

Teaching-learning Strategies for the Development of Humanistic Competences

Proposals to Form Veterinarians for a Better World





2012 Federal Council of Veterinary Medicine

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Whether the new educational opportunities become a significant development or not – for the individual or for society – it depends, ultimately, if people will really learn as a result of such opportunities; in other words, if they will really assimilate practical knowledge, logical thinking capability, abilities and values.



World Conference – Education For All.
Jomtien, Thailand. March, 1990.

Special thanks to everyone that attended the Workshop for Construction of Humanistic Competences Teaching-Learning Strategies.

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The Workshop for Construction of Humanistic Competences Teaching-Learning Strategies, as well as the elaboration of this publication, has become real due to the cooperation of all that trusted the need and possibility of changing educational practices in order to form professionals adaptable to meet social, technological and environmental demands and that involved themselves and dedicated to the important question: how to bring to the Course of Veterinary Medicine the development of humanistic competences?

To them, our most sincere gratitude.

W

hen the Federal Council of Veterinary Medicine (CFMV) proposed in the 90s to hold the national meeting between professors and the Federal and Regional Council of Veterinary Medicine System, through the

National Seminars on Veterinary Medicine Teaching, main event to discuss the profession education in the Country, it wanted to present new ideas; face self-indulgence and, above all, directly cause a continuous improvement in professional formation.

Brazil counts on one third of Veterinary Medicine schools of the world. The profession is responsible for strategic areas in economy, health and sustainability and the foundation for everything is on professional formation. If CFMV has as a mission to “promote society’s wellness, disciplining the exercise of Veterinarian and Zotechnician professions, through regulation, supervision, guidance, professional valuation and classes organization” the importance of its concern and action in the education of professions represented by it is evident.

This document is a milestone. Being the result of CFMV’s initiative and put into practice by countless National Seminars on Veterinary Medicine teaching, besides lectures, debates, roundtables, we were able to produce documents that can be implemented by all and subsidizing the Ministry of Education regarding Education in Veterinary Medicine. The publication brings a reflection on education values and it goes beyond, with suggestions of techniques for those committed to the formation of future professionals. We want it to be a starting point, so that humanistic practices are part of each professional’s reality. This is what we want in order to keep quality, ethics, and excellence in our profession.

Benedito Fortes de Arruda
CFMV President

Content

1. Presentation.....	010
2. A moment to reflect.....	014
3. Concepts.....	016
3.1 Competences.....	017
3.2 Teaching-learning strategy.....	017
3.3 Development of humanistic competences: a subject discussed worldwide.....	018
3.4 Development of humanistic competences: how Brazil is acting.....	019
3.5 Conceiving education as a whole	023
3.6 The Federal Council of Veterinary Medicine pioneering initiative	025
3.7 How to bring the development of humanistic competences to Veterinary Medicine educational practices?	027
3.8 Working to produce ideas.....	028
3.9 Brainstorming ideas.....	030
3.10 How was the World Café dynamics used in the Workshop?.....	031
4. The humanistic competences of the course of Veterinary Medicine.....	034
4.1 What is competence?.....	033
4.2 What are humanistic competences?.....	037
4.3 Attention to health competence.....	037
4.4 Decision making competence.....	038
4.5 Communication competence.....	040
4.6 Leadership competence.....	043
4.7 Administration and management competence.....	044
4.8 Permanent education competence.....	046
4.9 Considerations.....	048
5. The teaching-learning process	050
5.1 The active didactics.....	051
5.2 Teaching-learning process stages	053
5.3 Considerations.....	060
6. Teaching-learning strategies for the development of humanistic competences.....	062
6.1 The same content with different results.....	063
6.2 Dialogued lecture.....	064
6.3 Dramatization.....	067
6.4 Case study.....	070
6.5 Environment study.....	071
6.6 Text study.....	073
6.7 Directed study.....	076
6.8 Forum.....	078

6.9 List of discussion through computerized systems.....	080
6.10 Conceptual map	082
6.11 Workshop.....	083
6.12 Panel.....	085
6.13 Portfolio.....	087
6.14 Seminar	089
6.15 Problems solving	092
6.16 Brainstorming	094
6.17 Problem-Based Learning - PBL	096
6.18 Project-based learning.....	099
6.19 Jury trial.....	101
6.20 Games.....	102
6.21 Tips to evaluate learning using the strategies presented	104
7. Proposals for the development of the competence attention to health	110
Proposal 20 – Environment study	111
Proposal 21 – Environment study	112
Proposal 22 – Environment study	112
Proposal 23 – Environment study, case study or forum	113
Proposal 24 – Problems solving, workshop and environment study.....	114
Proposal 25 – Seminar.....	114
Proposal 26 – Brainstorming, environment study and workshop	115
Proposal 27 – Community project.....	116
Proposal 28 – List of discussion through computerized systems	117
8. Proposals for the development of the competence decision making	118
Proposal 29 – Case study, problems solving and environment study.....	119
Proposal 30 – Brainstorming and workshop	120
Proposal 31 – Text study and case study	120
Proposal 32 – Case study, brainstorming, problems solving and conceptual map	121
9. Proposals for the development of the competence communication	122
Proposal 33 – Games.....	123
Proposal 34 – Case study	124
Proposal 35 – Text study, case study and workshop.....	124
Proposal 36 – Directed study and dialogued lecture	125
Proposal 37 – Problems solving and workshop.....	126
Proposal 38 – Forum and problems solving.....	127
Proposal 39 – Brainstorming and dramatization	128
Proposal 40 – Text study and dialogued lecture.....	129
Proposal 41 – Seminar.....	129
Proposal 42 – Informative campaign.....	130

Proposal 43 – List of discussion through computerized systems.....	131
Proposal 44 – Text study, seminar and portfolio.....	132
Proposal 45 – Case study, brainstorming, dialogued lecture, forum, dramatization, seminar, panel and workshop	132
10. Proposals for the development of the competence leadership	134
Proposal 46 – Panel	135
Proposal 47 – Brainstorming	136
Proposal 48 – Problems solving	136
Proposal 49 – Games.....	137
Proposal 50 – Academic week.....	137
Proposal 51 – Dialogued lecture, forum or workshop.....	138
11. Proposals for the development of the competence administration and management.....	140
Proposal 52 – Project-based learning – business incubator.....	141
Proposal 53 – Project-based learning.....	142
Proposal 54 – Producing a bone room.....	143
Proposal 55 – Business incubator and workshop.....	143
Proposal 56 – Academic fair and workshop.....	144
Proposal 57 – Academic and professional strategic planning program.....	145
12. Proposals for the development of the competence permanent education.....	146
Proposal 58 – Study groups, text study, case study, computerized discussion list and problems solving	147
Proposal 59 – Workshop, case study and directed study.....	148
Proposal 60 – Text study, problems solving, list of discussion through computerized systems.....	149
Proposal 61 – List of discussion through computerized systems, case study, text study and forum	149
13. Final considerations.....	151
14. References.....	152

1. Presentation



I am an educator especially because I have love.



Paulo Freire

D

ear Professor from the Course of Veterinary Medicine,

The publication that you have in your hands was prepared for you! It derived from a work collectively produced, from a CFMV initiative, aiming at helping you in your classes, covering, therefore, your teaching practice as a whole.

Although the work has been motivated by the needs of bringing to teaching practice the development of humanistic competences, as recommended by the Course of Veterinary Medicine Curricular Guidance, you will see that implementing the strategies presented here will provide your classes with more dynamism, increasing the level of interest by your students and involving them in learning active situations, improving, therefore, the learning of technical competences involved in your subject.

The content that must be taught **does not change!**

What is being suggested are **new strategies**, that is, **new ways** of presenting this content to students, in a way that, **at the same time** the content is presented, humanistic competences are developed.

In order to be possible to get the most of this work's content, we recommend that you read it from its beginning and follow the logical order of Chapters.

Chapters 7 through 12 offer proposals of activities related to teaching-learning strategies covered in **Chapter 6**. The proposals detailed consultation or reading will have more effective results, therefore, if accompanied by the reading of strategy, or strategies, description it relates to. It must also be observed that in many points of Chapters 6 through 12 it might seem there are redundancies; however, these are deliberate, since we have chosen to keep the reliability with which was worked in the workshop that defined the strategies.

It is essential to notice, in the implantation of proposals or strategies describe herein, their insertion in the teaching-learning process as a whole, theme of Chapter 5. Therefore, strategies must derive from educational goals, and not the opposite! In the same way, evaluation must be coherent with the goals set and strategies designed.

Below, a brief exposition of chapter contents:

In **Chapter 3**, you will find some important concepts that will be used along this work, a summarized description about the development of humanistic competences in Brazil and in the world and the contextualization of the work done, the reasons, the way it was conducted, and the goals intended.

Chapter 4 clarifies the definition of competences and of humanistic competences, unraveling the descriptive content of each of them.

Chapter 5 approaches the teaching-learning process, substantiating the principles used in the construction of teaching-learning strategies and of proposals elaborated.

Chapter 6 describes the learning-teaching strategies considered valid for the development of humanistic competences, as well as guidance on how to proceed to use them in order to get effective results, as applicable results, conceived as proposals.

Chapters 7 through 12 illustrate, through proposals produced by the Workshop participants that took place on the XX SENEMV, applied activities related to the teaching-learning strategies in Chapter 6. These chapters deal, each of them, with proposals presented **by competence**, because this was how they were elaborated.

As you will quickly notice, the proposals inserted in Chapters 6 through 12, separated by competence, can be implemented in the majority of cases, for the development of each one, or of more than one, of the six humanist competences listed in the Course of Veterinary Medicine Curricular Guidelines.

By the conclusion of this work, final considerations and references used are presented.



At each affects eternity. He can never tell when his influence stops.

- Henry Adams

2. A moment to reflect



We, teachers, are never completely satisfied with the results of our work. And we even can't be, as we perform an activity whose effects we are not able to know thoroughly. (...)

In some very happy moments with the profession, we can leave a class with a particular kind of satisfaction, with the feeling of 'work done. That day, everything seems to have succeeded. (...)

But, on the other hand, yes: we are always unsatisfied, exactly because we practice a profession whose nature is open. This means that, unlike other professions, we will never be sure about the several aspects of our work. For example: When does it finish or when does it become complete? How can we be sure about the results of what we do for each one of our students? What is really part of the teacher's work?



Jaime Cordeiro (2007)



Thinking about Prof. Jaime Cordeiro's questions, Henry Adams's¹ thinking blooms with even more power:

A teacher affects eternity.

He can never tell where his influence stops.

Are there, hence, eternities in classroom?

Eternities that blend with that from the own teacher, for: who teaches and who learns?

And what do we do when technical knowledge must be bound with other knowledge? Are we prepared to face these challenges? Are we equipped with the required strength to understand and undertake the mission of being a teacher?

When performing the profession of college professor, we accept to disseminate technical and human knowledge. It is not simply **a recommendation and a necessity for the students' life**, but a **legal determination**. Thus, we should make another questioning: are our professors developing technical competences and, at the same time, human? Are these humanistic competences being worked in the student in an intentional way, that is, with the due planning?

What are we, after all, doing in order to prepare our young for the new world? For a better world?

¹ Henry Brooks Adams (Boston, February, 1838 – March 27, 1918) was an American historian, journalist, and novelist. History Professor at Harvard.

3. Concepts

“

Teacher is not who always teach, but who, suddenly, learns

”

Guimarães Rosa

3.1 Competences

In a summarized way, competence is the ability of combining **knowledge, abilities** and **attitudes** to achieve the desired performance. Knowledge refers to **know what to do**; the ability is related to **know how to do**; and the attitude to **want to do**. The notion of competence explains the need for practical experience and, for several times, specific experience, so that the desired development is achieved. Chapter 4 will cover this topic with more details.

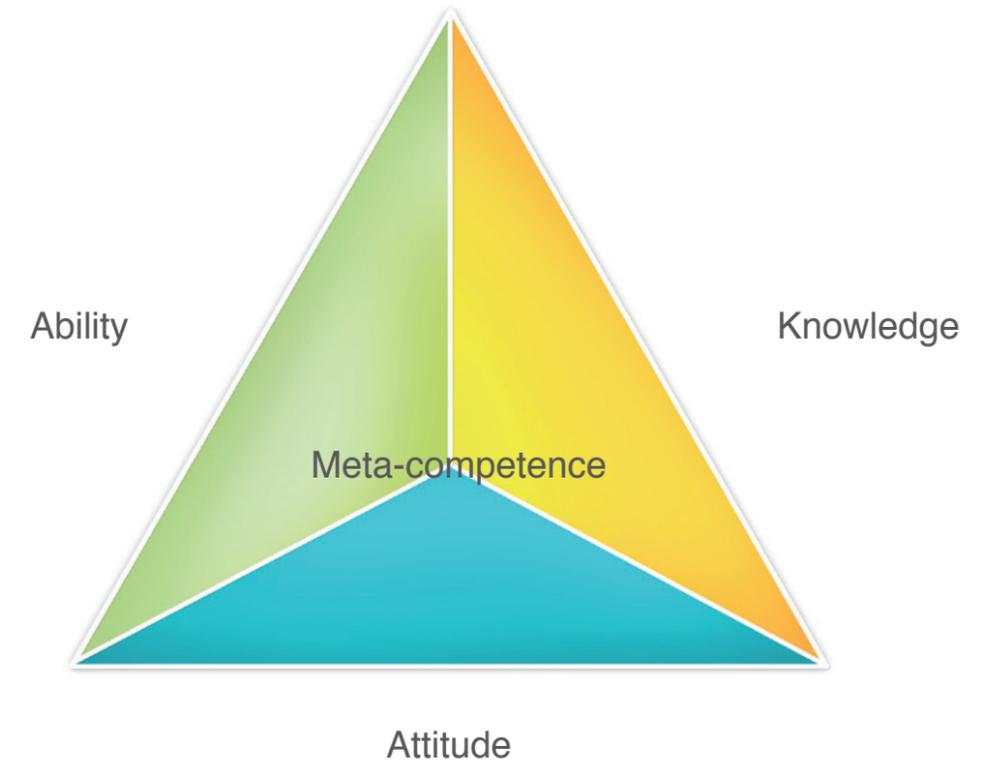


Image 1 – Holistic model of competence

Source: Le Deist and Winterton (2005), with adaptations

3.2 Teaching-learning strategy

What does differentiate the learning process that an individual experiences in their daily life from the learning process that such individual experiences in classroom? The difference, according to Cordeiro (2007), is in **intentionality**. In the teaching-learning process there is an intentionality: to produce learning. The author claims that, in teaching, all activities are conceived and planned with the **purpose of producing learning** in their listeners. Therefore, information must be organized and systematized in a way to achieve this goal. When performing these procedures, the teacher is **defining a teaching-learning strategy**.

Portilho (2005), in his article **Como os alunos universitários gostam de aprender (How college students like to learn)**, he comments that “learning strategies are integrated sequences of procedures or activities that the individual chooses with the purpose of facilitating the acquisition, storage and/or usage of information or knowledge. They are manipulable mental operations, which can be modified according to the necessity of the task in question.”

This work will present exactly this: proposals of activities aiming at facilitate learning.

It is of great relevance for this work to also point out the cyclical context of teaching-learning. Learning strategies are part of a broader whole, necessarily coherent, that comprises from the pedagogical project going through the learning goals to be elaborated in the teaching plan getting to evaluation. This will be seen in details in chapters below.

3.3 Development of Humanistic Competences: a subject discussed worldwide

For the World Organization for Animal Health - OIE², the Veterinarians, regardless of their area of professional practice, are responsible for promoting animal health and welfare, public health and food safety, the veterinarian services being considered a global public good. Veterinarian education is a foundation stone to ensure that the Veterinarian receives a formation that guarantees competences consistent with what is expected from their performance.

The North American Veterinary Medical Education Consortium - NAVMEC³ places the Veterinarian as a leader influent in matters related to animals, humans and health of ecosystems. According to NAVMEC, Veterinary Medicine is a profession known as one of the most rewarding, interesting and challenging, with a broad spectrum of career options for its aspirants. However, education in Veterinary Medicine faces, in a fast rhythm, great challenges arisen with the necessity of offering response to rapid and substantial changes of own humanity, connected mainly to world production of food, to supply of safe and protected food, to emerging zoonotic diseases, to protection of fauna and to management of public health. In order to meet these challenges, NAVMEC proposes a new vision for the course of Veterinary Medicine, a vision that brings a high level of social responsibility, considers and meets society’s needs, and shares technological improvements and partnerships. Observe the images below:

² A2 The World Organization for Animal Health, also known as OIE, is an intergovernmental organization, with headquarters in Paris, which succeeded, in 2003, the former International Office of Epizootics (OIE), which had been created in 1924 by an International Agreement. Website: <http://www.oie.int/>

³ NAVMEC – website: <http://www.aavmc.org/>

NAVMEV lists as Veterinarian’s **essential professional competences**

- communication;
- collaboration;
- management (of the self, of teams and of systems);
- permanent education;
- leadership;
- consciousness of diversity and
- adaptation to changing environments.

The World Organization for Animal Health, in tern, refers to **competences**, such as :

- communication;
- administration and management;
- research risk analysis application;
- among others.

3.4 Development of Humanistic Competences: how Brazil is acting

The of National Education Law Guidelines and Basis (LDB), Law 9394, published in year of 1996, has brought deep **changes** for higher education in Brazil. In it the education purposes were described, in which we emphasize some important expressions:

scientific spirit reflective thinking

I. to stimulate cultural creation and development of scientific spirit and reflective thinking;

development of Brazilian society

II. to form graduate students (...), able to be inserted in professional sectors and for participation in development of Brazilian society (...);

to develop the knowledge of human being and of the environment in which they live

III. to stimulate research work (...), aiming at science development (...) and diffusion of culture and, therefore, develop knowledge of human being and of the environment in which they live;

to communicate knowledge other ways of communication

IV. to promote dissemination of knowledge (...) that constitute humanity’s heritage and to communicate knowledge through teaching, publications and other ways of communication;

permanent desire for cultural and professional improvement

V. suscitar o desejo permanente de aperfeiçoamento cultural e profissional e possibilitar a correspondente concretização, integrando os conhecimentos que vão sendo adquiridos (...);

knowledge of present world's problems regional performance

VI. to stimulate the permanent desire for cultural and professional improvement and allow their correspondent achievement, integrating knowledge that has been acquired (...);

diffusion of achievements and benefits resulting from cultural creation

VII. to promote the extension, opened to people's participation, aiming at diffusion of achievements and benefits resulting from cultural creation and scientific and technological research (...)

From the changes initiated by LDB edition, it is emphasized the **Undergraduate Courses Curricular Guidelines**, which have replaced our Minimum Curriculum institute, once in effect.

The Curricular Guidelines allow:

outlining general principles and guidelines to Undergraduate Courses,

providing curricular flexibility and freedom when elaborating pedagogical projects,

factors required to obtaining results adequate to the context in which the Higher Education Institution is inserted,

allowing, therefore, the regionalization of education and fast adaptations to scientific and technological improvements, as well as conditions and situations derived from times in which change prevails.

