Critical and self-critical capacity	Same	
G13. Capacity to adapt to new situations	Same	
G14. Capacity to generate new ideas	Creative capacity	
G15. Problem-solving	Capacity to identify, articulate and resolve problems	
G16. Decision-making	Capacity to make decisions	
G17. Teamwork	Capacity to work in a team	
G18. Capacity to make connections	Interpersonal abilities	
G19. Leadership	Capacity to motivate and lead groups toward common goals	
G20. Capacity to work in an interdisciplinary team	Same	Commitment to the environment
G21. Capacity to communicate information to non-experts in one's field of study	Same	Commitment to one's sociocultural surroundings
G22. Appreciation of diversity and multiculturalism	Appreciation and respect for diversity and multiculturalism	
G23. Ability to work in an international context	Same	
G24. Knowledge of foreign cultures and customs	Not included	
G25. Ability to work independently	Same	
G26. Project design and management	Capacity to formulate and manage projects	
G27. Initiative and enterprising spirit	Not included	
G28. Ethical commitment	Same	
G29. Concern for quality	Commitment to quality	
G30. Motivation to achieve	Not included	



to determine the methods that will be used so that students acquire the knowledge proposed by each one of the competencies (De Miguel, 2006).

Service-learning: A methodology to encourage competency-based learning

Numerous studies carried out in the United States and Latin America (Billig, Jesse and Root, 2006; Delp and Domenzain, 2005; Fielding, 2001; Cabrera, Del Campo, Campillo and Luna, 2006; Morgan and Streb, 2003; Oldfather, 1995; Tapia, 2002; Waterman, 1997; Zeldin, 2000) have shown that service-learning is a methodological proposal specifically effective when putting theoretical content into practice, while at the same time promoting solidarity and responsibility. Service-learning encourages student learning through active participation in activities associated with community service. When used in this way, this methodology permits students to become directly involved with the individuals being served, forcing them to adapt to needs and realities that are often very different from those experienced in the classroom. This is where the greatest impact of service-learning is felt.

Service-learning can be seen as the intersection of two types of experiences. In the first experience, of a wholly academic character, studies or field work are carried out in many educational institutions with the objective that students apply investigative methodologies and receive contact with the real world as a part of the specific learning of their discipline (Tapia, 2000). The second experience involves the development of charity or solidarity-related activities, such as the sponsorship of rural schools, collections and campaigns for multiple community causes, and many other initiatives, all completed through active participation. We can refer to service-learning as

the intersection of these two types of activities, that is, when pedagogical and solidary intentions are included in the development of a project. Tapia (2006) notes that solidary intentionality plays an essential role in the education of citizens.

As such, solidarity-based education implies:

- The assumption of a group of values tied to justice and the integral promotion of human rights.
- The differentiation of truly solidarity-based ("pro-social") attitudes from altruistic intentions.
- Commitment to the common good.

For his part, Dr. Furco (1996), director of the Service-Learning Research and Development Center of the University of California-Berkeley, states that service-learning is a teaching pedagogy through which students acquire a better comprehension of academic content, applying knowledge and competencies for the benefit of society. This is achieved through students' participation and involvement in projects.

To the specialist Halsted (1998), service-learning is "the methodology of teaching and learning by which young people develop abilities through service to their communities" (p. 23). Stanton (1990, p.22), in turn, ties service-learning to "experiential education."

Definitively, service-learning could be defined as "*a solidarity-based educational project*" with students themselves as protagonists, and with the objective of attending to the necessities of the recipients while at the same time planning and improving the quality of learning (Tapia, 2002, 2006). Through this methodology, students develop competencies relevant to their entrance in the workforce. They also develop cross-curricular or generic



competencies such as social responsibility and solidarity, which are basic competencies in the education of democratic citizens. Furthermore, this type of practice contributes to the awakening of students' interest in public life and collective action.

The communitary implication of university learning. A service-learning project in a Buenos Aires villa

The service-learning project² that is presented here was begun in 2005 through a concrete petition voiced by the Los Piletones marginal community. This project was specifically destined to respond to demands and necessities related to animal control, animal health and zoonotic diseases³.

Los Piletones is a villa (shantytown) of the neighborhood of Villa Soldati, in the Autonomous City of Buenos Aires. It is in a zone of low elevation where flooding often occurs, with waters accumulating and remaining stagnant for significant periods of time. This causes the area to become a natural breeding ground for mosquitoes and other insect larvae, presenting great epidemiological risks.