Therefore, it is expected the formation of professionals able to face the challenges of rapid changes of society, of job market and of conditions of professional practice.

“The professional just ‘prepared’ is not considered anymore, but the professional ready for changes and, therefore, adaptable.”

his emphasis, present in CNE/CES Opinion No. 67/2003, guides the content of the national Undergraduate Courses Curricular Guidelines, elaborated from long discussions involving scientific society, professional orders and associations, class associations, productive sector and other sectors involved.

In the context of undergraduate courses in Veterinary Medicine, the National Curricular Guidelines were introduced through **CNE/CES Resolution No. 1/2003**. The Guidelines define the principles, foundations, conditions, and procedures of veterinarian formation.

CNE/CES Resolution No. 01/2003 sets forth that the Veterinarian formation must be aimed at providing knowledge specific of different areas of profession performance. However, the rule (art. 4) also emphasizes **competences** that must be part of the set of learning **objectives**:

- Attention to Health;
- Decision making;
- Communication;
- Leadership;
- Administration and Management;
- Permanent education.

These **competences**, called **humanistic**, are related to each other, independently. It is possible to conclude, additionally, that the mention to humanistic competences is not simply related to the development of certain behaviors in the students, that might denote the presence or not of the competence. Moreover: it is expected that the formation of the Veterinarian provides them with **development of competences in as applied way**. This is an essential condition to generating the results required by society, as far as Veterinary Medicine is concerned, and **required** from Higher Education Institutions.

Indeed, the referred Resolution bring, to the Veterinary Medicine course, a larger effort in the sense of improvement of higher education, set forth in the national Education Guidelines and Basis Law, as it will be discussed later, comprising specific aspects related to the performance of the future professional, however, reflecting as well a concern about the inclusion of topics and activities that allow the development of individuals and of their citizenship consciousness, as well as clearly provide the basis for facing social problems.

3.5 Conceiving education as a whole

The guidelines comprised in CNE/CES Resolution No. 01/2003 find resonance in the “Four Pillars of Education” proposed by UNESCO in the document “Learning: A Treasure Within” (Delors, 2000). In this document, education along life is based in four pillars: **learn to know, learn to do, learn to live together and learn to be, described** in Table 1.

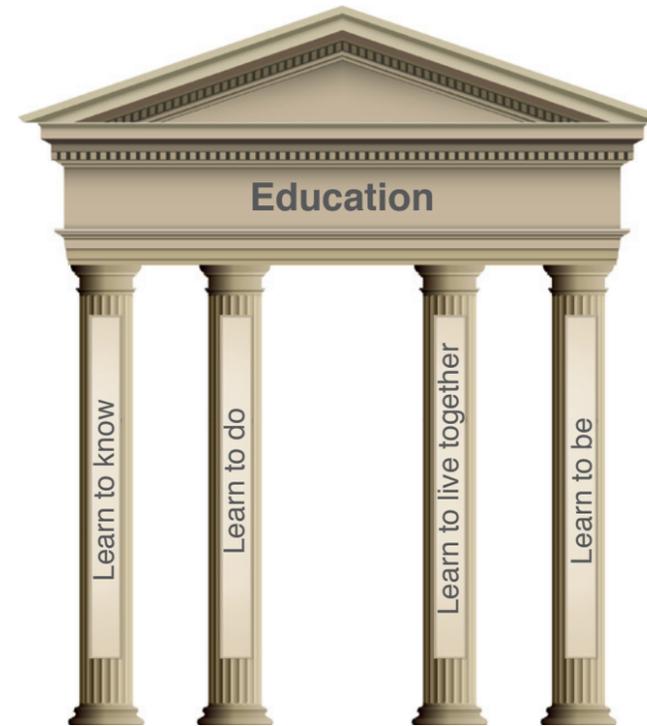


Image 2 – Four Pillars of Education

Table – Description of the Four Pillars of Education

PILLAR	DESCRIPTION
Learn to know,	to combine a general culture, sufficiently broad, with the possibility of studying, in depth, a reduced number of subjects, that is: learn to learn, in order to benefit from opportunities offered by education along life.
Learn to do,	in order to acquire not only a professional qualification, but, in a more comprehensive way, the competence that makes the person able to face several situations and work as a team.

Learn to live together,

to develop the comprehension of the other and the perception of interdependences – to do common projects be prepared to manage conflicts – in respect for pluralism, mutual comprehension and peace values.

Learn to be,

to develop, the far as possible, the personality and be in conditions to act with an increasingly great ability of autonomy, discernment and personal responsibility. With this purpose, education must take into consideration the potentialities of each individual: memory, reasoning, aesthetical sense, physical abilities, capacity to communicate themselves.

Source: Delors (2000).

The document draws the attention to the importance to conceiving education as a whole, reinforcing the necessity of implementing **other ways of learning**, besides those that are already focused only in knowledge acquisition, recommending that “this perspective must in future inspire and guide other educational ways, either in the elaboration of programs, or in the definition of new pedagogical politics” (Delors, 2000).

The short description of the pillars of education proposed by UNESCO, visualized in Table 1, allows us to notice, after examining the content of humanistic competences, that there are is a very deep link between the development of these competences and the observation of the pillars in the educational process.

It is, therefore, possible to perceive converging ideas about education for future and what is expected from the professional working in it. It was said what is expected from this professional, but there is the question.

How to form this new professional adaptable to what Brazil needs?

Even though these competences were outlined, this question arises and it is not quite resolved in Brazilian undergraduate courses.

Academic reports of initiatives in the sense of development of humanistic competences can

be found in connection to other higher courses, such as Nursing and Accounting courses. However, the introduction of institutional actions guided towards the incorporation of this notion of professional is not common. The truth seems to be that Higher Education Institutions are not sufficiently equipped to guarantee the fulfillment of these new guidelines.

3.6 The Federal Council of Veterinary Medicine pioneering initiative

The Federal Council of Veterinary Medicine – CFMV has as mission “to promote society’s wellness, disciplining the performance of Veterinarian and Zootechnician professions and ensuring professional appreciation and the organization of classes directly by or through the CRMVs”.

As an integral part of CFMV, the National Commission for Veterinary Medicine Education – CNEMV has been stimulating, over the years, through National Seminars on Veterinary Medicine Education, important discussions regarding the main aspects covered in the undergraduate courses, in order to promote the improvement of Veterinarian formation in Brazil.

CNEMV considers the question that humanistic competences are not being properly worked in Veterinary Medicine courses because there is still many doubts by coordinators and professors regarding “how” the teaching-learning process of these competences must be guided. In this sense, to contribute to the development of this topic was the main motivation of the XX Seminar on Veterinary Medicine Education, that took place on October 08-10, 2012, in Brasília, Federal District.

Veterinary Medicine education is traditionally focused on technical knowledge and abilities proper of it. However, it can be noticed a most important gap as far as development of humanistic competences is concerned, determined by law and necessary for society. These are fundamental because they provide the connection between different technical learnings, generating integrated solutions. The insufficient focus on the development of humanistic competences might additionally benefit a possible loss of professional space for the Veterinarian, especially in prominent positions, such as government, executive and leadership positions.

It is necessary to highlight that the development of humanistic competences is part of a desire for the formation of professionals that belongs to Brazilian society in general, common to every health field, such as biomedicine, medicine, and nursing. Additionally, as it was mentioned before, it is a guideline adopted by entities of international scope.

The training of Veterinary Medicine professors has been a topic equally approached by CNEMV, reflecting if the professors' preparation is adequate to stimulate the development of technical and humanistic competences in classroom. Additionally, that higher education professors not always have a pedagogical formation that allows them to link learning goals to the strategies adopted in classroom and the students' learning evaluation.

That being said, CNEMV has adopted as a main activity of XX Seminar on Veterinary Medicine Education the **Workshop for Construction of Teaching-Learning Strategies**, aimed at the development of humanistic competences.

In order to meet the importance and the goal of this initiative, it is necessary to be clear with regards to articles 3 and 4 of CNE/CES Resolution No. 01/2003 as a premise of the work developed.

Art. 3 of the rule refers to the graduate student's profile:

Art. 3 The Undergraduate Course in Veterinary Medicine as profile of the graduate student/professional the Veterinarian, **with generalist, humanistic, critical and reflective formation**, apt to understand and translate the necessities of individuals, social groups and communities (...) in their specific fields of work

Art. 4, brings changes that stimulated all the Workshop efforts, for it recommends:

Art. 4 – The Veterinarian formation aims at **providing the professional with knowledge to develop actions and results** aimed at the area of Agricultural Science as far as Animal Production, Food Production, Animal Welfare and Environmental Protection is concerned, **besides the following general competences and abilities:**

I. Attention to Health;

II. Decision Making;

III. Communication;

IV. Leadership;

V. Administration and Management and

VI. Permanent Education.

Art. 4, therefore, lists which **humanistic competences** must be approached.

It is possible to say that these competences are those that, **allied to technical competences**, will allow the formation of an **adaptable** professional, that is, these are the required competences so that changes pointed out by LDB can, effectively, take place.

The formation of this new adaptable professional that Brazil needs depends on the integrated development of technical and humanistic competences

The document **Teaching-Learning Strategies for the Development of Humanistic Competences – Proposals to form Veterinarians for a Better World** is a practical contribution to the so desired concrete insertion of curricular guidelines, mainly of what is presented in article 4 of CNE/CES resolution No. 01/2003, referring to the development of humanistic competences. Besides that, the strategies proposed herein are in line with UNESCO recommendations (Delors, 2000) and represent ways of learning alternative to the traditional ones, conceiving the individual's education as a whole.

Therefore, this publications aims at supporting professors and, consequently, Higher Education Institutions to achieve the highest levels of excellence in teaching and formation of Veterinarians that society needs.

3.7 How to bring the development of humanistic competences to Veterinary Medicine educational practices?

A changing world asks for changes to follow it. And it is in this point that we can found the focus of **Workshop for Construction of Teaching-Learning Strategies for Humanistic Competences**, taken place in Brasília, on October 09, 2012, with the participation of over 100 people, formed in its majority by Veterinary Medicine courses coordinators, besides professors and students, that is, those directly involved in the process daily routine.

In Chapters 7 to 12, these competences are presented, as well as the teaching-learning strategies proposals to develop them in different contexts of the course of Veterinary Medicine. These ideas were produced by the **Workshop for Construction of Humanistic Competences Teaching-Learning Strategies**, whose method is described as follows.

3.8 Working to produce ideas...

The activities were performed in an auditorium and three independent rooms, each of them counting on two facilitators. The event general schedule is exhibited in Table 2.

Table 2 – Workshop for Construction of Humanistic Competences Teaching-Learning Strategies Schedule

october 8, 2012	
2:50 pm	Presentation: Forming Veterinarians for a better Brazil: how to bring the development of humanistic competences to Veterinary Medicine educational practices
october 9, 2012	
8:30 am	Initial integration Presentation of humanistic competences
10 am	Break
10:20 am	Construction of teaching-learning strategies, competence: • Communication (Rooms 1, 2 and 3)
11:40 am	Construction of teaching-learning strategies, competences • Attention to Health (Rooms 1 and 2) • Leadership (Room 3)
1:00 pm	Lunch
2:30 pm	Construction of teaching-learning strategies, competences: • Decision Making (Room 1) • Permanent Education (Room 2) • Administration and Management (Room 3)
4:40 pm	Break
5:00 pm	Assembly with all the participants in the auditorium to present the results.

As it was a pioneering initiative, the papers were planned and organized considering their exploratory feature. As goals set for the Workshop, it was aimed that, by the end, the participants were apt to:

- I. define what competences are;
- II. relate the concept of competence to the teaching-learning process;
- III. distinguish humanistic competences;
- IV. interpret humanist competences in light of the Veterinarian performance;
- V. recognize different types of learning strategies;
- VI. create teaching-learning strategies aimed at the development of humanistic competences.

The six humanistic **competences** were considered regarding their content so that it was possible to propose the proportion of participants that would work in the construction of teaching-learning strategies of each competence. Therefore, because it is the relatively easy competence to be assimilated, **Communication** was approached from the very beginning and in three rooms, simultaneously; because it was the most overarching, **Attention to Health** was approached in two rooms, simultaneously; each of the other ones was approached in just one room.

Three support materials were previously produced and distributed to the participants:

- I. **Teaching-Learning Strategies Guidebook** – The strategies contained in the Guidebook are described in Chapter 6, with other strategies added suggested by the participants along the Workshop. The complete Guidebook is in Attachment III;
- II. **Description of Humanistic Competences**, material formulated based on the study of content to which competences refer, in contrast to description of similar competences, found in literature and/or derived from the experience of consultants assigned to the Project, in order to offer a great clarity to the attributes of each competence. The description of the humanistic competences was consolidated and it is described in Chapter 4;
- III. **Form to Elaborating Teaching-Learning Strategies** – represented in Image 3.

COMPETENCE TO BE DEVELOPED: _____

Name of the teaching-learning strategy:

Description (How will the activities happen? If the strategy is identical to the one in the Guidebook, it is to necessary to repeat!):

Guidelines to the Professor (Fill out it there is any important observation so that the Professor uses the strategy):

Basic resources (Will any specific resource be necessary for applying the strategy? Is there any resource that cannot be missing? Which one(s)?):

Application of the strategy in subject(s) of the course of Veterinary Medicine:
(Describe the strategy usage aiming at developing the competence in one or more specific course subjects. The purpose is to demonstrate the strategy being applied in a practical teaching-learning situation.) **USE THE BACK.**

Image 3: Form to elaborate teaching-learning strategies

3.9 Brainstorming ideas

In the rooms, the technique known as World Café was used. **World Café** is a simple process, however powerful to promote constructive dialogues and conversations, access collective intelligence and generate innovative possibilities of action.

The conversation at World Café are conceived based on the assumption that people already have inside themselves the knowledge and creativity to face even the greatest challenge. In order that this methodology of production of ideas is well-succeeded, it is essential to have clear goals to be achieved, besides trying to create a favorable environment: simultaneously informal and welcoming. The contribution of all must be encouraged.

World Café **intentionally** links the parts to the whole, combining the intimacy of a dialogue of four to five people with crossed brainstorming of ideas happening through movements of people from table to table. When encouraging people to carry on essential and/or most exciting ideas of their conversations, the essence of the collective tends to become more visible since the main ideas and insights rapidly move through conversation networks.



Image 4: World Café principles

3.10 How was the World Café dynamics used in the workshop?

Initial procedures adopted:

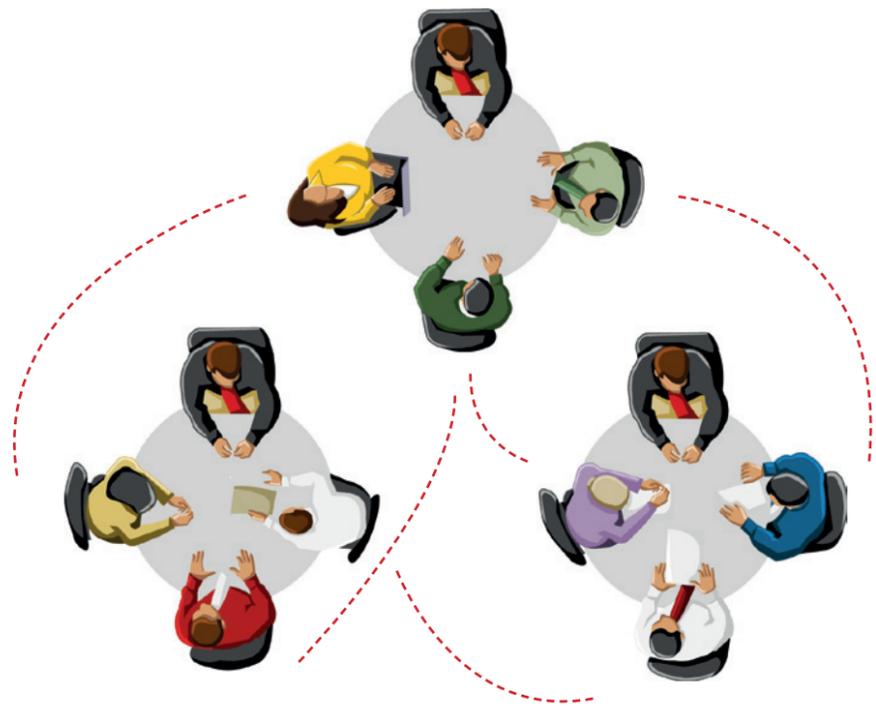
- I. Each room would discuss three competences.
- II. The participants in each room were distributed initially in subgroups of up to 5 participants, sat around round tables.
- III. The participants counted on a main question to guide discussions: **“Which are the best ways to make the student develop the competence (leadership, communication etc) in the course of Veterinary Medicine?”**

IV. Each constructed teaching-learning strategy suggestion should present examples of application in subjects of the course, if possible. For this activity they used the support materials, aiming at provide the participants with the knowledge of usual behaviors connected to each competence and, subsequently, to search for “inspiration” in the Learning Strategies Guidebook, in order to formulate new strategies or indicate strategies suitable for their development.

V. The participants should appoint a subgroup reporter that would remain in the table. The first moment of discussion ended after, approximately, 25 minutes. The participants of each subgroup, except for the reporter, went to other tables (randomly) and a new round of discussions developed.

VI. The new round started with the reporter of each subgroup presenting the work developed up to the moment. The new participants were invited to offer their contributions for the processes under construction in these tables. The reporter wrote down the development of ideas and teaching-learning strategies that were being constructed and improved.

New rounds took place, according to time limit. By the end of the works of construction of teaching-learning strategies of the three competences developed in each room, a moment of “harvest” was reserved, in which all participants of the room shared, before the assembly, what they had learned and produced.



An assembly with the complete group of participants was hold to present some of the results and end the works.

This Chapter has indicated the impelling context of this publication, as well as described the foundations and the manner how the proposals were obtained for the development of humanistic competences.

4. The Humanistic Competences of the Course of Veterinary Medicine

“

Education requires the greatest care, because it influences all life.

”

Seneca

A

ll effort expended by CFMV in the production of this work refers to the development of humanistic competences on the course of Veterinary Medicine. The comprehension of humanistic competences goes through the concept of competence, which will be approached in more details. Subsequently, this Chapter presents the descriptive content of each one of the humanistic competences present in the Curricular Guidelines of the Course of Veterinary Medicine.

4.1 What is competence?

Given the applied nature of curricular Guidelines, the focus of concept used is aimed at **competences at work**. **Competence** is conceived as:

“a combination of knowledge, abilities and attitudes, expressed by the professional performance inside a determined social, economic, cultural and environmental context, which adds value to the person e to society.” (definition adapted from CARBONE et al., 2c005).

The key-word of this concept is **combination**. Knowledge refers **to know what to do**; the ability is related to **know how to do**; and the attitude to **want to do**.

It is worth highlighting that the expression of competence, that is, the development (which is desired from the student!), is dependent of the context in which the student will work. This notion, included in the concept of competence used herein, is in line with the National Curricular guidelines, derived, in turn, from the National Education Guidelines and Basis Law, for it reinforces the importance of considering regional peculiarities from where the IES in the education characteristics is located. This measure favors, clearly, the expression of competence, for the measure properly situates it in front of element of social, economic, cultural and environmental context.

The addition of value both for the person (the student that expresses the competence) and for society, reflects the achievement gained from the expression of competence, which, finally, contributes for the development if the country and the world.

Competence to develop a better world!

In order to illustrate the concept, as well as complementing it, the image adapted from Le Deist and Winterton (2005) will be used. For the authors, knowledge, abilities and attitudes are dimensions of competence, together with a fourth dimension that they call meta-competence. The meta-competence facilitates the acquisition of the other three dimensions,

which for the authors, refer to cognitive, functional and social competences, respectively, knowledge, abilities and attitudes.

It is very important to understand that the distinction among the three dimensions is made just analytically. In practice, it is not possible separate them. Image 5 represents competence as a tetrahedron, reflecting its unity and the difficulty in separating knowledge, abilities, and attitudes in practice.

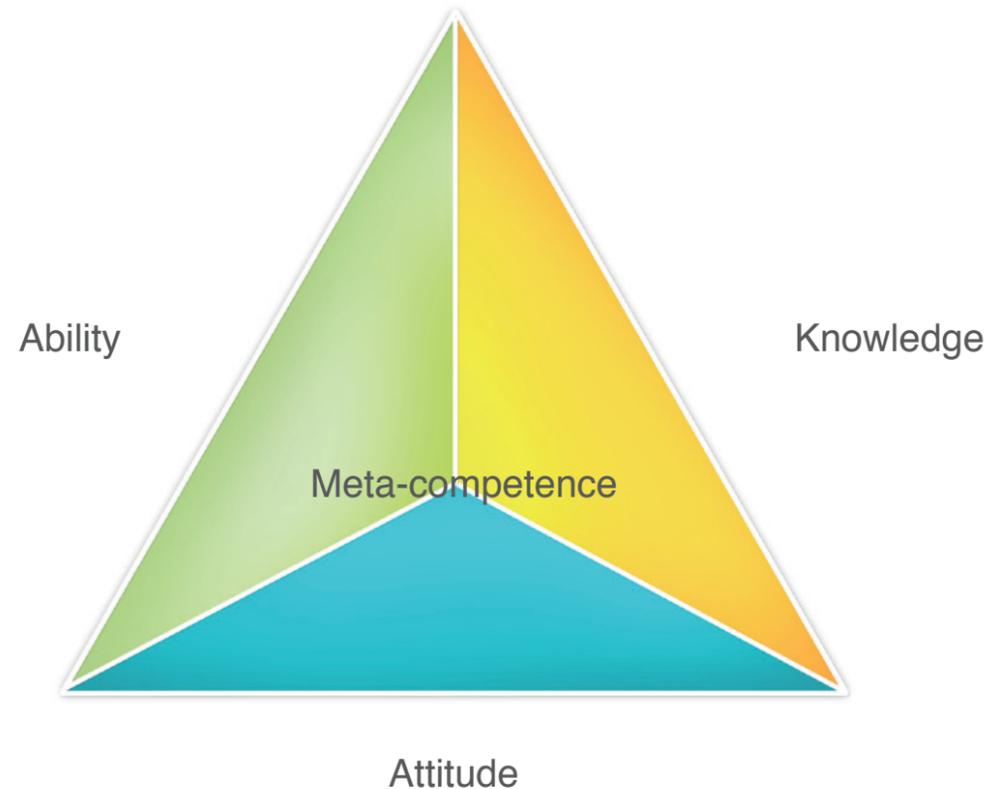


Image 5 – Holistic model of competence
Source: Le Deist and Winterton (2005), with adaptations

Image 5 demonstrates that meta-competence would be a fourth dimension facilitator of the other in the base of the tetrahedron. The **practical competences would be situated in the faces of the tetrahedron**, combining elements of different dimensions – knowledge, abilities and attitudes – in varied proportions. According to what will be seen in a more concrete way in the description of humanistic competences, practical competences are expressed in terms of behaviors,

4.2 What are humanistic competences?

The denomination humanistic competences was introduced with the purpose of differentiating technical competences, that is, proper to the performance of a Veterinarian as a specialized professional, from competences complementing these ones, related to the professionals' ability to socially insert themselves in situations offered by the situation. In this context it can be notice that the professional technically prepared that is not humanely formed will not be able insert themselves in society to make their knowledge available.

Humanistic competences are those related to the ability of dealing with countless possible variables to be considered when people are involved. Among other theoretical currents, these competences bring aspects explored by multiple intelligence theories, especially by the field of study of emotional intelligence. They are related to human matters of relationship, comprehension of reality from a broader point-of-view, of communication, leadership, organization and management, the management of the self being included. These exact competences, listed in art. 4 of CNE/CES Resolution No. 1/2003, allow to form an adaptable professional, as the legislation recommends.

As it was already mentioned, the humanistic competences to be developed in the course of Veterinary Medicine are: Attention to Health, Decision Making, Communication, Leadership, Administration and Management and Permanent Education. Below, the descriptive content of these competences will be presented.

4.3 Attention to health competence

CNE/CES Resolution 1/2003 describes the competence Attention to Health as:

Art. 4º (...)

I - Attention to health: health care professionals, inside their professional scope, must be apt to develop health prevention, promotion, protection and rehabilitation actions, both in individual and collective levels. Each professional must guarantee that their practice is performed in an integrated and continuous way with the other health system instances. Being able to think critically, analyze society's problems and search solutions for them. The professionals must provide their services in the highest quality standards and ethics/bioethics principles, taking into account that the responsibility of attention to health is not finished with the technical act, but with the solution of the health problem, both in individual and collective levels.

Table 3 provides additional elements related to the Resolution description.

Table 3 – Competence Attention to Health

Definition: Because it is related to the competence known as Systemic Vision, it can be defined as the ability of understanding Health as a whole, from the identification of parts or elements of a situation or context and notice the interaction and interference of a part over the others.

Important abilities

- Capability of:
- observation;
 - noticing the explicit and the implicit;
 - making connections;
 - selecting material information;
 - making analysis and deduction.

Important attitudes

- Curiosity, empathy, ethics, flexibility, initiative, persistence, proactivity, resilience and sensitivity.

Behaviors that exemplify the competence:

- It follows the happenings occurring around the world;
- It follows the results and actions developed by other professionals in a multidisciplinary project;
- It analyses all the consequences of a decision in relation to the other areas or subsystems;
- It develops an action plan to identify happenings of subsystems (economics, politics, legislation, technology etc) that must be monitored;
- It identifies the relation of its actions before a broader context;
- It monitors in a systematic manner the facts and happenings prioritized in the action plan.

Source: Adapted from Queiroz (2008).

4.4 Decision making competence

CNE/CES Resolution 1/2003 describes the competence Decision Making as:

Art. 4º (...)

II – Decision Making: the work by health care professionals must be founded in the capability of decision making aiming at the adequate use, efficacy and cost-effectiveness, of workforce, medicines, equipment, procedures and practices. For this purpose, they have to have competences and abilities to evaluate, systematize and decides the most adequate behaviors, based on scientific evidence.

Table 4 provides additional elements related to the Resolution description.

Table 4 – Competence Decision Making

Definition: Decision Making is the capability of identifying and choosing among different alternatives, which one is the best option to implement an action or solve a situation.

The decision process stages are:

- Study of the problem;
- Definition of alternatives;
- Evaluation of alternatives;
- Decision making;
- Decision implementing;
- Disciplinary actions

Important abilities

- Capability of:
- analyzing threats and opportunities when choosing each alternative;
 - leaving with uncertainties;
 - running risks;
 - deciding on one of the several variables;
 - deciding without having all required information;
 - noticing the subtlety of human behavior

Important attitudes

- Empathy, ethics, flexibility, humility, persistence, resilience, responsibility, confidence, sensitivity and timeliness

Behaviors that exemplify the competence:

- to act in a resilient way in unexpected or inadequate situations;
- to search for information that help decision making;
- to develop a contingency plan;
- to perform systematic control of achieve results and compare them those estimated;
- to elaborate strategies for goals achievement;
- to avoid future problems, working on the causes and not the consequences;
- to make a systematic and careful analysis about the impact of the decision made;
- to identify the adequate timing for decision making, not being precipitated or procrastinating;
- to base their conduct on ethical behavior;
- to plan actions, considering resources, time and ethics maximization;
- to bring themselves decision making about the problems that arise.

Source: Adapted from Queiroz (2008).

4.5 Communication competence

CNE/CES Resolution 1/2003 describes the competence Communication as:

Art. 4º (...)

III – Communication: health care professionals must be accessible and must keep the confidentiality of information they receive, when interacting with other health care professionals and people in general. Communication involves verbal, nonverbal communication and writing and reading abilities; mastering, at least, one foreign language and communication and information technologies.

Table 5 provides additional elements related to the Resolution description.

Table 5 – Competence Communication

Competence: Written communication.

Definition: Capability of writing texts.

Important abilities

- Capability of:
- making connections;
 - selecting information;

- Ability of:
- arguing;
 - combining words;
 - writing;
 - interpreting texts.

Important attitudes

- Self-confidence, discipline, enthusiasm, humility, persistence, resilience, responsibility, confidence and sensitivity.

Behaviors that exemplify the competence:

- to define to whom the text is addressed;
- to define the purpose of the text to be written;
- to develop texts with introduction, development and conclusion;
- to be objective when writing;
- to choose the best words to compose the sentence;
- to write topics that they wish to address in the text;
- to write paragraphs that have relationship with the text purpose;
- to make a cohesion or connection between the paragraphs;
- to identify arguments favorable to the text purpose.

Competence Communication

Competence: Spoken communication.

Definition: Capability of presenting ideas to a person, a group, an audience or a multitude of people.

Important abilities

Capability of:

- adapting to new situations;
- stimulating audience participation;
- selecting and prioritizing themes;
- making the presentation easygoing;
- perception and observation.

Ability of:

- persuading;
- transmitting ideas;

Logical thinking.

Important attitudes

-Authenticity, dynamism, discipline, empathy, enthusiasm, ethics, flexibility, humility, objectivity, persistence, proactivity, resilience, respect, responsibility, security, sensitivity and tolerance.

Behaviors that exemplify the competence:

- to present examples and stories that enrich the presentation;
- to present supporting material with quality and creativity;
- to present the them making connections to external reality;
- to present topics fluently, gradually and logically;
- to show attention and respect to the listeners;
- to show knowledge about the subject matter;
- to involve the audience in the presentation;
- to actively listen and empathically place themselves before the listeners' insertions;
- to speak attractively, clearly, excitedly, objectively and confidently;
- to notice the audience's dynamics;
- to plan the presentation defining purpose, content, topics sequence, target audience, expectation and time;
- to cause reflections that stimulate comprehension;
- to review the presentation planning considering the audience's need.
- to express themselves with adequate timbre, rhythm, speed and volume in order to keep the audience's attention;
- to use adequate language and terminology.

Source: Adapted from Queiroz (2008).

4.6 Leadership competence

CNE/CES Resolution 1/2003 describes the competence Leadership as:

Art. 4º (...)

IV – Leadership: when working in multiprofessional team, health care professionals must be apt to assume leadership positions, always considering society's wellness. Leadership involves commitment, responsibility, empathy, ability to make decisions, communication and management in an effective and efficient manner.

Table 6 provides additional elements related to the Resolution description.

Table 6 – Competence Leadership

Definition: Capability of influencing and inspiring individuals or groups to perform tasks voluntarily.

Important abilities

Capability of:

- analyzing threats and opportunities when choosing each alternative;
- helping in the development of people;
- managing conflicts;
- identifying peoples' talents and potentials;
- inspiring people;
- noticing group's behaviors and movements.

Important attitudes

- Self-confidence, discipline, determination, enthusiasm, ethics, justice, empathy, flexibility, humility, persistence, proactivity, resilience, responsibility, confidence, tolerance and transparency.

Behaviors that exemplify the competence:

- to systematically follow the development of each member of the group;
- to follow the group, identifying their relationships, communications and ways of working;
- to manage conflicts existing in the group;
- to define and clearly communicate vision, purposes and goals to everybody;
- to stimulate and support cooperation among people;
- to carefully and empathically listen to peoples' opinion;
- to provide feedback focused on the development of the other;
- to guide and follow people presenting difficulties in accomplishing activities;
- to promote activities that foster peoples' integration;
- to recognize and reward individual and collective development;
- to socialize information with everyone;
- to require, stimulate and value people to share their opinions;
- to make decisions considering ethics, respect, justice and transparency.

Source: Adapted from Queiroz (2008).

4.7 Administration and management competence

CNE/CES Resolution 1/2003 describes the competence Administration and Management as:

Art. 4º (...)

V – Administration and Management: the professionals must be apt to undertake initiatives, manage and administrate workforce, physical and material resources and information, in the same way they must be apt to be entrepreneurs, managers, employers or leadership in health care team.

Table 7 provides additional elements related to the Resolution description.

Table 7 – Competence Administration and Management:

Related competences: **People Management, Information Management, Time Administration and Processes Management.**

Definition: Capability of managing people and available resources and processes, setting objectives and actions, following the implementation of actions, taking preventive and disciplinary measures and evaluating processes and results.

Important abilities

Capability of:

- planning and organizing work, according to people's profiles and available resources;
- relating to different people's profiles, integrating the team and providing a stimulating environment and of high productivity;
- managing their own time, aiming at achieving the desired results;
- analyzing;
- prioritizing;
- selecting information;
- listening and noticing what is implicit.

Important attitudes

- Curiosity, dynamism, availability, discipline, organization, enthusiasm, ethics, flexibility, initiative, objectivity, persistence, proactivity, confidence and sensitivity.

Behaviors that exemplify the competence:

- to systematically follow the development of each member of the group;
- to define the action line, outlining stages and resources in order to achieve a goal;
- to assign tasks, sharing responsibility by their performance;
- to determine procedures to monitor processes, tasks or activities from the work team;
- to follow and evaluate the implementation of planned actions;
- to act in a disciplinary manner regarding the problems found;
- to anticipate and prevent potential problems identified during the actions;
- to relate people's profile to development opportunities offer, with performance improvement;
- to follow and evaluate people's performance, based on observation, review and follow up of activities and task;
- to administrate time when getting information;
- to search for information for decision making;
- to analyze obtained information;
- to analyze work routines, processes and procedures, providing adequate adjustments.

Source: Adapted from Queiroz (2008).

4.8 Permanent education competence

CNE/CES Resolution 1/2003 describes the competence Permanent Education as:

Art. 4º (...)

VI – Permanent Education. the professionals must be able of continually learning, both during their formation and in their practice. Therefore, health care professionals must learn how to learn and have responsibility and commitment to their education and training/internship of future professionals generations, however, providing conditions so that there is a mutual benefit between future professionals and service professionals, inclusively, stimulating and developing academic/professional mobility, formation and cooperation through national and international networks.

Table 8 provides additional elements related to the Resolution description.

Table 8 – Permanent Education Competence Content

Definition: capability of continually learning both through acquisition of new knowledge and extension of that existing as well as through long term experience.

Important abilities

- Capability of:
- planning and organizing work, according to people's profiles and available resources;
 - researching and studying theories and methods of their area, permanently;
 - identifying scientific improvements of their area, therefore updating their course/class plan;
 - analyzing studied researches and theories, searching for the full comprehension of new knowledge;
 - identifying knowledge and applicability gaps of Veterinary Medicine, forming an interdisciplinary set of knowledge regarding their area;
 - learning with their own and colleagues' professional experience;
 - applying new knowledge to professional activities;
 - participating of national and international exchange networks;
 - teaching and guiding, with scientific and educational foundations, theories and methods regarding Veterinary Medicine;
 - observing, systematizing and relating facts that occurred in society, considering them as source of learning.

Atitudes importantes

- Self-confidence, curiosity, ethics, humility, persistence, resilience, enthusiasm, courage, discipline, initiative, flexibility, confidence and sensitivity.

Behaviors that exemplify the competence:

- to permanently update themselves regarding the field of work;
- to apply at work new knowledge acquired;
- to create and/or develop new ways of proceeding at work;
- to identify and modify undesirable behavior standards;
- to share leanings with colleagues and work teams;
- to organize research systematics in search of new knowledge and solution;
- to participate in study or research groups;
- to support professional cooperation networks.

Source: Adapted from Queiroz (2008).

4.9 Considerations

This Chapter presented the humanistic competence required for the course of Veterinary Medicine. It is important to notice that the descriptive content of these competences has many intersection points, in a way that is possible to foresee that the acquisition or development of a competence impacts the expression of others and vice-versa.

Therefore, we have that, as an example, leadership is a competence supported by communication and decision making competence. Besides that, a good leader needs to, necessarily, have a vision of what he or she wants to achieve Hence it is very important that he or she has a well-developed systemic view – for a Veterinarian, this is consigned in the competence Attention to Health.

Another result of this natural proximity of the humanistic competences contents is that the teaching-learning strategies implemented with the purpose of developing one of them, will be able to provide an environment favorable to the development of the others. Therefore, the proposals presented in this publication, although separated in Chapters 5 to 10 per competence, in order to keep fidelity to how they were elaborated, might work as inspiration for the objectives related to all humanistic competences.

The humanistic competences descriptive content allow to observe, also, that its development contributes to a much more well-succeeded performance as far as technical competences are concerned. That is, the description of humanistic competences makes clear the supplementary aspect of their development for the Veterinarian's specialized professional practice.

In the following chapter, the foundations of the teaching-learning process will be presented, with emphasis on active didactics that, because it is focused on the student as a subject of learning itself, is aligned with the intention of developing humanistic competences and makes a theoretical-conceptual space for the introduction of differentiated and effective teaching-learning strategies (to be seen in Chapter 9) in order to achieve this objective.



5. The teaching-learning process

“

To educate is to grow. To grow is to live. Education is, therefore, life in the authentic meaning of the word.

”

Anísio Teixeira

As it was previously said, the teaching-learning process can be defined as a “sequence of activities by the professor and the students, aiming at the assimilation of knowledge and development of abilities, through which students improve cognitive capabilities (independent thinking, observation, analysis-synthesis and other)” (LIBÂNEO, 1994, p.54). Teaching and learning are, therefore, two facets of the process, which are completed around a content, under the professor’s guidance.

Professor, therefore, drives a series of activities organized with the purpose of providing the student with the means so that learning can take place. The learning action involves conscious and active assimilation of contents and the development of capabilities and abilities, that is, of competences.

5.1 The active didactics

Didactics is one of the subject matters of Pedagogy that studies the teaching-learning process, in order to provide guidelines for professors’ professional activity. And it is in there where the connection between the formation requirement of the **adaptable professional** by undergraduate courses, defined by the Education Guidelines and Basis Law, and teaching practice reality, is made.

For Libâneo (1994), the traditional Didactics, which assigns to teaching the task of mere transmission of knowledge, overloading the student with knowledge memorized without questioning, still prevails in education practice. Teaching is centered in the professor, who exposes and interprets the subject matter. The main mean of transmission of knowledge is the word, the oral exposition. This one being the methodology massively used in undergraduate courses in Veterinary Medicine in Brazil.