According to statistical data compiled in 2006 by the Housing Institute of the Government of the City of Buenos Aires, the Los Piletones villa has 620 households inhabited by 3741 people, who correspond to 985 families. With respect to nationality⁴, 47% of the residents are Bolivian, 44% Paraguayan, 7% Peruvian, and only 2% Argentine, evidence of the pronounced migratory origin of its inhabitants.

Within the social groups that inhabit villas and marginal neighborhoods such as Los Piletones, humans and animals coexist under specific

conditions of ownership and control, resulting from the idiosyncrasies, socioeconomic conditions and housing characteristics of the neighborhood. Canine and feline overpopulation has become a relevant problem, allowing us to define these marginal populations as highly susceptible to the risk of contracting zoonotic diseases.

Numerous zoonoses are transmitted from domestic animals to humans through indirect pathways, for example through mosquitoes such as *Aedes aegypti*, also known as the yellow fever mosquito. Careful vigilance of these mosquitoes, along with entomological vigilance of all insects that are known vectors of pathogens, constitute fundamental aspects of the prevention and control of zoonoses.

With the initiation of the service-learning project, developed from a specific demand that Margarita Barrientos (leader of the villa) presented to the Veterinary School, pet owners receive direct benefits, with all community members (the 41,228 people who live in and around the villa) indirectly benefitted thanks to the diminished reproductive capacity of pet owners' animals. These animals reproduce at higher rates as a result of their free or semi-free lives (diminished rates of contact between these animals results in diminished aggressiveness and the diminished transmission of some pathogens).

Furthermore, the young professionals and veterinary students of UBA who carry out these pre-professional charitable practices in the villa also receive benefits from the project, utilizing the service-learning pedagogical methodology. The students, guided by the teachers, are tied creatively and critically to this marginal villa, contributing to the solution of its problems and closely-experienced needs. Finally, the project is made up of extracurricular academic activities that comply with two objectives: service to



one's country, and the formation of values and behaviors of responsibility and solidarity (Martínez Vivot and col., 2008).

Definitively, and in the words of one of the participating professors,

Fundamentally, the project has to do with basic sanitary practices concerning animals in needy neighborhoods, which we sometimes vulgarly define as villas. These practices of basic sanitation consist in the clinical examination of as many animals as is possible, the early (and sometimes not so early) detection of some of the diseases suffered by the animals, and, fundamentally, the transmission of information to pet owners; not only information about pet-related health problems, but also another form of information that is very important to us as the nucleus of our project, and has to do with zoonoses. Zoonoses, diseases that can be transmitted from animals to humans, are our main focus in our interactions with pet owners, which are often children with their dogs, cats, and even their parrots, and we inform them that the animals can carry certain diseases that could be contagious to the owners themselves. We then inform them how to protect themselves, whom to consult concerning their pets, and what health precautions should be taken with their animals. We, inasmuch as we can, within our limitations (our work is not clinically exact, but rather has to do with the transmission of basic sanitary practices), do everything possible so that the animals brought to us can enjoy good basic health and sanitation. For this reason, our project is fundamentally linked to the control of zoonoses.

(Interview with a professor of veterinary medicine of the Veterinary School).

An evaluative case study of the service-learning project carried out in Los Piletones villa

Questions and objectives⁵

The project is based on the following research questions:

- Is the service-learning methodology effective in the development of general or cross-curricular competencies among students?
- Which are the elements that significantly influence student participation?
- What type of citizenship learnings have the students received through the practical implementation of the project?

Based on these research questions, the objectives of our study are:

- Identify and evaluate various general or cross-curricular competencies seen in a service-learning project of the School of Veterinary Science of the Universidad de Buenos Aires.
- Identify the elements that encourage or discourage student participation in the project.
- Identify citizenship learnings that have been exhibited by the students as a result of the project.

Methodology, sample population and informants

During the time period of September to November, 2007, an *evaluative case study* was completed as a part of the project of innovation in service-learning previously presented. The



evaluative case study is a method of qualitative analysis especially useful to describe the true context in which an intervention is being carried out, and explain the attained results.