Traditional didactics

teaching is centered in the professor, who exposes and interprets the subject matter. The main mean of transmission of knowledge is the word, the oral exposition.

Active Didactics or New School Didactics

teaching is centered in the student, in which the student is the learning subject. Besides oral exposition, carried out through dialogues, other strategies are used in order to benefit the learning construction.

The author claims that the New School Didactics or active Didactics, on the other hand, considers the **student as the learning subject**, with active and investigative behaviors. The professor guides learning situations. In this pedagogical practice:

What professors have to do is to place the student in favorable conditions so that, from their needs and stimulating their interests, they can search by themselves for knowledge and experiences. The idea is that the students learn better what they do by themselves. It is not only about learning by doing, in the sense of manual work, actions of manipulation of objects. It is about placing the students in situations in which their global activity is mobilized and that is manifested in intellectual activity, activity of creation, verbal, written, plastic or other expression. (LIBÂNEO, 1994, p. 65).

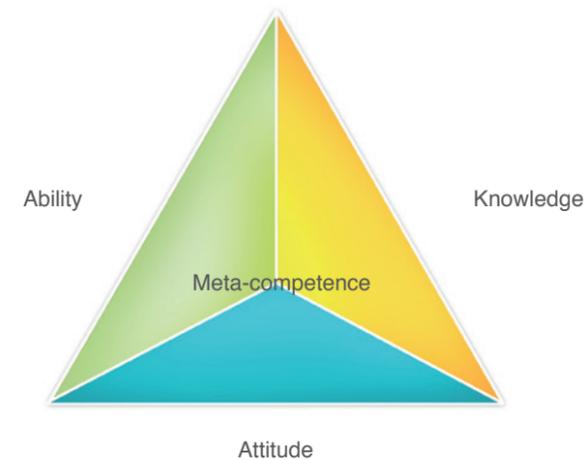
In a way that active Didactics guides the work to be done by the professor favors ways of learning that transcend mere acquisition of knowledge, observing, therefore, the Four Pillars of Education proposed by UNESCO.

For active Didactics, learning-teaching methods, techniques, and strategies that involve cooperative activities, teamwork, projects and experimentation, are elements of great importance, for the learning process is more relevant than teaching.

Teaching consists of an intervention with the purpose of promoting learning. Learning, in turn, is a **process of change in behavior**, whether it is **cognitive, psychomotor or affective**, caused by an experience.

To learn means to acquire competences.

These notions lead us to questions: how to promote this changing process, that is, in which way is it possible to provide learning? How to develop competences? For this present case: **how to develop humanistic competences?**



Active Didactics, due to its features, is more in line with the adaptable professional formation desired by society and determined by law. Therefore, is it much more prone to produce results in the development of humanistic competences that traditional Didactics is. Therefore, the teaching-learning strategies presented in this work will be based in their principles.

Image 6 – Holistic model of competence

Source: Le Deist and Winterton (2005), with adaptations

5.2 Teaching-learning process stages

The teaching-learning process, in order to be effective, comprehends different stages that must, necessarily, be coordinated among themselves. These stages or steps can be divided in:

- I. Planning;
- II. Execution of teaching-learning activities;
- III. Evaluation.

5.2.1 Teaching-learning process planning

The teaching-learning process planning includes:

- I. recognition of educational needs;

- II. identification of the student's characteristics;
- III. setting of learning goals;
- VI. selection of teaching contents;
- V. definition of teaching-learning strategies, as well as their logical concatenation in the subject schedule. The product of this stage is, in general, a teaching plan or subject plan.

Normally, items I and II were already identified in the Institution Pedagogical Project. Item III - teaching-learning goals – refer to the expected results of the work to be carried out by the professor along the subject. They must be traces from the Curricular Guidelines and from the Course pedagogical project. They must express **knowledge, abilities and attitudes** to be achieved regarding the students' abilities development. In most planes this item refers to only technical topics, however, as it was already explained in this document, it is important that there is a total change with the inclusion of humanity aspects.

The contents form the objects to be approached in instruction – systemized knowledge and abilities. They must be directly related to teaching-learning goals. The exposition of contents to students must occur through teaching-learning strategies adequate to the defined goals.

Remember what was previously said: The content that must be taught **does not change!** What is being suggested are **new strategies**, that is, **new ways** of presenting this content to students, in a way that, **at the same time** the content is presented, humanistic competences are developed.

As we previously saw, teaching-learning strategies **are means used by professor to facilitate the learning process**. Several types of means can be used in the condition of teaching-learning strategies: organization of classroom space, differentiated instruction materials, audiovisual resources, technical visits, educational programs for computer and many other, including activities, structured or not, which have the purpose of providing the student with situations of potential learning. These activities are the focus of the effort expended that has generated this publication.

In a way, it is possible to say that the content will determine strategy, while seen as the concrete formative base to achieve the goals. However, when the goal is related to developing abilities (or humanistic competences, as in this case!), strategy may assume a central role. (LIBÂNEO, 1994).

In the teaching plan or subject plan, **the goals related to the development of humanistic competences** must be comprised, as well as other teaching-learning contents and strategies chosen in order to achieve them, in line with the subject syllabus and the Course pedagogical project.

5.2.2 Execution of teaching-learning activities

The activities must be carried out in conformity with the teaching-learning process planning. However, it is necessary to be aware of the dynamism of the process itself, making corrections and adjustments whenever required.

The professor must be aware of the need to make the teaching contents significant and real, benefiting from previous experience brought by the students and valuing their discoveries and participations. Besides that, the professor must stimulate the student's interest for classes and learning goals, aiming at awakening the future professionals to their insertion and social, economic, technological and environmental contribution.

The everyday reality experienced in classrooms is, eminently, that of presenting contents in **lecture** format, with the students, in most cases, having the role of passively watching them, being a method focused on the professor. Therefore, it is necessary to consider that not always professors have the required preparation to conduct their classes in a way that the teaching-learning process is focused on the student, as the active Didactics recommends and bringing to practice the higher education national guidelines. Innovative teaching-learning strategies, as those presented in this publication, require, in many cases, preliminary studies and trainings, not necessarily formal, so that they are properly implemented.

In a first moment, it might appear to professors that they have a lower level of control when they apply teaching-learning strategies different from lecture. This impression might render them apprehensive with relation to the success of implementing new strategies. Actually, it is not that control is lower, but the nature of the control performed by professors is different: it comes from their leadership before the students.

The professors' attitude when applying differentiated strategies must be helpful and solicitous. The professors' leadership pillars are based, mainly, on the applied teaching-learning strategy and content domain, on the attention to students' needs and on the trust that there

is being learning, even if it is not “visible”. (Think well: how is it possible to “see” learning even in a lecture?)

Use the teaching-learning strategies for which you feel prepared. However, dare! At least, dare little by little...

5.2.3 Evaluation

Evaluation consists of continuous verification of goals achievement and activities yield. The evaluation has as purpose to access material data about both students' and professors' performance, aiming and provide feedback to the teaching-learning process.

Nowadays, evaluation conception must surpass its classifying role to undertake the character of formative evaluation, which seeks to know and improve the teaching and learning process. According to Luckesi (2005), in the evaluative process, we do not need to judge; we really need to diagnose, taking into consideration the most adequate and satisfying solutions for deadlocks and difficulties found in the process.

The formative evaluation recommends the student development in face of planned actions, derived from theoretical-methodological assumptions established in the course pedagogical project in order to form the future professional.

In the course of the subject, professors' and students' work results are compared to the proposed goals. The evaluation happens so that it is possible to verify advancements and difficulties and reformulate the professor's work when results are not satisfying.

The students' leaning evaluation must be coherent to the goals set for the subject, focused on the student, as well as with the adopted teaching-learning contents and strategies. Evaluation must follow the teaching-learning process step-by-step (LIBÂNEO, 1994, p. 195). The following image summarizes the teaching-learning process planning process stages.



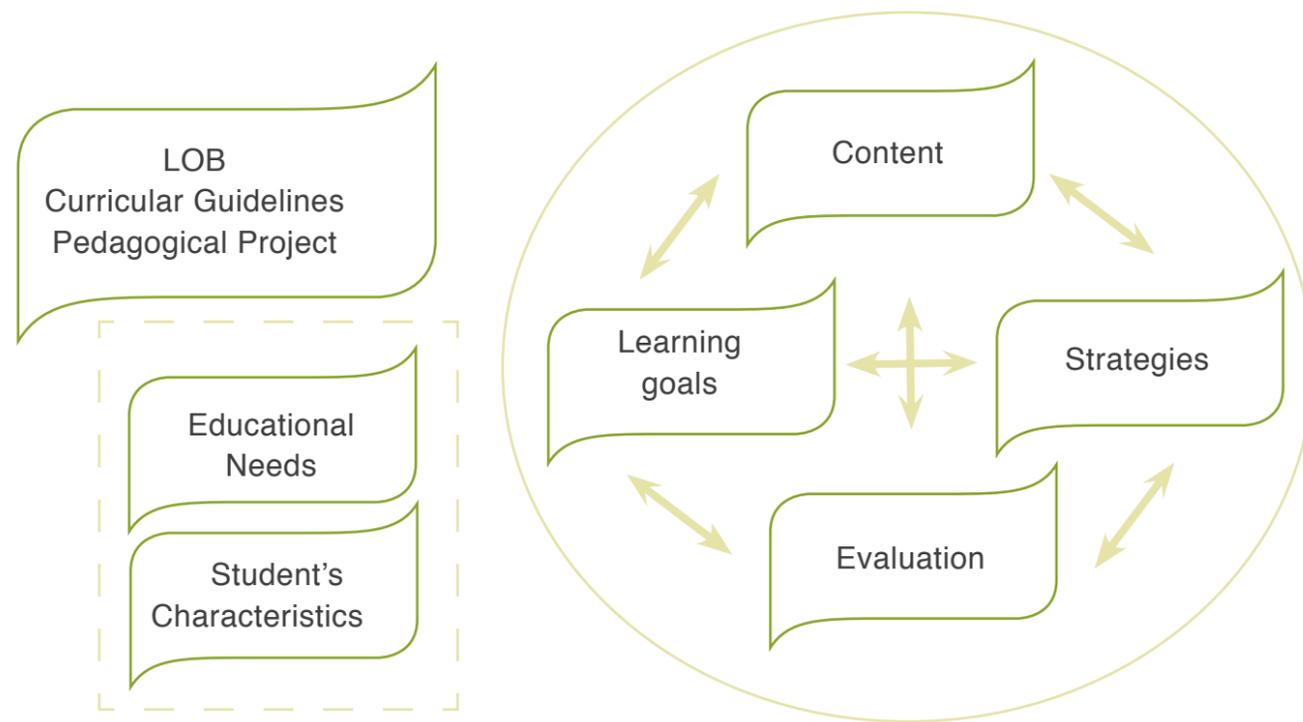


Image 7 – Teaching-learning process stages

The excerpt below, retrieved from the work “Didática”, by José Carlos Libâneo, highlights the evaluation pedagogical-didactics role. In the text, it is explicit that evaluation, as well as the teaching-learning process, must be intrinsically committed to the social function of higher education itself.

When systematically proving the teaching process results, it is highlighted or not that the fulfillment of teaching social purposes, of preparing students to face society’s requirements, of inserting them in the global process of social transformation and of providing cultural means of active participation in several areas of social life. At the same time, it favors an attitude more responsible by the student in relation to study, undertaking it as a social duty. Meeting its didactics roles, evaluation contributes to assimilation and fixing, for the correction of mistakes made allows improvement, extension and deepening of knowledge and abilities (LIBÂNEO, 1994, p. 196-197).

It is essential to reinforce that evaluation cannot be reduced to its control role, in detriment of its educational roles, in a way that the awarding of grades is related only to formal control or a classifying purpose. Evaluation must neither stick to the professor’s verdict about the student’s level of adequacy and conformity in relation to the content transmitted. On the contrary, professor must stimulate learning through evaluation, using adequate conditions and means for this purpose.

An adequate evaluation process includes partial evaluations along the classes. It also includes balance between qualitative and quantitative aspects.

Libâneo (1994) has listed the features of a well-conducted evaluation:

- I. It reflects the goals-contents-strategies unities;
- II. It provides the teaching plan review;
- III. It helps to develop capabilities and abilities;
- VI. It aims at students’ activity;
- V. It is objective;
- VI. It helps in professor’s self-perception; and
- VII. It reflects professor’s values and expectations in relation to students.

When using differentiated teaching-learning strategies for the development of humanistic competences, **evaluation must be in line with the development** goals of these competences.

It is common to find written tests that are not adequate to evaluate, individually, the achievement of these goals!

It is important that professors are prepared to review their evaluative system, setting criteria and methods that stimulate learning and provided useful and adequate elements for the teaching-learning process as a whole.

5.3 Considerations

This Chapter presented, briefly, fundamental aspects of the teaching-learning process, showing how the New School Didactics or active Didactics, in line with the UNESCO's pillars of education and the notion of competences, provides the foundations for a practice in classroom, in which the **student is the center of the process**.

Professors, when emphasizing in teaching-learning process the goals to be achieved by the student, dislocate their axis of perception (and, consequently, of planning, execution and evaluation) to the needs and results expected by the students. This way of seeing education allows us to render the teaching-learning process more effective, as it simultaneously makes way for the introduction of differentiated teaching-learning strategies.

Because they are based on assumptions that reinforce the complexity and multiplicity of how human being learns, as well as they are based also on UNESCO's pillars, these strategies, in turn, favor situation and environment for the development of other competences, besides the technical competences.

In the following chapter, the strategies for the development of humanistic competences will be presented.



6. Teaching-learning strategies for the development of humanistic competences

“

It is not enough to know how to read that Eva saw the grape. It is necessary to understand which position Eva occupies in her social context, who works to produce the grape and who profits from this work.

”

Paulo Freire

6.1 The same content with different results

It is worth noticing that the content to be approached as far as subjects are concerned **does not undergo change** due to the adoption of new teaching-learning strategies. The same content, worked in a different manner by the professor, can produce different learning results.

The strategies presented in this Chapter are regularly used in education environment in several levels, as well as in education, development and training events for young and adults, in countless variations.

They consist of strategies for the development of humanistic competences that, when used properly, are centered in the student's needs and performance and consider the offer of different learning stimuli, in line with UNESCO's pillars, with the active Didactics precepts and with the competences concept.

The major part of the strategies described in this Chapter constituted the **Teaching-Learning Strategies Guidebook (Manual de Estratégias de Ensino-Aprendizagem)**, a support material distributed during the Workshop for Construction of Humanistic Competences Teaching-Learning Strategies. These strategies were selected and adapted from the book "Processos de Ensino na Universidade – Pressupostos para as estratégias de trabalho em aula" (Anastasiou and Alves, 2003). They were presented to the Workshop participants with the purpose of providing facilitating elements for the production of specific strategies for the course of Veterinary Medicine, readily applicable, allowing that the participants did not "start from scratch" in this job.

Therefore, from the teaching-learning strategies provided in the Workshop many suggestions of adaptation and conjugation of strategies appeared, which ended up integrating the production of the proposals comprehended in this document.

In many cases, the participants contributed accepting the validity of implementing strategies for the development of humanistic competences of the course of Veterinary Medicine, through illustrative examples or pointing out special care and details required to the application of strategies. **In other words, given how they were constructed, the major part of the proposals inserted in this document depends on the careful reading of the descriptions comprehended in this Chapter.**

After each strategy described, one example is presented. These examples were retrieved from the Workshop participants' contribution and are, for this exact reason, proposed to be implemented as they were elaborate or with adaptations.

Aiming at facilitating professors' choice, as well as favoring the success when implementing the strategies, three classifications were defined regarding the level of preparation required in terms of the professor's preparation for its implementation. Image 4 shows this categorization:

Level of preparation for teaching strategies application

-  Strategy requires a minimum level of preparation from the professor.
-  Strategy requires a medium level of preparation from the professor.
-  Strategy requires a high level of preparation from the professor.

Image 8 – Level of preparation for the teaching strategy application

It is expected from professors, therefore, maturity to self-evaluating with regards to their preparation and search the means to elevate their readiness for new challenges, choosing the strategies or proposals, adaptable in most cases, in a conscious, founded way.

It is recommended that the implementation of differentiated teaching-learning strategies, as those proposed in this document, can count on the good sense in their dosage during the academic semester, avoiding overloading both professor and student with simultaneously demanding and innovative activities.

6.2 Dialogued Lecture

Professor's preparation level for using this strategy:



For Lopes (1991, p. 42), "an alternative to transforming lecture in teaching technique capable of stimulating the student's critical thinking is giving it a dialogical dimension." In this form of lecture, dialogue between professor and students is used to build a relationship of knowledge and experiences exchange.

The strength of this strategy consists of stimulating **dialogue**, with space for questionings, critics and resolution of doubts. It is indispensable that the group discusses and reflects on what is being approached, so that an integrating synthesis is elaborated by everybody.

When choosing this strategy, remember that, according to studies by the American psychiatrist William Glasser, we learn:

- 10% when we read,
- 20% when we listen,
- 30% when we see,
- 50% when we see and listen,
- 70% when we discuss/debate,
- 80% when we experience and
- 95% when we teach.

If until now you have given lectures. Without debates or dialogue, your student can be part of this statistics.

A simple change can modify the class's learning level. Encourage dialogue and group debate.

Two elements can cause the dialogue between professor and students: **problematization and question**. To problematize means to question situations, facts, phenomena, and ideas, trying to understand the problem itself, its implications and the ways to a solution. Asking has the purpose of starting, through an enquiry, the re-elaboration of knowledge (LOPES, 1991).

Professor contextualizes the topic in order to allow the students to connect information they already have to those that will be presented; presents the unit's study goals and their relationship with the subject or the course.

Dialogued exposition must always search for connections among the participants' experience, the object studied and the whole of the subject or Veterinary Medicine itself.

When exposing the topic, professor can guide questions choosing students randomly, asking them to manifest their ideas, to argue about what they understand as correct concerning the topic, or even to make a conclusion related to the class.

Professor must stimulate the class in order to provide feedback to the manifestations done.

6.2.1 How to evaluate this strategy

Numa aula expositiva dialogada, a aprendizagem dos alunos pode ser avaliada principalmente pela participação dos alunos, de suas descobertas e do conhecimento produzido, reveladas no decorrer de toda aula. Para maiores detalhes, leia o tópico Dicas para avaliar a aprendizagem com a utilização das estratégias apresentadas ao final deste capítulo.

This strategy contributes to generate the proposals:

1, 36, 40, 45 e 51

Proposal No. 1 worked by the group during the Workshop is a good example of dialogued lecture. See below.

Example of using the strategy Dialogued Lecture for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 1

Subject identified by the group:

Comparative Anatomy of Domestic Animals

In a class of comparative anatomy of domestic animals' digestive systems, it is possible to follow this sequence:

- To start the class with a question such as “What do you know about domestic animals' digestive system?”
- To explore students' previous knowledge and experience with the topic;
- To define digestive system organs;
- To define animal classes based on feeding;
- To ask students about the feeding nature of different species;
- To ask what will be necessary about anatomic structures; for the type of food digestion;
- To ask students to make a summary of the most relevant points of the class.