To be more specific, we define cases as those *unique social situations or entities* that merit research interest. In the present research, the case has been the “physical space⁶” of Los Piletones villa where the service-learning project is carried out. The motives for basing ourselves in the analysis of this “social entity” are:

- The project developed in this space has continuity; that is, it has continued for three years.
- The project developed in this space has been recognized with the Presidential Award, granted each year by the Ministry of Education, Science and Technology of Argentina, given each year as a part of the Practices in Solidarity in Higher Education program. This award is given to charitable and educational projects, honoring those that permit students to use their knowledge in service to the community and become participating and responsible citizens of the common good.
- The project that has been developed in this space has been valued as a good experience in service-learning by Maria Nieves Tapia (expert in service-learning and member of the Latin American Center of Service-learning, [Centro Latinoamericano de Aprendizaje y Servicio Solidario, or CLAYSS]).

The informants in this study are:

- Students who participate in the project.
- Teachers and professors who participate in the project.
- People who live in the Los Piletones villa.

- Local leaders who work in Los Piletones villa. Service-learning “experts.”

Interviews, discussion groups and observations are the methods of data collection utilized in this study. Specifically, the following methods were used:

- 5 discussion groups with 30 students.
- 4 interviews with professors.
- 14 informal interviews with villa residents.
- 2 interviews with local leaders.
- 3 semi-structured interviews with service-learning experts.
- 5 participant observations.

Systematic analysis of content is used in the examination of the information obtained through the different strategies of data collection. First, the information is transcribed to a word processing application, and second, the information is analyzed by the ATLAS-TI v.4.1 qualitative analysis program. This program permits us to analyze the results, organizing them into the designed categories of analysis.

Findings

The analysis of informant responses reveals that during their pre-professional practices, students significantly developed nine generic competencies, which are listed here corresponding to the different goals of the project that is the object of our study:

- 1) Social responsibility and civic commitment
- 2) Capacity to apply knowledge to practice
- 3) Capacity to communicate information to non-experts in one’s field of study
- 4) Capacity to work in a team
- 5) Capacity to formulate and manage projects
- 6) Appreciation and respect for diversity and multiculturalism



- 7) Basic professional knowledge
- 8) Capacity to identify, articulate and resolve problems
- 9) Capacity to make connections

With respect to *social responsibility and civic commitment*, the service-learning experience developed a greater consciousness among students of the need to work and carry out projects as a group, and of greater involvement in participatory processes. Professors, students and villa leaders all affirm that this type of project allows participants to give back to society in return for the free, public education that society provides them.

Faculty members must get out of their offices now and again and get to know these places, which must be seen and recognized by the people, here and in the other villas. There is so much need in so many places. Simply living in a villa is very, very difficult, in every way. (Interview with a villa "leader").

We are doing this volunteer project because we consider ourselves a part of the community and we want to give something back to the community. Individualism, which is very prevalent in Argentine society, perhaps more so in higher strata of society, prevents those who have more economic power from caring about anything. And, well, we are here in front of people who in many cases have nothing but who continue to want to do things the right way (Participant, discussion group 4).

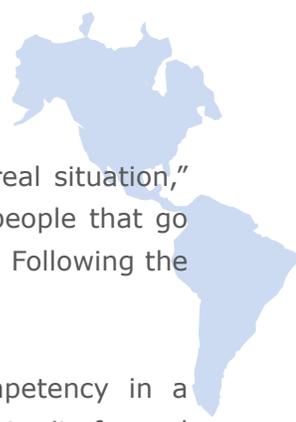
These findings coincide with the study elaborated by Einfeld and Collins (2008), in which students who participate in a service-learning project are interviewed, and are found to have greater consciousness of inequality and of their responsibility with regard to social problems.

Both professors and students assure that the project has helped them become conscious of the importance of promoting responsibility and commitment both in university students and in all members of society. In fact, although the majority of students affirm that the primary motivation for their participation in the project is more instrumental (they seek to put theoretical knowledge into practice), as time passes, their social commitment to the project becomes more significant, coming to motivate them to continue their ties to aspects of the project related to social responsibility and the possibility of offering a solidary service to a marginal community. We understand that in all ethically defensible participation, participants must take on a degree of commitment with respect to the work in progress, and we have found evidence of this commitment among many of the students.

I think that student motivation is high, students have participated a lot, some feel an important social commitment, if you ask them, they know that they're there helping those people. They put a lot of other stuff to the side, they get up early in the morning, on a day when they can set their studies aside, and they go, and when they come back they feel good about what they've done (Interview with a professor).