Remember to...

Verify the availability of material and audiovisual resources to do the activities.

6.3 Dramatization

Professor's preparation level for using this strategy:



It consists of a theatrical performance of real life situations, from the focus on a problem or topic. It can have presentation of ideas, concepts and arguments. Dramatization is a way of natural expression through which students are invited to exteriorize observations and feelings using adequate mimics, words and rhythms. It is an essentially creative activity, based on observation.

This strategy aims at giving and receiving information, achieving better comprehension of situation, favoring greater integration in the group and awakening the students' interest through a concrete experience. It must be used in small groups, where its participants try to explore together certain problem or situation. It can be planned or spontaneous.

Basic sequence to be followed:

- I. In the first case, professor chooses a subject and the roles and distributes them among the students, guiding them about how to act, if required.
- II. In the second case, planning can be done entirely by the students, which brings more authenticity to the exercise.
- III. It is possible to form a circle around the scene so that all observe well the presentation;
- VI. Professor informs the available time and ask them to pay attention to material points according to the work's purpose;
- V. In the end, close the activity.

6.3.1 Other ways of implementing the strategy

- Two or more people must perform a real or hypothetical scene, each of them playing a role, however spontaneously. Students can be invited to exchange roles, in order to help in the development of empathy, favoring comprehension of the other's situation;
- The development of techniques can be observed by one or two people, or even by a group of participants, whose mission is to record the occurrences, which will serve as a base for the discussion that must follow the performance. Therefore, observers write down what they consider significant during the performance, with regards to the problem or solution presented and to the dynamics verified in the development of the activity;
- Finished the performance, observers must make their reports, starting, then, the discussion, the fundamental aspects or conclusion can be written on the board.
- It is possible to agree that one observer analyses the performance of each character, the other evaluates the fidelity to situation, and a third on looks for potential contradictions in the scene and another is responsible for making conclusions.

6.3.2 How to evaluate this strategy

Evaluation must use qualitative parameters, such as creativity, leadership, participation, used tools, usage of content, level of depth when approaching contents and other.

Students can be stimulated to evaluate themselves and to contribute to each other's evaluation. It is suggested that grades are assigned for individual and collective performance. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

1, 36, 40, 45 e 51

Proposal No. 2 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 2

Subjects

Immunology, Cytology, Preventive Veterinary Medicine.

This proposal consists of exercising dramatizations of hypersensitivity reactions in animals. The activities must be performed in the following order:

1. Professor gives a theoretical class to students and divides the class, relating each student to a cell or substance involved;
2. From this moment, students create a screenplay, design the costumes (e.g. antigens, antibodies, macrophages, etc);
3. The entire dramatization is filmed and commented so that it is possible to explore the activity afterwards, in classroom.

The consistent mastery of using this strategy is essential so that the professor can guide students.

Remember to...

- verify the availability of room adequate to presentations, preferably a stage;
- verify if the students have the materials required to presenting the play;
- verify the possibility of recording the presentations;
- include the activity in the teaching plan, linking it to learning goals and to content;
- provide, if required, time limits to students' preparation and schedule with presentation dates.

6.4 Case study

Professor's preparation level for using this strategy:



It consists of detailed and objective analysis of a real situation that needs to be investigated, relating data to elements of the theory studied, being highly challenging for the involved. Basic sequence to be followed:

- I. Professor exposes the case to be studied.
- II. The group analyses the case, presenting their point-of-view and the aspects under which the problem can be focused; register for closing. Presents in the great group.
- III. Professor resumes the main points, collectively analyzing the solutions proposed. Analysis of a case:
 - a) Description of the case: aspects and categories that compose the whole of the situation. Professor must indicate the most important categories to be analyzed.
 - b) Prescription of the case: students make prepositions for changing the situation presented.
 - c) Arguing: students justify their propositions before application of theoretical elements they have.

6.4.1 How to evaluate this strategy

Students must be evaluated by criteria such as participation and quality of arguments presented, among other.

Professor might ask for the composition of a brief text that shows assimilation of knowledge along the activity, being this one a complementary evaluation tool.

Students can be stimulated to evaluate themselves in the activity. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

3, 23, 29, 31, 32, 34, 35, 45, 58, 59 e 61

A Proposal No. 3 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 3

Subjects identified by the group

Clinic; Surgery

Students will be divided into subgroups, which will study and discuss a real case, which can be proposed with or without diagnosis. The problematic must be presented and discussed counting on individual arguing/substantiation. The solutions proposed are, then, compared by professor and students.

Remember to...

Choosing the case to be discussed is a factor critical for the strategy success. It is important to be a real case.

- Stimulate the feeling of freedom of opinion and interpretation and students' self-esteem;
- Stimulate argument among the students.

6.5 Environment study

Professor's preparation level for using this strategy:



The Environment Study strategy consist of a direct study on the natural and social context in which the student is inserted, aiming at a determined problematic in an interdisciplinary way. Creating conditions for contact with reality provides the acquisition of knowledge in a direct way, through experience.

The application of the strategy occurs through the following stages:

- I. Planning: students decide with the professor the focus of study, the important aspects to be observed, the instruments to be used for registering the observation and review the literature referring to the focus of study.
- II. Execution of the study as planned: raising the assumptions, making the visit, collecting data, organizing and systematizing, transcribing and analyzing the material collected.
- III. Results presentation: students present the conclusions for the discussion of the great group, according to the goals set for the study.

In order to use the environment study strategy, it is **essential** to be aware of the importance of interdisciplinarity and of teamwork.

6.5.1 How to evaluate this strategy

Students must be evaluated by criteria that include participation and commitment during the activities, as well as by criteria associated to quality of analysis, conclusions and results produced. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

4, 20, 21, 22, 23, 23, 24, 26 e 29

Proposal No. 4 exemplifies this strategy. See below:

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 4

Subject identified by the group

Zoonoses

The planning, execution of the study as planned and presentation of the results cycle, components of the Environment Study strategy, can be used in a context of specific project, aiming at decreasing dog population, through surgery. The purpose of population control is to contribute to public health, avoiding zoonoses.

Remember to...

- Involve the students when elaborating the project;
- Verify the availability of registration room for filling out the cards;
- Verify the conditions so that it is possible to receive the animal in postoperative to remove stitches;
- Make the responsible owners aware about the zoonoses transmitted by pets.

6.6 Text study

Professor's preparation level
for using this strategy:



Through the critical study of a text, ideas of one or more authors are explored.

Moments:

- I. **Text context** – data, type of text, author and author's data...
- II. **Textual analysis** – text preparation: viewing the set, searching for clarifications, vocabulary, facts, quoted authors, scheme.
- III. **Thematic analysis** – author's message comprehension: theme, problem, thesis, line of reasoning, main idea and secondary ideas.

VI. Interpretative analysis/extrapolating the text – raising and discussing problems related to the author’s message.

V. Problematization – interpreting the author’s message: philosophical currents and influences, assumptions, association of ideas, critics.

VI. Synthesis – re-elaboration of message, based on personal contribution.

6.6.1 How to evaluate this strategy

Professor must have the text questions very clear - and registered - which constitute the basic and essential points to be understood and fixed by the students. In relation to them the professor will verify the level of comprehension presented and the necessity of elaborating them better with the students so that the desired level is achieved.

Students must be evaluated with relation to their participation during the activities, as well as the capability/effort expended in the argumentation and adjustment of answers. Portuguese mistakes must be considered, as well as the composition quality. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

5, 31, 35, 40, 44, 58, 60 e 61

Proposal No. 5 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 5

Subjects identified by the group

Epidemiology; Infectious diseases; Zoonoses, Animal Production

Professor must present a text. Students do a first individual text reading in order to allow a view of the set. They enumerate the paragraphs, in order to facilitate identification of ideas presented and register unknown words in order to research/ask for information about their meaning.

Students do a second individual text reading more paused and highlighting key-words that identify the concept approached by the author in each paragraph. Make a scheme presenting: introduction (problem presentation), development (arguments used) and conclusion (author’s reasoning result). This scheme will facilitate the “annotation”, a summary of the text, if required or asked by the professor.

Individually or as a group, students search for text comprehension, through which they answer the following questions:

- what is the subject approached?
- what is the problem or issue raised by the author?
- what is position defended by the author?
- what are the arguments presented to justify this position?
- Individually or as a group, students critic the text, through the following procedures:
 - dialogue with the author analyzing the text critically;
 - identify which author’s arguments are convincing;
 - raise the problems or issues essential for reflection;
 - defend a position with regards to the text (problematization, reflection, etc.).

Be careful with application:

You should not provide the student with an incomplete text, which contributes to impoverish the content, depriving them of a view of the whole or of the access to other views referring to the same theme.

- The text study must follow a proposition of a study theme, and be followed or have indications of complementary research activities.
- Professor must follow up the activity, for guidance or clarification of doubts, however without interfering in the student's work.
- The material presentation of the text must be carefully observed: legibility, cleanliness, attractive layout etc. They are secondary factors when compared to the content, but they interfere in the disposition for reading and reflection.

6.7 Directed study

Professor's preparation level for using this strategy:



It consists of studying under the professor's supervision and guidance, aiming at solving specific difficulties.

This activity requires careful preparation: it is necessary to have clear: what, for what and how the session will happen. These activities can be individual or as a group and consist of:

- individual reading from a script elaborated by the professor;
- resolution of questions and problem situation, from the material studied;
- debate on the theme studied, allowing socialization of knowledge, discussion of solutions, reflection and students' critical positioning in face of reality experienced.

6.7.1 How to evaluate this strategy

The professor will verify the level of comprehension presented and the necessity of elaborating the content better with the students so that the desired level is achieved.

Students must be evaluated with relation to their participation during the activities, as well as the capability/effort expended in the argumentation and adjustment of answers. Portuguese mistakes must be considered, as well as the composition quality. For more details, read the topic **Tips to evaluate learning using the strategies** presented by the end of this chapter.

This strategy contributes to generate the proposals:

6, 36 e 59

Proposal No. 6 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 6

Subjects identified by the group

All

Professor must present a text that may or may not be specially prepared for the activity. Some minutes are given for individual text reading. After that, students can, individually, answer the questions formulated. Then, the group discusses the answers, arguing in order to defend their substantiations.

Another way consists of allowing discussions in subgroups before the answers are individually written by the students, followed by arguing as a group.

Directed study can effectively contribute to fixating the contents. Despite that, for the development of humanistic competences, it is necessary to reinforce the moments of discussion and arguing.

6.8 Forum

Professor's preparation level for using this strategy:



Forum consists of a space, of a kind of “Meeting”, in which all members of the group have the opportunity to participate in a debate on certain theme or problem.

It can be used after a theatrical performance, lecture, movie session, to discuss a chapter of a book that has been read by the group or a legislation, a problem of historical fact, a newspaper article, a technical visit.

After explaining the forum goals, the professor:

- I. delimits total time (e.g. 40 minutes) and partial time of each participant (e.g. 5 minutes);
- II. defines the participants' roles:
 - a) the **coordinator** organizes participation, guides the group and selects contributions given to final synthesis;
 - b) the **synthesis group** takes the notes that will form the summary;
 - c) the **participant audience** – each group member identifies themselves when talking and give their contribution, making considerations and raising questionings.
- III. by the end, a synthesis group' member reports the summary elaborated.

6.8.1 How to evaluate this strategy

Students must be evaluated with relation to their participation during the activities, as well as the capability and/or effort expended in the argumentation. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

7, 23, 38, 45, 51 e 61

Proposal No. 7 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 7

Subjects identified by the group

All

The Forum will be hold after a problematization of presentation of a theme by an expert, chosen by the professor. The professor appoints a coordinator/moderator and a reporter and sets time for each participation. Students must prepare a summary about the topics discussed after the Forum.

Remember to...

- Increase student's perception about the themes;
- Keep the connection between the contents and public health;
- Verify availability of room with movable chairs and materials such as chronometer and flipchart;
- Define those occupying the roles of coordinator, synthesis group and participant audience, following students' performance during the process;
- Define current themes and interesting to the group;
- Previously communicate the subject to be approached, so that the participants can prepare themselves;
- Emphasize to the students the importance of a previous study on the subject to be discussed;
- Provide logistic support and audiovisual resources, if required.
- Define current themes and interesting to the group;
- Previously communicate the subject to be approached;
- Guide the students so that the study beforehand the subject to be discussed.

6.9 List of discussion through computerized systems

Professor's preparation level for using this strategy:



This strategy comprises the organization of a group of people to discuss a theme, through electronic means, or several subgroups with topics about the theme in order to carry out a continuous reflection or substantiated debate, with professor's interventions, which as a member of the group, makes its contributions.

It is important to establish a time limit for developing the theme. Finished the theme, the process can be reactivated from new problems.

It is important to recognize that the list is not supposed to be used as a moment of questions and answers only between students and professor, but among all the participants, as partners in the process.

6.9.1 How to evaluate this strategy

Student's learning can be evaluated by criteria such as participation and quality of comments inserted in the list. Professor can even use complementary means of evaluation, such as asking the students to write a report on their experience of participation in the list, as a summary about the material topics or topics that stimulate their interest. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

8, 28, 43, 58, 60 e 61

Proposal No. 8 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 8

Subjects identified by the group

All

With this technique, the student can research about a basic topic and a discussion about the current characteristic of the theme is generated. As the discussion is textual, the ability of writing, combining words and arguing is required and developed. It is interesting to develop the linguistic competence since the beginning of the course. Besides that, this technique places the student in the internet environment, using the virtual means that is a reality very close to the student.

The professor needs to define the discussion topic and be a Moderator so that the focus around the subject is kept during the entire discussion.

The moderating activity will require extra time from the professor, which needs to be planned.

Remember to...

- Verify the availability of access to internet for the students, as well as of computers, so that the activity does not exclude any student;
- Indicate sources of consultations to the students that aim at deepening the subjects. The professor must have the bibliographic references about the subject, as well as schemes for potential research works.

This strategy has a broad application in the course subjects. For example, it is possible to think in a discussion from anatomy (basic concepts about an organ or system), where a question comprehending anatomy and its clinical and surgical implications is proposed. In this same example, it is also possible to approach aspects related to anatomy modifications and their implications.

6.10 Conceptual map

Professor's preparation level for using this strategy:



Students make a diagram, manually or supported by software, which indicates the relationship between concepts and ideas, in a two-dimensional perspective.

After selecting a set of texts, data, objects or information about a theme, the professor proposes to the students:

- To identify key concepts of the object or text studied;
- To select the concepts in order of importance;
- To include the most important concepts and ideas;
- To establish a relationship between the concepts through the lines and identify these lines with one or more words that show this relationship;
- To identify the concepts and words that must have a meaning or express a proposition;
- To aim at establishing horizontal and crossed relationships, outline them.

It is important to notice that there are several ways of outlining the conceptual map.

By the end of this activity, the professor can guide the students and share the maps collectively, comparing them and complementing them. Students must justify the localization of certain concepts, verbalizing their understanding.

6.10.1 How to evaluate this strategy

Because they present a topics structure, the mental map produced by the students can be used to evaluate learning, verifying the relevance and the depth of unfolding of points, as well as the relation appointed among them. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

9 e 32

Proposal No. 9 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 9

Subject identified by the group

Parasitology

The problematization of the class subject can be obtained through the usage of a newspaper article about contamination by *Dirofilaria immitis*. The students will collectively build a Conceptual Map with theoretical-scientific support about the subject.

The students must draw up, freely, possible strategies to solve the problem. The mental map can also comprise these possibilities of solution.

By the end, students come up with a solution proposal, present this proposal and write a report.

Remember to...

- Keep yourself updated with regards to the themes approached;
- Coordinate the activities considering conduction of time.

6.11 Workshop

Professor's preparation level for using this strategy:



It consists of a students' meeting, aiming at studying and working in order to know or deepen a theme, under the guidance of an expert. It provides the possibility of learning how to do something better, before the application of concepts and knowledge previously acquired.

The professor organizes the group and provides beforehand the environment and teaching material required to the workshop. Organization is essential to the works' success.

It can be to involve, in its development, the most varied activities: individual studies, bibliographic consultation, lectures, discussions, problems solving, practical activities, composition of works, field trips and other.

6.11.1 How to evaluate this strategy

The workshop is a strategy eminently participatory, in which the elaboration of a product (or more than one) is expected. Therefore, students' participation can be evaluated, as well as their individual and collective performance and the work final product. The professor must follow closely the activities so that it is possible to evaluate. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

10, 24, 26, 30, 35, 37, 45, 51, 55, 56 e 59

Proposal No. 10 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 10

Subject identified by the group

Transdisciplinary

This proposal consists of offering specific Workshops as a complementation of thematic axes during professional formation, approaching themes such as negotiation techniques, product sales techniques; personal marketing and strategic planning.

Be careful with application:

This type of activity must count on experts, or on professors that have the required abilities to guide works of this nature.

6.12 Panel

Professor's preparation level for using this strategy:



It consists of the informal discussion on a group of students, appointed by the professor (which already studied the subject being analyzed). The students present opposite point-of-view in the presence of others. It is possible to invite students from other levels, courses or even experts in the area. The professor coordinates the panel process, which will take place as follows:

- I. five to eight people are placed, informally, in semicircle in front of the listeners, or
- II. around a table, to talk about a certain subject;
- III. each person must talk for 2-10 minutes;
- VI. the professor announces the discussion theme and the time designated to each participant;
- V. in the end, the professor makes connections regarding the discussion in order to, subsequently, invite the other participants to make questions to the panelists.

6.12.1 How to evaluate this strategy

Students must be evaluated with relation to their participation during the activities, as well as the capability and/or effort expended in the argumentation. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

11, 45 e 46

Proposal No. 11 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 11

Subject identified by the group

All

A Panel can be a strategy used in the development of the competence Attention to Health, aiming at enriching knowledge about a text or problem-situation, upon the offering of several suggestions and criticisms (e.g. problem found in a cold-storage room). This strategy allows also contributing to increasing confidence of people that are not used to debating in public. It also allows the participants to exercise dialogue and discussion about divergent points-of-view.

The students must be stimulated to participate individually in small groups, which must analyze a text or problem-situation with greater depth, surveying several points-of-view about a text or problem. How it works:

1st Stage:

The participants are distributed in subgroups of 4 to 6 people, for reading and analyzing a text, or studying a problem-situation. Each subgroup analyses an aspect of part of certain text; or all analyze the same text or problem-situation.

2nd Stage:

It gather in open group (large group), where each subgroup presents their ideas, followed by the debate for the large group's conclusions.

- The professor can broaden the student's view and, consequently, the development of the competence Attention to Health, if he or she use the strategy in order to systematically explore the subjects. e.g. When approaching animal husbandry, mainly production, approach also the issue concerning environmental impact, mentioning positive and negative aspects.