Naturally, motivation is a basic and necessary prerequisite to personal action, and is related to the level or degree to which the participants identify with the issue or theme that being evaluated and how committed they feel to it:

We understand commitment as the degree to which the participants feel personally affected by the issue being evaluated. It is something like the greater or lesser



distance that exists between the subject and the context of the process in which he or she is invited or decides to participate. It is an element that is especially important in the emotive dimension of participation, and it constitutes, as such, a motivational factor favorable to participation (Trilla and Novella, 2001, p. 153).

Students' motivation in the project is reflected, among other things, in the length of time that they continue to participate in it. Both the professors and many of the students have been committed to the project for nearly three years. Furthermore, their motivation extends beyond this project, as evidenced by the fact that eight of the interviewed students also participate in other projects where they seek to offer charitable services.

We also all participate in another project, at the shelter that is here in front of us. Because we couldn't go to Los Piletones due to our schedules, we started to go to this place. We all like the idea of community work, and the shelter seemed like the right place to get involved (...) (Participant, discussion group 1).

It is also interesting to see that the students consider the benefit received from their service as mutual; that is, they feel that the community gives as much or more to them than they can ever give it.

With respect to the *capacity to apply knowledge to practice*, the students manifest that this project has provided them with an opportunity to do so, and they significantly reflect on this competency, commenting that the department often uses simulations and theoretical clinical cases in the classroom. In this respect, their interest highlights what Massot

and Feisthmel (2003) call the "real situation," which includes interactions with people that go beyond simple material operation. Following the same authors,

(...) a person has a competency in a given situation. If the opportunity for real action does not arrive, the competency is not perceivable, or is not put to the test. Competency only exists in connection with an object or situation. It cannot be identified if the performance situation is unknown (p. 25).

Some of the participants corroborate these ideas:

I learned techniques of serodiagnosis using the serums of animals from the villa. The results were interesting, because many tested positive for zoonotic diseases, which we then treated (Participant, discussion group 5).

Principally the management of animals, and beyond animal management, another important thing is the management of animal owners, which is sometimes difficult, and one has to listen to them (...) (Participant, discussion group 1).

(...) And so it appears to me that on the one hand we are providing a service, both in terms of veterinary science and dentistry, in cooperation with other departments of the university, in medicine we are giving a high-quality care service, which is extremely important an academic environment, because the things that you see here, and from the perspective that you see them here, you can't see in the classroom (Professor, interview 2).



Also, students carry out the procedures in groups and later meet with teachers to interchange dialogues and analyze the results, later planning corresponding activities. It's relevant to remember that in the service-learning methodology, students are protagonists in all steps of project planning, and we believe that this is one of the strengths of this type of learning, because it *develops students' competency in the capacity to formulate and manage projects*, which is difficult to do in the classroom.

The relationships that we have in the villa between students and between students and professors are not found in the classroom, because, you could say, there's always distance between students and professors (...) (Participant, discussion group 2).

I learned two things (...) I met people from other university classes and of different ages, and I began to form relationships with people from my department at school that I might not have otherwise met. For example, I'm in fourth year, and I know students who are in their first year. That helps me too. I think it's important because we're very much individualists (Participant, discussion group 2).

(...) otherwise it's good, because, as they're not evaluating you, the relationship is on equal terms, I mean, you know that he's the doctor and you're the student but the relationship is very fluid. We all have a good feeling about this, many of us are friends, so everything is well, it's good (Participant, discussion group 4).

In students' responses we observe that a dialogue has been formed. Dialogue is an essential element of our societies, and for this

reason, teaching should be based on a dialogue between students and teachers, where professors may also be questioned and are no longer possessors of the absolute truth (Freire, 1997). Participation in the service-learning project analyzed here promotes relationships through dialogue⁷ (Freire, 1970; Habermas, 1992, 2002; Flecha, 1997; Bartolomé, 2004), as exhibited in the participants' narrations and interactions that occur between participants.

It's truly wonderful. The professionals that come here aren't just veterinarians; they sometimes become so involved in the family structures of the people here that they end up becoming friends, psychologists, and social workers. They have a great deal of experience, in many ways, and so when pets are brought to be examined, a lot more ends up happening, due to the fact that they can be with the people, because sometimes people just need to talk to someone and they don't have anybody. Maybe they come and they talk to me, I have as many problems as they do, and, well, it's great to talk with other people. And they transmit all of that. Besides being veterinarians, when they're here, they're doctors, social workers and psychologists (Interview with a "leader" of the Los Piletones community).

The students also give a very positive assessment of the experience when they are asked about the type of relationships they have with the residents of the villa.

It's very good. At the beginning I was fearful, but later we all, the residents and the students, felt good, they respect us and ask us things, and we respect them



and have gotten to know some of them, and we chat with them (Participant, discussion group 5).

I get along very well with the children and the old people. I get along well with those people who demonstrate their love and responsibility for their pets; those are the people that I get along best with (Participant, discussion group 5).

With respect to their *capacity to communicate information to non-experts in one's field of study (Commitment to one's sociocultural surroundings in the Tuning Latin America Project)*, students express that their participation in the project helps them improve their communicative competencies, especially because they must exchange information, opinions, etc. with people who are not familiar with the technical terms of the profession. This learning process is clearly reflected in their interactions with pet owners. In our observations, we have detected that the students show an attitude of familiarity at all times, including pet owners' opinions in their diagnoses. Instead of presenting themselves as experts, they tend to promote dialogue, contributing in this way to the de-monopolization of their expert knowledge and allowing for a dialogue-based construction of this knowledge in which all parties play a role. Students therefore learn as a result of their different interactions within the project (Flecha, 1997).

Principally the management of animals, and beyond animal management, another important thing is the management of animal owners, which is sometimes difficult, and one has to listen to the owners and know how to wait for the owner to say what the problem is, and why they've brought their animal, not inducing them to say what we want to

hear but allowing them to speak and say what we want them to say (Participant, discussion group 4).

However, we have observed differences with regard to communication, which in our judgment can be attributed to the students' individual characteristics and their initial communicative abilities, although we do not have data to corroborate this belief. Nonetheless, we must stress the work that the professors carry out with respect to students' training in this competency. During the bus rides from the university to the villa and back, professors take advantage of this informal educational space to work on aspects such as this one.

Today during the ride Marcela mentions the importance of communication. She insists that the work that we do involves not only sanitation, but also education. She explains how at the beginning, the people of the villa saw the students as strangers and didn't have any trust in the work that they were going to carry out. However, as years have passed, credibility has been gained, principally through students' respectful treatment of the inhabitants of the villa. She points out to the new students that they should pay attention to the behavior of the professors and the students who have been involved for longer periods of time (...) on the way back from the villa, one of the professors speaks to two of the new students and clarifies some aspects of the situation (Observation).



We are interested in this educational aspect, and feel that it would be interesting to formally promote—within the project—some sort of communicative dynamic that would allow those persons who find it difficult to communicate to improve their competencies in this area.

With respect to *appreciation and respect for diversity and multiculturalism*, it is worth noting that the villa is home to great ethnic diversity (Peruvians, Bolivians, Paraguayans, and only 2% Argentines). Interacting with people from different places who also pertain to a different social class than the majority of the students can help promote intercultural competency. This competency is a key element in professional achievement and a precursor to the exercise of intercultural citizenship.

Yes, I too hold the same opinion: the most important part was having contact with a real social context, different from the one we are accustomed to, very poor and with different cultures present (Participant, discussion group 5).

The most important thing that I got from this project is that I learned how to work in the community, that is, before this I never had the opportunity to be in contact with communities of people from other places, and I learned to communicate with them as equals. I came to understand that even though they are poor, they want to improve their lives and their animals' lives (Participant, discussion group 5).

Although in their responses students emphasize the importance of having contact with people of distinct cultural origins—given that without significant contact with different people it's quite probable that we would not be conscious of diversity—their conduct and responses do

not reflect an attitude of curiosity regarding the different cultural collectives that live in the villa. They show appreciation for an outlook based in tolerance of diversity, but not in the recognition of diversity. While tolerance can be seen as a good beginning, efforts should be made to develop attitudes based in the recognition of diversity, representing a starting point in the promotion of an intercultural dialogue where all voices are heard and taken into account (Bauman, 2001).

Although we have not seen relationships based in the recognition of diversity, the commitment that the students and the professors have to the community is positively valued by the residents of the villa.