- When supporting or discussing opposite ideas, students will have opportunities to develop, also, their capability of arguing and convincing, which contributes to the development of the competence leadership.

- It is important to remember that, in both strategies, students more advanced in the course or experts can be invited to share.

Remember to...

- Organize groups and provide, beforehand, place and material (flipchart, multimedia).

6.13 Portfolio

Professor's preparation level for using this strategy:



Os alunos devem identificar e construir uma coleção de registros e análises das produções mais significativas, ou dos maiores desafios e/ou dificuldade em relação ao objeto de estudo, assim como das formas encontradas para superação.

6.13.1 How to evaluate this strategy

The portfolio produced by the student can be evaluated upon criteria to be previously stipulated by the professor. These criteria can be related to: presentation, quantity and quality of records, relevance and organization of records etc. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

12 e 44

Proposal No. 12 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 12

Note

This proposal regards the strategies Portfolio and Problem Solving.

Subject identified by the group

Animal Production; Environmental Health; Nutrition and Fodder; Animal Welfare; Bioclimatology; Clinic; Preventive Veterinary Medicine

This proposal consists of making a technical visit, followed by a survey and registration of the problems found. These problems must have been previously verified by the professor.

After that, students perform activities such as: risks analysis, data collection, material analysis, legislation study and environmental impact analysis.

From the presentation of the conclusions obtained, students discuss and propose actions.

The students must create a portfolio, a collection of records and of analysis performed, as well as the ways found for overcoming.

Remember to...

- Stimulate the students' questioning capability;
- Prepare the presentation environment so that it is adequate to reflection;
- Verify practical matters regarding the activities and the technical visit;
- Prepare text in line with the theme;
- Verify beforehand the practical hypothesis to be studied.

6.14 Seminar

Professor's preparation level for using this strategy:



It is a space in which a group debates themes or issues, aiming at sowing ideas. Three moments are required:

- I. Preparation** – The professor's role is essential to present the theme and/or select it with the students, as well as to justify its importance, challenge students, present the ways to carry out researches and their several modalities (bibliographic, field or lab);
- II. Development** – It is when the theme discussion must take place. A secretary jots down the problems formulated, as well as solutions found and conclusions presented. The professor is supposed to guide the criticism session by the end of each presentation, making comments about each work and its exposition, organizing an integrating summary of what was presented.
- III. Report** – Students must elaborate a written paper in the format of a summary, and it can be produced individually or as a group.

6.14.1 How to evaluate this strategy

Professors, besides following up their receptivity, can verify the students' performance and development. It is necessary also to inform the positive aspects and points for improvement. Therefore, the professor must read and comment all the papers, as well as their presentation. Self-evaluation must also be stimulated, as well as the evaluation of other students. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

13, 25, 41, 43, 44 e 45

Proposal No. 13 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 13

Subject identified by the group

All

This proposal consists of making a technical visit, followed by a survey and registration of the problems found. These problems must have been previously verified by the professor.

As a teaching-learning strategy, Seminar can, naturally, develop the competence Communication. Choosing the appropriate theme, the competence Attention to Health can also be developed.

Guidance for the instructor:

In a first group session of the class, the instructor proposes the theme referring to the several focus in which it will be studied. Students are divided into subgroups, each one being responsible for one of the theme's aspects. It can also be a different theme for each subgroup. The activities schedule is also proposed and established.

In this moment, remember to be aware of:

- organizing the timetable for the students' papers presentation;
- guiding the students in the research (pointing out sources for bibliographic consultation and/or people/institutions) and in the elaboration of their records for presentation to the group;
- organizing the physical space to favor dialogue among the participants.

Each subgroup, after choosing a coordinator and a secretary, will study its subject, during as many sessions as determined in the schedule, being possible to develop the papers during class or not, according to the professor's goals. This task consists of searching for information, consulting bibliographic and documentary sources, consulting experts, discussing as a group, deeply analyzing data and information, confronting points-of-view until reaching the group's conclusions, writing them.

Each subgroup presents its study to the class, promoting debates that can take place after each presentation and/or by the end, in order to make a global summary about the subject. This stage can be performed in different ways: in the format of a panel, one group after the other etc.

It is possible to have a group responsible for the seminar's dynamics or this role can be divided among different groups. This can positively contribute to work development, as long as the global content is not missed. When the subject does not allow a work division, the professor can be responsible for encouraging the debate, through an open panel, following or not group discussions.

During the seminar preparation and development, the dynamism roles comprehend:

- Indicating a basic text for reading when required;
- Making, beforehand, a script that guides and encourages the survey of problems and matters relevant to the discussion;
- Quickly presenting the theme in the day of the seminar (remember that all already know the subject);
- Providing clarifications, when required;
- Guiding the group debate, if the theme is polemic or very complex (each group must have a reporter);
- Guide the general debate trying always to "tie up" the discussion so that the possibility of a final summary is not missed.

The group must be always aware in order to guarantee and ask for everybody's participation.

Be careful with application:

This is a teaching strategy very used in our courses. However, when the Seminar is not well guided, it tends to be just "a class" given by a group instead of the professor. If the other students remain passive, the expected goals related to the Seminar are completely de-characterized, generating disappointment in relation to its efficiency.

The seminar must not be used often, because in order to achieve the present students' participation it is necessary that they know the proposed subject. Therefore, the seminar must only be used when the topic is sufficiently explored.

The main Seminar's goals refer to deepening, questioning and debating a certain subject.

Remember to...

- Make a class with movable chair available in order to form circles;
- Indicate the bibliography adequate to the activities;
- Provide the audiovisual resources required.

Other suggestions

- The groups composition can be chosen randomly;
- The professor must follow up the bibliographic research;
- The reporter of each presentation can be defined randomly, as well as the presentations order;
- The groups can count on a new opportunity to present the seminar;
- The professor can guide the students with relation to how to make a good presentation, as well as with relation to the expected written paper quality ;
- It is important to inform the student that the Seminar is being used as a teaching learning strategy to develop written and spoken communication.

6.15 Problem solution

Professor's preparation level for using this strategy:



It consists of facing a new situation requiring reflective, critical and creative thinking from data expressed in the problem description

It requires the application of principles, laws that can be or not expressed in mathematical formulas.

Activity dynamics:

- I. Present to the students a certain problem, mobilizing them to search for a solution.
- II. Guide the students when formulating hypothesis and analyzing data.
- III. Execute operations and compare solutions obtained.

VI. From the summary, verify the existence of laws and principles that can guide similar situations.

6.15.1 How to evaluate this strategy

When using the strategy Problems Solving, the professor must evaluate learning both in relation to participation and effort, as well as students' performance when solving issues presented. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

14, 24, 29, 32, 37, 38, 48, 58 e 60

Proposal No. 14 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 14

Subject identified by the group

Transdisciplinary

This proposal consists of presenting a real problem to be solved, whose topic can comprehend issues as the following ones:

- Control and management of notifiable diseases focus;
- Animal euthanasia approach;
- Treatment choice, evaluating cost-benefit;
- Academic guidance for insertion in the market;
- Appraisal (decision on the report composition).

In short, activities with the study of a problem are initiated. Then, the alternatives are defined. The decision will be supported by a research on the costs for solving a problem. Once the decision on what must be done is made, the solution will be implemented, as well as the required disciplinary actions, if that is the case.

It is recommended that the work is carried out with a multidisciplinary team, involving professors and students of several subjects.

Partnerships with public agencies and/or NGOs focused on the area of case study can be formed.

Remember to...

- Reinforce to the students about the importance of supporting or basic bibliography;
- Verify the availability of physical and logistic structure.

It is important that the students have complete knowledge about the problem as whole, in order to make their decision (based on arguments), take and manage the risks of the option selected.

6.16 Brainstorming

Professor's preparation level for using this strategy:



It is a strategy to be collectively applied, with individual participations, performed in written or oral format. Students are invited to express, in a first moment, their ideas with no filter. The analysis of the ideas comes in a second moment. It can be used in the sense of collecting suggestions to solve a problem.

Activity dynamics:

When asked about a problematic, the students must:

- I. Express in words or short sentences the ideas suggested by the issued proposed.
- II. Avoid critical attitude that would cause judgment making and/or exclusion of ideas.

III. Record and organize the spontaneous ideas;

VI. Select them according to criteria to be agreed upon, such as, for example, the possibility of being practiced soon, of being compatible with other ideas and with regards to their short, medium and long term efficiency.

6.16.1 How to evaluate this strategy

Brainstorming is a strategy in which participation, creativity and capability of respecting and valuing the colleagues' opinions are important criteria to be considered, as well as the quality of the final discussion product. As in other strategies, student can be asked to write a report, a summary or other document referring to the activity, in order to be evaluated by this material as well. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

15, 26, 30, 32, 39, 45 e 47

Proposal No. 15 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 15

Subject identified by the group

All

This proposal consists of promoting the discussion of different points-of-view about the "health" theme, with consequences to mental, physical and social health, including different species.

Professor must offer broad themes, related to health, in the format of interviews, newspapers, figures, illustrations, images and/other media formats that approach polemic and/or popular topics. Examples of images or situations:

1) Image of a pregnant woman with a cat laid over her belly and a plate with fruits over a table by her side. This image approaches pregnant women's health with regards to zoonotic diseases, food safety; pet animals' health; the importance of relationship between people X animals in the inter-relationship principle; the importance of a well-informed veterinarian in order to ensure the family's health when working in the clinic.

2) Image of a dog ran over

The image approaches responsible ownership; traumatology and orthopedics; cicatrization physiology; antimicrobials and anti-inflammatory pharmacology, zoonotic diseases.

Ask the student a final product in the format of an scheme (mental map, flowchart etc), allowing the professor to evaluate the class's summary ability.

Remember to...

- Research advertisement material adequate to carrying out the activity.

It is important that the professor feels apt to diversity Attention to Health proposes. The professor can invite other professional to guide the activity, if considered as necessary.

6.17 Problem-Based Learning – PBL

Professor's preparation level
for using this strategy:



The Problem-Based Learning (PBL)⁴ is an approach centered in the student, allowing the students to do researches, integrate theory and practice, and apply knowledge and abilities to develop a viable solution to certain problem.

⁴ Sources: Savery (2006) and www.unifesp.br/centros/cedess/pbl/

It consists of recurring meetings of small groups (up to 12 students) with a professor (tutor or facilitator). The professor aims at facilitating the students' discussion, guiding them when necessary and pointing out useful teaching resources for each situation. The activity emphasis lays on self-directed learning, centered in the student. In general, it is used as a clinical context for the activities.

Different stages are identified:

- I. An initial tutorial session works through students' previous knowledge about the subjected presented; the problems are first identified and listed, and subsequently the learning goals are formulated, based on topics considered as useful for clarifying and solving the problem.
- II. Students work independently, searching for information and elaborating them (self-directed study), before the next tutorial session.
- III. New tutorial session, when information brought by all will be discussed and integrated in the problem-case context.

Stages 2 and 3 can repeat, according to necessity.

6.17.1 How to evaluate this strategy

This strategy requires an effective follow up by the tutor. It can be evaluated by students' oral presentation, reporting their learning, or even by a forum or panel. Follow-up reports can also be introduced, to which professors must formulate clear evaluation criteria. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

16

Proposal No. 16 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 16

Subject identified by the group

Epidemiology, Preventive Veterinary Medicine, Zoonoses; Public Health

This proposal consists of forming small groups disconnected of the subjects in order to use the Problem-Based Learning – PBL. In these groups, tutorial sessions are alternated with self-directed study in order to solve problems found in clinical contexts.

The professor must be apt to work in a differentiated way, not meeting the traditional learning standards, in order to assume the learning facilitator role.

Remember to...

- Stimulate in the students the recognition of the Veterinary Medicine role in health, aiming at prevention, promotion and protection;
- Define the steps or stages, the groups and body activities.

It is possible to make partnerships with City, State and Federal Governments and with private sector in order to perform the activities.

It can result from **Problem-Based Learning**:

- I. Extension
 - a) Folders
 - b) Textbooks
 - c) Field days
 - d) Lecturers
- II. Research
 - a) Essays
- III. Projects

e.g. In the context of Zoonoses subject, it is possible to choose the development of projects aiming at discussing Veterinary Medicine performance in the field of collective health, such as: deforestation situations results in aggression by bat bite (Rabies) and transmission of diseases by vectors (Leishmaniasis).

6.18 Project-based learning

Professor's preparation level for using this strategy:



Project-Based Learning⁵ is similar to Problem-Based Learning (PBL), in which learning activities are organized around the achievement of a common goal (project). Inside an approach based on projects, normally the students are provided with specifications for a desired final product (build a rocket, develop a website etc).

The learning process is more guided to follow the correct procedures. While they work on a project, it is possible that the students find several “problems” that generate teaching-learning opportunities. Professors are more prone to be instructors and coaches (instead of tutors), providing specialized guidance, feedback and suggestions of “better” ways of achieving the final product. Teaching (modelling, scaffolding, questioning etc) is provided according to the student's necessity and inside the project's context.

When compared to PBL, the **Project-Based Learning** tends to decrease the student's role when setting goals and results for the “problem”. When the expected results are clearly defined, then there is less need or incentive for the students to define their own parameters.

6.18.1 How to evaluate this strategy

This strategy required close follow-up by the professor, which must help the students when evaluating the project development in each stage. The project goals achievement is a material parameter; however, it is not the only one. There are other parameters to be considered, such as results quality, cost and time, besides students' learning with the process. Self-evaluation must be stimulated. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter

⁵ Source: Savery (2006)

This strategy contributes to generate the proposals:

17, 52 e 53

Proposal No. 17 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 17

Subject identified by the group

Professionalizing subjects

This proposal consists of elaborating projects from situations presented. Groups will be formed with up to 5 members. A leader for each group must be appointed. Students will be encouraged to make partners in the market, to use the PDCA technique (the Management Cycle: plan, do, check and adjust) and to interact with other professors during the activities.

The Teaching Plan must provide the activities to be carried out, such as visits to properties and project presentation by the end of the semester.

The group's written, oral and self-evaluation criteria must be clear.

Example of strategy application:

Animal Production Subject (swine, poultry and cattle).

Quality improvement project in an Animal Production system (swine farmhouse), divide groups and each one will be responsible for a stage. Diagnosis performance and improvements proposal. The paper will be presented to an examining board. It is important to stimulate entrepreneurship. The project can be implemented in an interdisciplinary way.

Remember to...

- Verify the availability of spaces in line with the activities and audiovisual resources;
- Verify the logistic conditions to make the visits.

6.19 Jury trial

Professor's preparation level for using this strategy:



The judge will be represented by the professor. Two teams will be formed: 1) Defense and 2) Prosecution – to be represented by different groups, during the time set beforehand.

A document comprising the discussion content based on basic and complementary literature must be prepared. The jury will be formed by other group of students, which will observe the teams that will argue. The rest of the students will be part of the audience.

The professor must elaborate a theme, as well as point out the topics to be approached, in the sense of guiding and directing the students towards the focus expected by the subject. The text received from the teams will be corrected and criticized. All themes approached in the Jury Trial will be object of later study, in classroom.

6.19.1 How to evaluate this strategy

Students must be evaluated with relation to their participation during the activities, as well as the capability and/or effort expended in the argumentation. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

18

Proposal No. 18 exemplifies this strategy. See below.

Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 18

Subject identified by the group

Immunology; Infectious and parasitic diseases; Production Systems

Examples of situations:

1. Immunology – to judge which is the most efficient immunity, innate or adaptive, cellular or humoral;
2. Infectious and parasitic diseases – defense and importance of diseases in a determined animal physiologic system;
3. Production Systems – to debate different production systems.

Remember to...

- Verify the availability of physical space adequate to performing the activities, as well as audiovisual resources;
- Verify the availability of witnesses, if required.

6.20 Games

Professor's preparation level for using this strategy:



The game is one of the most important tools in education in general. The game provides an environment in which the students can present spontaneous behaviors.

The game can be defined as a “spontaneous activity, carried out by more than one person, governed by rules that determined who will win. These rules include duration, what is allowed and forbidden, moves’ values and indicators of how to finish the game” (Gramigna, 2007, p.3).

The game must be involving to the point of stimulating students’ participation, taking the risk of getting lost in its goals.

6.20.1 How to evaluate this strategy

In the games, participation, creativity and capability of respecting colleagues are important criteria to be considered, more than right moves or valorization of the winning team. For more details, read the topic **Tips to evaluate learning using the strategies presented** by the end of this chapter.

This strategy contributes to generate the proposals:

19, 33 e 49

Proposal No. 19 exemplifies this strategy. See below. Example of using the strategy for the development of humanistic competences in the Course of Veterinary Medicine.

Proposal 19

Subject identified by the group

All

before the final subject evaluation, students will exercise in the subjects approached through questions and answers to be formulated by them in a game in which there are three groups. Two groups will be opponents, while the third one will work as a question and answer mediator.

The groups will alternate the mediator role.

The game rules will be established by the professor. In this case, the time for elaborating the answer must be stipulated, as well as the score to be got for the right answer, as well as the number of rounds before alternating. The professor can identify the need for establishing more rules, even during the game.

The game, used this way, is also a study tool, providing even a pre-evaluation before the end of the semester.

Remember to...

- Verify the availability of witnesses, if required. Verify the availability of chronometer, board, signs and space in line with the activity;
- Elaborate beforehand the game rules.

6.21 Tips to evaluate learning using the strategies presented

It is important to remember that the teaching-learning strategies presented in this document were selected aiming at the development of humanistic competences.

Therefore, initially, consider that:

- The competences are observed through **behaviors** students show during the activities;
- The acquisition or development of competences can also be observed through “**deliveries**” (or “products”) that students will elaborate as part of due to the strategy application, such as: essays, texts, answers to test questions, conceptual maps, portfolios and others;
- It may sound repetitive, but it is important to remember that the evaluation process must be intrinsically associated to strategies used, for the teaching-learning cycle, which begins with the course pedagogical project and ends with the learning evaluation, must form a coherent, interconnected whole – this means that, in practice, the **behaviors to be developed are the behaviors to be evaluated**;
- The assignment of score percentages in the evaluative process must try to **value practice and/or student’s demonstration of behaviors or expected deliveries**;
- Natural aptitudes and talents must be respected and valued: there are students

that present the expected efforts with little effort. On the other hand, effort must also be valued and encouraged, for it is a demonstration of interest. That is, there must be a balance between valorization of effort and valorization of talent, besides recognizing situations in which both are present;

- Evaluation criteria, among them expected behaviors and delivery characteristics, must be clear for the students, so that they can emphasize their efforts and focus their attention on which is being stimulated and, with that, achieve better results;
- The evaluation process must generate **learning for the students** – it is a feedback related to their performance and, as such, it must provide **clear and specific notes regarding right moves and improvement opportunities** (classroom is a rehearsal, a lab to real life!);
- The evaluation process must generate – it is a feedback related to their performance when planning, preparing, guiding and in the next learning evaluation and, as such, it must clearly provide the right moves and improvement opportunities for next classes;
- Evaluation must be, as far as possible, very objective, that is, built over parameters little subject to questioning - this helps to avoid feelings of injustice that, many times, are a great discouragement to student’s development.
- The evaluation must not be used as a punishment or as an instrument of power, for this is not its essence!
- If the students are afraid upon an evaluative process, their fears can indicate uncertainty in relation to the learning process or to learning itself. This type of situation may deserve you attention!
- The evaluation process can be shared, that is, students can be stimulated to evaluate themselves and to contribute to each other’s evaluation.
 - Even if there is grade awarding for the group’s performance, individual evaluation is recommended.

Having this in mind, we prepared for you **valuable tips** that can facilitate your work when evaluating students’ learning using this differentiated strategies.

1) In experience activities, be aware of the behaviors you expect to get from students. **Make a short list of just 3 or 4 main behaviors**, in order not to lose focus, and **take notes** from your observations regarding the students during the activities. This notes can be taken during the activity itself, or right after it ends. Prepare a small worksheet, if possible, listing horizontally the students' names and vertically the desired behaviors. Add small signals in the worksheet as the behaviors are perceived, so that you have an immediate visual appreciation of how the presentation of behaviors by the class is going.

2) In Chapter 6 of this document, you find the humanistic competences descriptive tables. These tables have suggestions of behaviors that you can use in your list of students' desired behaviors in each activity.

3) **Participation** is, undoubtedly, an important criterion to evaluate, during the class, the students' leaning process. There are several participation indicators, such as comments, questions, facial expressions, laughs, answers to a question made, attempt to formulate a concept, suggestions of examples, among others.

- However, it is necessary to note that these indicator can be present and learning not taking place at ideal levels. In this case, professor needs to evaluate the quality of these interventions.

- It is necessary to consider that the lack of this participation indicators does not denote, necessarily, that the students are not alert or that they are not learning.

- Cellphones and computers used during the activities do not mean, necessarily, lack of participation, since the practice of researching online is very widespread. A "Google" research can exactly indicate an interest awaken with the professor's or some colleague's speech, a desire to know more. Professor must, if possible, anticipate this kind of situation, more and more common in classrooms, and decide, beforehand, if this kind of behavior is appropriate to the activity or not. This decision must be communicated to students, in a substantiated way, before the activity being started.

4) When using qualitative parameters to evaluate the activities, such as creativity, participation, level of depth when approaching the content, quality of arguments presented and others, **try to always be guided by behaviors that can be observed**, according the ones described in tables of Chapter 4. For example, if the chosen activity searches for, besides technical learning acquisition, the development of the humanistic competence **Decision making**, verify Table 4 – **Behaviors that exemplify the competence** (Chapter 4) to make the questions, such as: Which behaviors demonstrate that the student:

- acted in a resilient way in unexpected or inadequate situations?
- searched for information that help decision making?
- developed a contingency plan?
- performed systematic control of achieved results and compared them those estimated?
- elaborated strategies for goals achievement?
- avoided future problems, working on the causes and not the consequences?
- made a systematic and careful analysis about the impact of the decision made?
- identified the adequate timing for decision making, not being precipitated or procrastinating?
- based their conduct on ethical behavior?

They will serve as a basis for your evaluation, for you will be analysis what item (4.4) informs with regards to required abilities and attitudes:

- analyzing threats and opportunities when choosing each alternative;
- leaving with uncertainties;
- running risks;
- deciding on one of the several variables;
- deciding without having all required information;
- noticing the subtlety of human behavior;
- empathy, ethics, flexibility, humility, persistence, resilience, responsibility, safety, sensitivity and timeliness.

Adopt this practice as a clarity exercise, in which you are going to improve more and more with your dedication. The process will also become increasingly easier and will provide you with better precision and agility when conceiving the strategies themselves.

5) **Avoid evaluating students' opinions**. If the opinions are asked for, remember to respect their freedom of thought and the students' self-esteem. In evaluative situations, instead of asking for opinions, use questions such as: "What would you do in this situation? Substantiate your answer."

6) When evaluating composition of texts, **Portuguese mistakes must be pointed out** and, preferably, generate small decrease in score. Evaluate coherence between the paragraphs and the ideas presented as well. Improvement points must be clearly indicated. Think about this as a contribution for the formation of a more capable professional, even if your focus is on the technical knowledge present in the text (obviously this will also be evaluated!).

7) Even in a written paper, it is possible to use observable behaviors as evaluation criteria. Before starting correcting papers or tests, make a list of expected behaviors in each answer. Example: “From the case presented, did the student write at least 3 symptoms possible to be observed in a clinical examination? (3 points) Did the student relate the 3 symptoms to the owner’s report? (3 points) Did the student do the right diagnosis? (3 points). Did the student write correctly the text in the entire answer? (1 point)”



7. Proposals for the development of the competence attention to health

“

It is not enough to teach man a specialty, because he will become a useful machine and not a personality. It is necessary that he acquires a feeling, a practical sense of what it is worth being accomplished, of what is beautiful, of what is morally correct.

”

Albert Einstein

T

his Chapter presents the proposal elaborated to develop the competence Attention to Health, formulated by the Workshop for Construction of Humanistic Competences Teaching-Learning Strategies participants.

It is important to remember that the proposals presented here must be considered with the respective strategies descriptions to which they are related.

Besides that, the proposals are, for the most part, easily adaptable, being able to meet the learning goals related to all these humanistic competences, as well as technical competences.

Proposal 20 – Environment study

Subjects

Animal Nutrition; Public Health; Epidemiology; Infectious Diseases; Parasitic Diseases; Planning and Management in Health; Management and Administration; Diffusion of Technology; Environment Sanitation; Deontology.

Environment study must be carried out inserting a technical visit with multidisciplinary character, trying to comprehend interconnected matters of several subjects.

The technical visit provides the student with the contact with society's needs reality in a non-fragmented manner, allowing the visualization of the whole and providing content interconnection. Through a diagnosis of the situation, of development of planned actions and of problem solving, it allows the student to understand, propose, discuss and develop health prevention, promotion, protection and rehabilitation actions at individual and collective level.

Remember to...

- Indicate required bibliography;
- Verify conditions of visit transportation and logistics;
- Make, before the visit, a survey on the problem;
- Verify the availability of labs for practice classes;
- Make community and students aware about the importance of work to be done for all.

Proposal 21 – Environment study

Subjects

All

The **environment study** may involve the choice of a multidisciplinary theme that shows the importance of didactic activity for the own field where study will be carried out, such as, for example, swine and avian salmonellosis control, responsible ownership of production animals or campaigns in urban areas aiming at collective health.

In this type of study, the student's contact directly with environment will be provided with involvement of population and public health government agencies (of agencies and programs such as Zoonoses Control Center, Department of Health, Family Health Program, Vaccination Program, for example). The interdisciplinary exchange with other professions, favored by this type of study, can be even improved with the invitation of other institutional representatives and professionals to participate in classroom activities or make presentations, lectures and reports.

Remember to...

- Provide the required audiovisual resources in different moments of the activities;
- Plan and provide required logistic support;
- Plan and provide support for production of marketing material.

Proposal 22 – Environment study

Subjects

Parasitology, Sanitation and Environment/Environment Sciences, Veterinary Public Health, Forage Culture – Agrostology, Husbandry Projects, Animal Production – Bovine, Ovine, Caprine, Equine and Ruminant Diseases.

This proposal consists of using the Environment Study in order to extend knowledge and capability of association among several themes.

Through visits to properties, professor exposes a problem and students are invited to evaluate the situation, reflecting on it.

Students must elaborate a problem solving project and present it. Periodical reports on the project must be prepared.

Remember to...

- Establish communication with other professors about the activities carried out;
- Know beforehand the several themes that can be observed during the visit;
- Know the environment that will be observed;
- Follow up the project execution.

Proposal 23 – Environment study, case study or forum

Subjects

All

This proposal consists of promoting, through one of the strategies above, the discussion of current themes, which comprise many Veterinary Medicine subjects, providing the student with a **multidisciplinary perspective**.

ATTENTION!

- Current themes that interest the group must be defined.
- There must be a previous communication about the subject to be approached.
- Students must be guided to study the subject to be approached beforehand.
- The activity must preferably count on the presence of the professors of the subjects involved in the activity.

Remember to...

- Introduce a multidisciplinary perspective;
- Value relevant discussions that approach current themes in all the subjects;
- Increase student's perception about the themes;
- Keep the connection between the contents and public health;
- Verify the availability of resources required to perform the activities.

Proposal 24 – Problems solving, workshop and environment

Subjects

Professionalizing subjects, such as Public Health, Clinics, Surgery and Epidemiology

The three strategies can be used to diagnose a problem presented, as well as allow a diagnosis about the problem context as a whole, such as the presence of scabies in dogs and people from a native village. Actions will be proposed, both healing and preventive. In Problems Solving, it will be possible to make a summary, by the end, in order to verify if it is possible to get generalizations about the problem and its solutions.

Professors from other areas must be invited to participate in the activities, in order to provide the multidisciplinary works organization. The students, which can come from different semesters of the course, must be guided to propose solutions. The activities will provide integration between professors and students in different stages of the course, besides the development of a systemic view related to health.

Proposal 25 – Seminar

Subjects

All

This proposal consists of using the Seminar in order to present a written paper, elaborated by the students, in the format of scientific article of a specific area.

Each student must present the article to the audience, which must make questions. The presentation order must be chosen randomly.

The students must elaborate articles, whose structure will follow the patterns of some periodical of the area, chosen by the professor. The articles will be produced having as reference relevant bibliography.

Remember to...

- Define the theme to be discussed;
- Appoint a moderator for the discussion moment, so that the focus is kept (the moderator can be the professor or a student);
- When appointing a student as moderator, he or she will be responsible for controlling time and coordinating presentations;
- Clearly establish the evaluation criteria, as well as the scores;
- Verify the availability of periodicals for consultation, texts, books etc;
- Verify the availability of audiovisual resources for the presentations.
- Indicate sources of consultations to the students that aim at deepening the subjects. The professor must have the bibliographic references about the subject, as well as schemes for potential research works.

Proposal 26 – Brainstorming, environment study and workshop

Subjects

Public Health, Epidemiology, Sanitation and Environment, Meat and/or Milk Inspection, Preventive Veterinary Medicine

In this proposal, three teaching-learning strategies are integrated to work on the theme Family Health.

From the theme, students will participate of a **brainstorming**, aiming at surveying the existent problems about the theme, as well as possible alternatives of solution for these problems.

In the second moment, students will carry out an **environment study**, in which they will search for relevant information in the field, in legislation, in communication vehicles etc, systematizing the information obtained.

A Workshop, therefore, will be organized, which will be opened to local community. From this Workshop lectures, folders, radio shows etc, must be produced.

Remember to...

- Support the students along the semester in weekly meetings (which can count on the subject hours);
- Evaluate students' performance and participation in the Workshop.

Proposal 27 – Community project

Subjects

Transdisciplinary

This proposal consists of making the students' participation in a **Community Project** mandatory, with minimum hours of participation in volunteer activities in the third sector (for example, 36 hours). These activities must allow the students' involvement with several types of people and situations.

Stages:

- Preparation, with registration in affiliated places;
- Development of volunteer actions;
- Elaboration and handing in the Final Report regarding the activities developed.

Implementation difficulty level: difficult

A practical example: Community Project - PUCPR

All students are obliged to fulfill 36 hours in the subject Community Project (volunteering action). The student does not graduate if he or she does not attend the subject.

The idea is to encourage the student to participate in third sector activities and make him or her a better citizen.

Slogan used: "The PUCPR student receives 2 diplomas: one in competent technician and one in good person."

Proposal 28 – List of Discussion through computerized systems

Subjects

Transdisciplinary

This strategy can be organized as a complementary online activity, without prerequisite, approaching multidisciplinary themes in order to relate academic contents to Health Services practices.

This proposal consists of a way of working on interdisciplinarity in the course, providing the understanding of the whole, from the parts. Computing, very familiar to young people, has great success potential when used as didactic tool.

The activities can be organized differently:

- 1) one group of people to discuss the theme, by electronic means; or
- 2) several subgroups with theme topics to carry out a continuous reflection; or
- 3) a substantiated debate, with professor's interventions, which as a group member, makes contributions.

Finished the theme, the process can be reactivated from new problems.

ATTENTION TO APPLICATION

It is not a moment of questions and answers only between students and professor, but among all the participants, as partners in the process.

It is important to establish a time limit for developing the theme.

Remember to...

- Select beforehand the important themes and/or information;
- Consider computing skills required to participation;
- Consider the availability of required computing resources;
- Make connections of subjects with public health.

8. Proposals for the development of the competence decision making

T

his Chapter presents the proposal elaborated to develop the competence Decision Making, formulated by the **Workshop for Construction of Humanistic Competences Teaching-Learning Strategies participants**.

It is important to remember that the proposals presented here must be considered with the respective strategies descriptions to which they are related.

Besides that, the proposals are, for the most part, easily adaptable, being able to meet the learning goals related to all the humanistic competences, as well as technical competences.

Proposal 29 – Case study, problems solving and environment study

Subjects

Animal production, infectious diseases subjects.

This proposal consists of creating a text and an exercise from it, according the following example, to work as a support for the strategies application mentioned above.

“In a calf corral there were 50 cases of diarrhea in animals that were up to 30 days old. A veterinarian was called in order to try to control the outbreak. The professional’s conduct was to collect material and send it to a lab in order to identify the agent.

Possible Decisions:

- Number of samples
- Type of collection
- Delivery
- Shipping time
- Sample conservation
- Type of exam: Histopathological, Parasitological, Urological.

Proposal 30 – Brainstorming and workshop

Subjects

All

This proposal consists of using, in a sequenced way, Brainstorming and Workshop. The final product is a banner.

In a Brainstorming, students will list the themes of related interest and complementary to the course plan. Groups will be formed, which must choose a theme, implicating in the decision of deepening that theme, studying it.

The Workshop will be done, later, in order to produce a theme presentation banner.

Remember to...

- Provide physical space adequate to the activities;
- Provide guidance, criteria and parameters required to structure the banner.

Proposal 31 – Text study and case study

Subjects

All

This proposal consists of providing the student, in the beginning of the subject, with the choice of themes, in a set of themes suggested by the professor that are not comprehended in the basic niche of the syllabus. These themes will be introduced in the classes through texts, cases or problems with different interpretations.

Students must study the texts, cases or problems, elaborate criticism and decide among the interpretations, substantiating their decision.

Proposal 32 – Case study, brainstorming, problems solving and conceptual map

Subjects

All

Initially, the instructor must present the case to be discussed, encouraging a **brainstorming**. After that, students must produce a **conceptual map**, outlining the options to be followed and the situations generated upon each decision made.

In a schematic manner, the steps to applying the strategy are:

1. Presenting the student a problem or case (such as, for example, related to dermatology, cryptorchidism or pyometra);
2. Providing a brainstorming of ideas related to diagnosis of treatment(s) and actions to be taken;
3. Promoting the discussion and presentation of concepts, hypothesis and possible paths to be followed;
4. Guiding the production of a flowchart (conceptual map) about the options and consequences;
5. Comparing the solutions proposed;
6. Executing decision making, if there is a real problem to be solved, and analyze the results.

In this strategy, it is important that the students have complete knowledge about the problem as whole, in order to make their decision based on arguments, so that they can take and manage the risks of the option selected.

9. Proposals for the development of the competence communication



This Chapter presents the proposals elaborated to develop the competence Communication, formulated by the **Workshop for Construction of Humanistic Competences Teaching-Learning Strategies participants**.

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Proposal 33 – Games

Subjects

Subjects with practical contents, such as Anatomy (anatomical specimen) and Histology (slides projection).

This proposal consists of organizing a Game, after lectures and practical classes, in order to contribute to fixation of the content studied, stimulating students' participation and health competition.

The **Game** is organized by dividing the class in subgroups. A structure or slide is projected on a screen and a question related to the projection is made. With the support of bells or rings, the groups apply for answering the question. The group ringing the bell first can answer the question. If it answers right, it scores. If it answers wrong, the other group scores.

This activity requires the students to review the content before the game.

Remember to...

- Stimulate the students to participate, encouraging them to act;
- Evaluate the students' participation in the Game;
- Indicate sources of consultations to the students that aim at deepening the subjects. The professor must have the bibliographic references about the subject, as well as schemes for potential research works.

Proposal 34 – Case study

Subjects

Anatomy

In this proposal, anatomical specimens are taken as “cases” to be described and analyzed.

Students must be divided into groups. Each group must observe the anatomical specimens and make a description of the structures observed. By the end, the group must perform an oral exposition related to the observations made.

Proposal 35 – Text study, case study and workshop

Subjects

Subjects from the substantiation group

This proposal consists of working on communication, on the deepening of contents and interdisciplinarity, through oral discussions and preparation of a summary, allowing the students to:

- To exercise dialogue and discussion about divergent points-of-view;
- Increase knowledge about a text or problem-situation, upon the survey of several suggestions and criticisms;
- Disinhibit people that are not used to debating as a group.

The professor must divide the class into study groups. Each group will receive a written text reporting a case involving content of several subjects, in an interdisciplinary perspective. Each group will analyze the text, comparing information to reality and to knowledge acquired. After that, a document reflecting their experiences and growths (absorption) in relation to the contents approached in the subject must be prepared.

Multimedia resources can be used by the students during the activities.

Practical attention:

- Objectivity – be sure that all read (and understand) the text completely, even if just one of its aspects or parts will be studied, and avoid that in the debate participants move away from the subject being approached;
- Participation – call the participants’ attention to the fact that all group members must have balanced participation (mainly in small groups);
- Clarity – verify, by the end, if the main ideas were well comprehended by all the participants; motivation --make questions in order to encourage debates; concreteness – guide the content towards practical reality.

Remember to...

- Prepare multidisciplinary texts that bring the basic contents close with pre-professionalizing;
 - Set goals, connected to group dynamics and time factor;
 - Allow that all group members contribute to discussion in the “great group”;
 - Verify the availability of periodicals for consultation, texts, books etc;
- Indicate sources of consultations to the students that aim at deepening the subjects. The professor must have the bibliographic references about the subject, as well as schemes for potential research works.

Proposal 36 – Directed study and dialogued lecture

Subjects

All.

The professor must distribute a text to the students about a determined subject. After reading, the students discuss the text as a group and answer the questions proposed. Subsequently, there is the Dialogued Lecture. This proposal can work for, for example, contextualizing a determined topic from the teaching plan. A scientific article, or parts of it, can be used as a supporting text.

ATTENTION! It is important to try to use a recent and clarifying text about the text, searching for national cases.

In basic subjects, search for applicability in professionalizing subjects.

Remember to...

- Prepare the text to be used beforehand;
- Verify the availability of audiovisual resources required to the class;
- Indicate sources of consultations to the students that aim at deepening the subjects. The professor must have the bibliographic references about the subject, as well as schemes for potential research works.

Proposal 37 – Problems solving and workshop

Subjects

Clinic, surgery, hospital practices

This proposal must be implemented in an environment of veterinary service, as described below, in which the activities integrate several actors and institutional sectors as well as several competences: Communication, Decision Making, as well as the ability of working as a team.