The people who take part in the project, I believe that they are not only doing the right thing, but that they have good hearts. And the education of the people of the villa, of all of us, it's important, right? It's good to know that they're going to come (...) they worry about the animals and also about the human aspect (...) From the moment they started until today, you'll no longer see dead animals thrown in the streets, there aren't sick animals, there aren't stray, abandoned cats (...) (Interview with a "leader" of the Los Piletones community).

We like that they come, they treated and cured two of my animals. They're good people and they always keep coming (Interview with an inhabitant of the villa).

On the other hand, we believe that student participation, as well as the continued duration of the project, are beneficial to the students, giving them the opportunity to intervene and make decisions in all stages of a participatory project (to be a part of the project), and also



because hierarchical relationships between professors and students are being eliminated. These elements allow us to suppose that a project-based participation is being promoted (Trilla, 2007), characterized both by students' feelings that the project is truly theirs and their participation in different moments of the process.

Through the collected responses we are able to identify some of the elements that promote or discourage participation in this type of project. Among the motivating elements are: the opportunity to put theoretical knowledge into practice; the relationships established between students, between students and professors, and between students and villa residents; the chance to utilize their learnings in giving something back to society; the possibility to bring the university into closer contact with society; and the supportive role of the professors.

I really started to get involved because what's missing from this course of study is the practical aspect; we're always looking for outside opportunities to see if we can learn from them, that is, there's a lot of theory but no practical application during the five years of the major (Student, discussion group 2).

The climate, the good relationships, these things motivate you as well, because if it were something hard to do, and you went in rigidly, maybe it'd be very good but it wouldn't give you as much...If your own peers tell you about it, then you start getting caught up in it, your connection deepens, and each time more people go, and it's like a snowball getting bigger, and each time more people go (Student, discussion group 3).

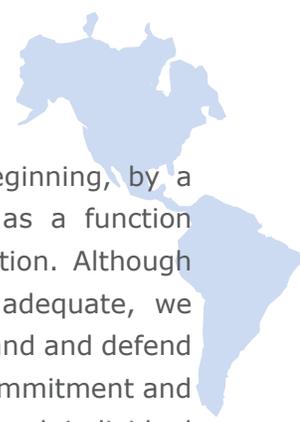
The project is very good because it lets us give something back to the people, to society, et cetera; it's all the things that you learn about. In Argentina university attendance is free and we are morally obligated to share our learnings with the people, we should give them all that we know (Student, discussion group 4).

University life has always been distant from the community and that's not good. The university should lend an ear and listen to the community (Student, discussion group 4).

On the other hand, when looking at elements that discourage participation, we encounter mostly organizational barriers: restrictive schedules, the lack of projects of this sort that would expand scheduling possibilities and also diversify the content being put into practice; and the difficulty in complying with the agreed-upon schedule when participating in this sort of project.

I stopped going this year because I was taking classes the days that we were going to go to Los Piletones (Participant, discussion group 4).

There should be a greater variety of projects, not only related to animals, but also other types, because there are some people that are studying this major but they don't like this branch, they like public health, they like other sorts of things. Then they wouldn't feel obligated to do something that they don't enjoy, because if that's case they won't be excited to go (Participant, discussion group 2).



I wish they would adhere to the schedule, because they always say they're leaving at eight and we never leave on time, there are always delays, because on the other hand, sometimes we were involved with other things on Mondays, in fact I work on Mondays, and when there's delays, everything gets delayed. The schedule isn't respected, that's how it is (Participant, discussion group 2).

Conclusion

In order to synthesize our findings, we have identified competencies in the service-learning project that students acquire through their participation in the continued development of the project, which are difficult to acquire in formal degree courses in the Veterinary School of the Universidad de Buenos Aires. The project has allowed work to be done with a global vision, because the absence of holistic visions that has characterized university-level education "leads to the incompetent application of knowledge, and consequential difficulty in aligning knowledge with reality" (Mateo, 2007, p. 514).

On the other hand, our analysis has shown us the importance of recognizing the interests, motivations, etc. of the people implicated in the participatory process. The analyzed project was formed based on interests expressed by members of the Los Piletones community; the participating students join

the project motivated, in the beginning, by a curricular interest, which shifts as a function of the duration of their participation. Although basing projects on interests is adequate, we cannot reduce—when we understand and defend a type of participation based in commitment and also in responsibility for social and individual transformation—participatory processes to mere interests, although these may be collective. If we wish to promote an inclusive democratic citizenship that seeks equity, we should do so through the formation of attitudes associated with participation (empathy, curiosity, motivation to generate change, etc.). When these attitudes are acquired, the citizenry is capable of co-opting the causes and problems of other people. Only in this way will we be able to overcome the barrier of individuality and participate in solidarity with others. We may say this if we keep in mind one of the main risks faced by service-learning projects: that they may be generated in spaces where a portion of the participants may find themselves in a more "privileged" situation than the others.

Finally, we must show that the acquired competencies and appreciations presented in these pages show that the project has generated spaces for participation. We the people learn to be active citizens through direct participation (Hérbert, 1997; Trilla-Novella, 2001), and it is through this participation that citizens acquire a critical consciousness of problems and motivations for change, as well as responsibility and commitment to the results of their participation.

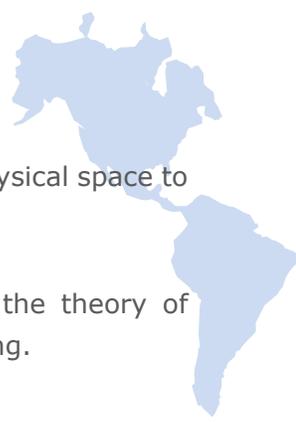
Endnotes

1. Beginning in 2001, more than 135 European universities worked intensively to consolidate the European Higher Education Area (EHEA) with the goal of achieving the dream of a united Europe in terms of higher education by the year 2010. Although Tuning had been an exclusively European experiment, in recent years, the 2004-2006 Tuning Latin America Project was formed with the contributions of European and Latin American academics, with the goal of examining higher



education and promoting easily and comprehensibly comparable degree programs. Tuning seeks to reflect this goal of finding points of agreement, overlap and mutual understanding, in order to facilitate the comprehension of educational structures. Today, Tuning is an internationally recognized methodology and a tool constructed by and for universities themselves. 62 universities from 19 Latin American countries are participating in the Tuning Latin America project (Argentina, Bolivia, Brazil, Chile, Columbia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela). Furthermore, a second relevant actor, *the Tuning National Centers (Centros Nacionales Tuning, or CNT)* are participating in the process (González, Wagenaar and Beneitone, 2004). The Tuning Latin America Project elaborated a list of cross-curricular or generic competencies for the region, soliciting input from each participating country, through the Tuning National Centers, in the form of lists of generic competencies considered relevant on the national level, using the European list of 30 generic competencies as a reference point, and with the input of the 62 participating Latin American universities (corresponding to the 18 countries). 27 generic competencies have been agreed upon through this process.

2. The project is developed in reference to university teaching and research, and the extension of the university in the community. Different areas of the university related with animal health are involved, including: infectious diseases, pharmacology, anesthesiology, surgery, bacteriological diagnostics, microbiology, and infectious zoonotic serology. Added to this are investigative activities whose desired results will be able to be evaluated both qualitatively and quantitatively, and will have a positive impact both for the community being studied and neighboring communities, and for the university.
3. Zoonoses are diseases that are transmitted from vertebrates to humans, and are found throughout the world with serious repercussions in public health. Their impact extends beyond rural areas, reaching large cities as well, tied to synanthropic and domestic animals. It is precisely in urban settings where coexistence with both groups of animals becomes highly dangerous, due to deteriorating living conditions and the presence of high-risk areas with high deficits in sanitary infrastructure and high levels of unmet basic needs. For this reason, the combining of health education with primary health care interventions (immunizations, de-worming and reproductive control) is a high priority. In the study of zoonoses, education is necessary in the promotion of sound health practices, with the aim of addressing human health needs that may be influenced by direct or indirect contact with animals, and create health options that can be accessed by high-risk populations.
4. The volunteer students and teachers presented the data of a survey of 33% of the households of Los Piletos villa concerning the composition of nationalities in the community.
5. In this article we have only included the results tied to the questions and objectives that are related to the changes produced in the participating students. The complete work pursues seven objectives which, among other things, include the impact of the project on Los Piletos villa.



6. The Margarita Barrientos Foundation, located in Los Piletos villa, has provided a physical space to the students and professors that participate in the project.
7. In 1970, Freire proposes his theory of dialogical action; later, Habermas writes the theory of communicative action, and in 1997, Flecha writes the beginnings of dialogical learning.

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