“The Veterinary Medicine student in action” –

Action with the community called “AÇÃO PET”.

Description

- 1 – A theoretical initial introduction (theme of the day) registers the start of the activities, which end with a meeting with students’ participation;
- 2 – Practice comes before theory, in which the student fixates more knowledge of the disease in question;
- 3 – The student’s ability is trained during duty in veterinary hospital, where each team (formed in the first day of class) takes the responsibility of anamnesis, material collection for examination/interpretation, diagnosis and treatments, so that the student prescribes and the professors signs, if it is correct;

4 – The students is evaluated in two theoretical evaluations based only on “clinical cases”, experienced in practice;

5 – The third evaluation happens in the last day of the semester (preferably on a Friday), when the students assume several sectors of responsibility, divided into the themes already formed (Support, Food, Communication/Publication, Medicines and Procedures) and provide service (with the resident veterinarians of the veterinary hospital). At this moment a form is filled out with the animal owner’s data.

Required facilities and resources

- Office (practice class);
- Sports gymnasium;
- Tables, chairs and consumption material (syringes, material for bandages etc);
- Lab support;
- Entertainment area for children;
- Guard (organizing the lines);
- A lot of “willingness” to perform the work.

Proposal 38 – Forum and problems solving

Subjects

All.

This strategy consists of using practical cases that take place in Institution itself in order to generate the material to be studies. After the study, a **Forum** must be hold in order to search for alternatives to solve the problem.

Example: A clinical case of a cat that died due to aldicarb intoxication.

It is important that the professor stimulates interdisciplinarity. In the example provided, themes such as expert opinion descriptive appraisal, concepts of animal welfare, differential diagnosis for public health, providing applicability of legislations and toxicology are themes that can be approached.

Remember to...

- Prepare images and audiovisual resources, such as multimedia projectors and recorders;
- Verify the availability of lab (physical structure and equipment for necropsy)

Proposal 39 – Brainstorming and dramatization

Subjects

Medical Clinic, Pharmacology, Surgical Clinic, Deontology, Ethics.

This proposal consists of implementing an activity of **Writing Prescription**.

The professor presents a descriptive clinical case, with background and diagnosis. The students perform a **Brainstorming** in order to describe the treatment, posology, indications and prescription. Then, students perform a **Dramatization** in which they explain the prescription for two “owners”, one of them working with health care and the other being a layman.

Stages:

- 1 – Present to the students a certain problem, mobilizing them to search for a solution;
- 2 – Guide the students when formulating hypothesis and analyzing data;
- 3 – Execute operations and compare solutions obtained;
- 4 – From the summary, verify the existence of laws and principles that can guide similar situations;
- 5 – Dramatization.

In this proposal, it is possible to work written communication by writing the prescription, oral communication by expressing ideas as a group, both in Brainstorming and Dramatization, and body language, in Dramatization.

Remember to...

Verify the availability of room and material resources required to the activities, such as:

- office (real or made in classroom);
- animal (real or toy);
- lab coats;
- prescription paper pad (official or made).

Proposal 40 – Text study and dialogued lecture

Subjects

All.

A text relevant to the area must be used as content for the **Dialogued Lecture**, which will cover important aspects of the text to stimulate dialogue. The **Text Study** can take place either before or after the **Dialogued Lecture**.

Introduce a text in foreign language.

In basic subjects, use paper from the applied field.

Remember to...

Search for national cases.

Proposal 41 – Seminar

Subjects

All.

In this proposal, the **Seminar** is prepared and presented to the student during class. The professor must define the class theme beforehand, asking the students to bring more correspondent bibliographic materials.

The students will be divided into small groups and the sub-themes, to be developed by the groups, will be chosen (preparation activity with 20 minutes maximum length).

The groups will have to discuss in classroom about the sub-theme. Then, the groups will prepare a brief exposition and present the discussion result.

The professor makes complementary considerations and ends class.

ATTENTION! The professor must allow the entire presentation of each group, intervening after they end.

During the paper preparation, the professor must walk among the groups, clarifying doubts and supporting what is necessary.

Remember to...

Verify the availability of internet access, bibliography, computers and multimedia projector.

Proposal 42 – Informative campaign

Subjects

Public Health

This proposal consists of elaborating an Informative Campaign aimed at determined audience about a specific theme.

Class must be divided into groups of 5-6 students. The groups must create a group identity (a name). The themes will be distributed randomly. The professor must define and clarify the evaluation criteria for the Campaign.

In the Campaign, students will be able to generate pieces for several media (newspapers, informative texts, blog and internet), texts, folders. They will also be able to make interviews (radio and television).

The professor can ask for written material with all the Campaign pieces, before the presentation.

The written material and the presentation must be evaluated.

The activity can be implemented during the semester.

In the subject Public Health, it is possible to approach the discussion of the veterinarian at NASF (Family Help Support Centers). It is suggested the creation of a material that explores a theme, that present sub-themes approached by the veterinarian in family health, such as, for example, a glass cutting board to be used in kitchen with a sticker presenting the symbol referring to the Campaign subject..

Proposal 43 – List of discussion through computerized systems

Subjects

Parasitic Diseases, Pathology, Physiology, Anaesthesiology, Images, Infectious Diseases, Medical Clinic, Reproductio.

The professor must create a list of exercises or discussion about themes, in different groups or even in the same group, through discussion forums online.

There is a stage of group discussion and a stage of discussion summary, both mediated by the professor.

By the end of the process, the groups will prepare a Seminar (with attention to the groups questionings) for the whole class, with evaluation and complementation by the professor.

Attention! The discussions can be concluded with one or more face-to-face classes.

Remember to...

- Chose a theme and not a whole subject/
- Act effectively as a mediator;
- Verify the availability of computers, web, moodle, community, or other tool to unify the group with common interests;
- Guide the groups so that they create a group on “Facebook” or an institutional group.

Proposal 44 – Text study, seminar and portfolio

Subjects

All.

This proposal consists of asking the students to prepare a **Seminar** and a **Portfolio** from a **Text Study**.

Proposal 45 – Case study, brainstorming, dialogued lecture, forum, dramatization, seminar, panel and workshop

Subjects

All.

The professor must inform about the **Case Study** to be carried out. In the following class, the students study the case, with the support of a **Brainstorming**.

The same theme is approached in **Dialogued Lecture** or in a **Forum** organized by the professor. The students must, then, expose the them through **Dramatization, Seminar or Panel**.

The activities must be developed in groups.

Example of idea application:

Subject Small or Large Animals Medical Clinic:

Theme: a clinical case; case discussion; presentation of diagnosis and the most suitable treatment



10. Proposals for the development of the competence leadership

T

his Chapter presents the proposals elaborated to develop the competence Leadership, formulated by the **Workshop for Construction of Humanistic Competences Teaching-Learning Strategies** participants.

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Proposal 46 – Panel

Subjects

All

Graduate students will be invited to make a brief presentation (around 10 minutes) about a determined theme. However, this presentation will have, intentionally, **conceptual mistakes**. The students must point out these mistakes, showing the corrections to be made, questioning and arguing in defense of their ideas.

Remember to...

- Verify the availability of room adequate for the activity;
- Recommend students previous study;
- Invite the graduate students in a timely manner for their preparation;
- Prepare the graduate students for the peculiarities regarding the activity to be developed.

Proposal 47 – Brainstorming

Subjects

All.

The proposal consists of making a **Brainstorming** before teaching a class about determine subject matter.

The instructor must establish a problematic from a case and allow the students to freely express their ideas about the exposed case, being able to appoint a students to take the role of reporter, consolidating the ideas presented by the end.

This strategy provides the development of perception of the importance of individual contributions and of collective solutions production, essential to the leader.

It can be carried out in several subjects, with recommendation to subjects such as Clinic, Surgery and Anatomy.

Remember to...

Verify the availability of required material, such as posters, boards and/or flipchart.

Proposal 48 – Problems solving

Subjects

All.

This proposal consists of dividing the group into subgroups to which themes related to a real problem will be introduced. The students must study the theme and the problem and discuss in order to present problem solving proposals.

ATTENTION! After finishing the activities, the professor will be able to promote students' self-evaluation.

It is important that the groups are randomly divided and that the reporter of each group is randomly chosen.

Proposal 49 – Games

Subjects

Clinical Pathology, Histology, Pathology and Parasitology

The professor proposes a comparison between hematological slide, from problems surveyed in HV. The students, divided into subgroups, will be responsible for collecting material for making the slides.

ATTENTION! It is important that the professor knows the hematology of several species beforehand.

Remember to...

Verify the availability of adequate lab material.

Proposal 50 – Academic week

Subjects

Transdisciplinary

The **Academic Week** consists of a type of event with schedule organized in activities such as short courses and lecturers. A professor, appointed as coordinator, must define the themes and support the students. They must be committed in order to elaborate the schedule and provide the means that will make the **Academic Week** possible.

The students must search sub-themes, lecturers and instructors. They must handle matters related to sponsorship, places for holding the event, dates and agenda, coffee break, treasury etc. They must also try to solve problems during the event.

There might be a rotation, so that, each year, a different professor is responsible for coordinating the event.

Proposal 51 – Dialogued lecture, forum or workshop

Subjects

All.

In this proposal, the professor must, through the Dialogued Lecture, provide theoretical tools required to the organization of a work in subgroups or in pairs, with definite themes. The work to be done must be debated in a Forum or in a Workshop in which the purpose is to defend the result of the group or pair work.



11. Proposals for the development of the competence administration and management

T

his Chapter presents the proposals elaborated to develop the competence Administration and Management, formulated by the **Workshop for Construction of Humanistic Competences Teaching-Learning Strategies** participants.

It is important to remember that the proposals presented here must be considered with the respective strategies descriptions to which they are related.

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Proposal 52 – Project-based learning – business incubator

Subjects

Transdisciplinary.

The strategies involved in this proposal make the student involved with complex matters that require planning, performance, evaluation and disciplinary actions.

Husbandry business, pet shops, cemeteries, pet hotel, labs and farm productive sectors are examples of projects whose elaboration can be proposed as pedagogical activity.

These same projects can be performed in a **Business Incubator** context, which will provide the student with the experience of management concrete experiences,

These applications require an interdisciplinary work inside and outside the course, whether with other courses (e.g. Administration, Agronomy, Engineering, and others), or with entities such as Sebrae.

Remember to...

Keep contact with courses and institutions.

Proposal 53 – Project-based learning

Subjects

All.

This strategy consists of dividing the class into groups, which will have to analyze a problem or even an opportunity, aiming at developing a problem.

The elaboration of a project must have purposes, methods, schedule, budget, application/execution and results analysis, among other requirements, which must be stipulated before the activities performance. The activities provided in the project will be effectively performed during the subject.

An **example** of application of this strategy:

Class theme: Responsible Ownership.

- Analyze in a neighborhood the quantity or wandering dogs or diseases transmitted by dogs to people;
- Set the goal: make people aware of the importance of responsible ownership for decreasing the quantity of wandering dogs and of transmission of diseases;
- Choose the methods: example – educative lecture;
- Observe it there will be decrease in the amount of wandering dogs after delivering the lectures.

Remember to...

- Verify the availability of resources required to the activities, of all types, such as multimedia, paper/pen, database for consultation etc;
- Establish clearly the project structure;
- Ask the students to anticipate how the stages follow-up will be carried out.
- Monitor if the students are indeed carrying out the execution of the project and the follow-up of its stages;
- After making the project, record the lessons learned.

Proposal 54 – Producing a bone room

Subjects

Anatomy

The production of a **Bone Room** in the subject Anatomy, is a proposal in which the students are guided to develop the competence administration and management, which will require a sequencing of activities during the semester, aiming at presenting a final result.

In the beginning of the semester, the class is divided into subgroups and species for each subgroup will be chosen randomly. During the semester, the students will have to separate and prepare the pieces

Remember to...

- Verify the availability of required resources, such as physical space, corpses etc;
- Guide the students with relation to potential places to obtain the pieces, such as zoonoses centers, clinics, cold stores etc.

Proposal 55 – Business incubator and workshop

Subjects

Veterinary Economics and Administration

In this proposal, the students will have to perform all the steps required to create a Junior Company, such as development of an idea in the veterinary field, market survey, development of products, construction of business plan, search for financial resources etc. The students can develop the creation/elaboration activities in **Workshops**.

- The student's projects can be presented in fairs or to an evaluative board.
- The best ideas can be awarded.

It is important that the professor has experience with the subject matter.

Remember to...

- Present to the students the business plan structure;
- Verify the availability and the access to database and business planes models.

Proposal 56 – Academic fair and workshop

Subjects

Transdisciplinary.

An **Academic Fair**, composed by veterinary experience Workshops, can be developed counting on the participation of students of different classes.

For each period a tutor professor will be appointed, that must chose the **Workshop** theme inside the veterinarian's field of work.

The **Academic Fair** can take place in places near the Institution, open to the participation of external audience.

The students must be stimulated to plan the activities, act in an entrepreneur manner, use marketing notions, act creatively to get resources and work as a team.

Remember to...

- Verify the availability of physical space, facilities and equipment;
- Help the students to get sponsorship, if possible;
- Provide the event publication.

Proposal 57 – Academic and professional strategic planning program

Subjects

Transdisciplinary

In the initial phase of the course, from 1st to 5th term, the students will be encouraged to elaborate an **academic planning**, from a curricular and extracurricular matrix. From 6th to 9th period, in the phase of career and/or business planning, the students, through demand diagnosis, market opportunities and academic and personal possibilities, will elaborate a **professional strategic planning**, setting goals and an action plan to achieve them.

The Program must count on managers specially appointed among the faculty members, besides the collaboration of experts in the field of personal strategic planning. Occasional specific demands, such as required knowledge, researches and others, must be met with the support of experts selected by the Program managers.

12. Proposals for the development of the competence permanent education



This Chapter presents the proposals elaborated to develop the competence Permanent Education, formulated by the **Workshop for Construction of Humanistic Competences Teaching-Learning Strategies** participants.

It is important to remember that the proposals presented here must be considered with the respective strategies descriptions to which they are related.

Besides that, the proposals are, for the most part, easily adaptable, being able to meet the learning goals related to all the humanistic competences, as well as technical competences.

Proposal 58 – Study groups, text study, case study, computerized discussion list and problems solving

Subjects

All the subjects from the professionalizing axis, specifically in the subject Scientific Research Methodology.

The idea is to provide the students with experiences that value the collection of information additional to those available, whether in scientific vehicles or using other media.

Professors, graduate students, professionals and experts can be invited to participate in the activities.

It might be important to consider, in some aspects, the financial resources to allow this participation.

Remember to...

- Show your own motivation to students with regards to the discovery of used knowledge;
- Verify the availability of resources required to the chosen strategy;
- Check the access to updated bibliography.

Proposal 59 – Workshop, case study and directed study

Subjects

Transdisciplinary

This proposal consists of the promotion of a **Preceptorship Program**. The course coordination offers a Program, which can be bound to the extension coordination, in which veterinarians, specialized and trained in different Veterinary Medicine areas, contribute to offer a vision of the job market reality, stimulating the student in continued education and favoring the perception of need for multidisciplinary, updated and continuous knowledge.

The program must be supervised by a tutor professor and must stimulate the students to pursue knowledge and not only receive it. This happens through workshops and self-directed studies alternated with practice. The program must be applied to professionalizing subjects and the synthesis of the knowledge acquired must happen in the format of a debate with the tutor, in the absence of the preceptor. The encouragement to continuous study will be the reflection of the multidisciplinary problematic related to the profession routine and it will logically be executed by qualified professionals.

Program Coordinator's Role:

- Contact qualified professionals, working in the market;
- Plan the logistics of the group in the offered areas;
- Perform admittance test or selection process and evaluate resumes;
- Institute the Program rules so that they stimulate learning and rescue the participants' responsibility, as well as recognize the need for continuous study.

Remember to...

- Plan the Program budget;
- Take the measures required to ensure the availability of labs, if required.

Proposal 60 – Text study, problems solving, list of discussion through computerized systems

Subjects

Transdisciplinary

This proposal consists of using and selecting current themes to be worked on in d activities that involve text interpretation and analysis, such as those inserted in **Text Study, Problems Solving, List of Discussion through Computerized Systems and Case Study**.

Study Groups can be formed, counting on the participation of undergraduate and graduate students, using the strategies proposed, encouraging permanent education in the field to be discussed.

The formation of **Study Groups** can provide, as additional results, the practice of transmitting experience and information to students, which can stimulate the habit of educating oneself permanently.

Among the relevant information, events and opportunities must be published, in order to encourage the students' participation in congresses, technical visits and internships, as well as allow the student to transmit his or her experience to the group.

Remember to...

Keep yourself updated and encouraged in relation to your own permanent education.

Proposal 61 – List of discussion through computerized systems, case study, text study and forum

Subjects

All.

In this proposal, students and graduated students will participate in virtual activities, carried out in several formats, such as **List of Discussion through Computerized Systems, Case Study, Text Study and Forum**.

Digital media such as Facebook, blogs, email groups and institutional systems (moodle / student's gateway) will be used in order to make classes, videos and scientific articles available to students.

The professor will be the moderator, the students being able to contribute with postings of relevant materials, doubts, learnings etc.

Specific fields of Veterinary Medicine, many times in need of more attention (such as entrepreneurship and management, for example) will be benefitted with the creation of Study Groups, in which the students will also organize scientific events.

The graduated students will be able to participate in events giving lectures or short courses. They will also be able to receive institution's emails informing about scientific, updating or training events.

ATTENTION! The professor will have to be trained in order to use and create evaluations that will be available in digital media on specific hours and days so that the students answer and, therefore, are evaluated in the subject.

Remember to...

Verify the availability of students' access to digital media.

13. Final considerations

This paper was built over new paradigms. The first of them attributes to higher education the responsibility of forming individuals adaptable to a highly complex and dynamic world, changing constantly. The second paradigm is related to pedagogical trends that insert the students as a learning process subject, which opportunely allows higher education to form citizen able to change social, economic and environmental reality, contributing to world's population life quality improvement.

It was also build under a new language: that of competences, which are not completely assimilated in educational, professional, business and corporate environment.

It is about a new, innovative enterprise, guided by the Federal Council of Veterinary Medicine since the planning of XX SENEMV, and in events before it, which resulted in this offer: a major input to guide professors and Higher Education Institutions in search of satisfying society's desires with regards to the Veterinary formation.

This important support for the professor's effective performance is an innovation! Now all expectations are related to the usage of this offer...

The strategies proposed in this Work, if applied consistently and in line with the other teaching-learning process stages, such as planning and evaluation, will contribute to improve teaching quality, however, not only as far as the development of humanistic competences is concerned. Differentiated strategies such as the ones presented present the attribute of making classes much more interesting and motivating, facilitating the development of veterinary medicine specific competences.

When placing the students' needs in a first plan and visualizing them under the combination of knowledge, abilities and attitudes point-of-view, as comprised in the competence concept, the professor can guide the activities, as well as the classes' "spirit", in order to form an adaptable professional that society needs so much: a Veterinarian ready to work as a transforming agent of a better world!

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