

**Different epistemological approaches  
in Master's programs in Bioethics.  
Analysis and proposal for teaching  
research methodology**

**Distintos acercamientos epistemológicos  
en programas de maestría en bioética.  
Análisis y propuesta para la enseñanza  
de la metodología de investigación**

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<https://doi.org/10.36105/mye.2020v31n3.01>

**Abstract**

The work based on a random compilation of some Master's programs offered in the Spanish language in Spain and Latin America, aims to show the plurality of presentations on Bioethics and, based on these findings, to rethink the concept of *interdisciplinary* for teaching purposes. The problem based on which we started was; what sense should be given to the expression *interdiscipline* when used in teaching in Bioethics? As a theoretical framework, the notion of expanded reason is used, understood as an overcoming of instrumental reason and that serves as a bridge between the experimental and the axiological. Thus, an exploration of the concept was carried out by means of a convenient sample of the term *interdiscipline*, *multidiscipline*, *science* as they appear in various Master's programs in Bioethics. The article is divided into

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Reception: March 20, 2020. Acceptance: May 15, 2020.

three parts: a section where it compares different Spanish and Latin American programs to highlight the epistemological conception of Bioethics that they present. The following section studies the concept of *interdiscipline* based on what has been seen in the programs, combining the categories of *prudence*, *council* and *wisdom*. It closes with the proposals for better teaching in Bioethics teaching. The importance of dialogue between *disciplines* was concluded where the search for ethical meaning predominated in all ethical questions that arise in the classroom.

*Keywords:* epistemology, teaching programs, didactics, interdiscipline, multidiscipline, transdiscipline.

## Introduction

The personal concern that motivated this research was the search for improvements in the teaching and learning process in the Research Methodology subject, in the Master in Bioethics program, at the Center for Advanced Social Research, in Queretaro, Mexico. This concern was didactic and methodological: what use should be given to the expression *interdiscipline*, *multidiscipline* and similar ones when teaching deliberation and research procedures to students in graduate school?

To answer this question, the work is divided into three sections. The first is an investigation from a convenient sample. The information search technique was through a search engine (Google.com). The options located on the web that offer a master's or master's degree in *bioethics* were selected. The first nine options for analysis<sup>1</sup> were considered. The analysis consisted of reviewing purposes, objectives and the study plan. Some of the methodological elements of how bioethics is presented in the programs are described.

In the second section of this work, a conceptual analysis of the *interdisciplinary* is carried out using the categories of *expanded reason*

(Agejas, J., 2014). This contrasts with what is located in the first section. From the thought of these two sections, I extract some ideas that I propose for the teaching of Bioethics in the postgraduate course of the Center for Advanced Social Research of Queretaro and that I consider can be applied to other postgraduate programs in Bioethics.

## **1. Examples of Bioethics programs offered by various institutions**

In this part, some revised Bioethics Postgraduate programs from universities in Spain, Mexico and South America that were randomly selected through an internet search as indicated are covered. The analysis focuses on pointing out how Bioethics is presented from the methodological and epistemological point of view. In the presentation of the programs, in the curricular maps, there are explicit and implicit elements that are indicated.<sup>2</sup> The answers are varied; they give a hint of the *use* given to terms such as *discipline* and the use of bioethics.

### *1.1 Bioethics Research Institute (Monterrey, Mexico)*

The Bioethics Research Institute, located in the state of Nuevo León, Mexico (Bioethics Research Institute, 2019) has an educational program that is presented as analogous to other personalism programs, stating that:

The Institute's Philosophical Foundation is based on the universal declaration of bioethics and human rights. It states ethical-moral integrity and *cultural dialogue* in educational studies and training programs. The Institute carries out high-level studies, training professionals, academics and researchers with *bioethical knowledge* that allow them to make decisions in their professional actions when applying science and technology, by promoting knowledge in life conservation actions and respect for the ecological environment (Institute, 2019).

### *1.2 Valencia Catholic University Saint Vincent Martyr (Valencia, Spain)*

Currently they offer a Master (2018), but in an earlier version of the Master (2011) it was handled by modules and had subjects where some useful elements were found for considering Bioethics teaching:

#### **Module III. Bioethics and communication**

##### Communication

##### III.1 Scientific disclosure

##### III.2 Communication techniques in Bioethics

##### Current society and policy in bioethics

[...]

Professional associations to their members. The strike of the health professional

##### III.2 Bioethics, democracy and politics

[...]

#### **Module IV. C. Bioethics and education**

[...]

##### IV. C. 2 Bioethics as a transversal subject

The contents that refer to the way of transmitting bioethics are highlighted: its transversality or its presence in various *disciplines*. This may imply its dialogical nature and its need to adapt its language and exposure to the different professional groups to which it is addressed and from where it originates. This idea is taken up in the next section of this work.

### *1.3 El Bosque University (Bogotá, Colombia) (2008)*

In the case of the three programs offered (Specialty, Master's and Doctoral Degree), it is described that the Bioethics program:

It is *interdisciplinary* in nature; It is aimed at professionals with an academic degree in different areas: Health (medicine, dentistry, nursing, veterinary medicine, among others), Basic (chemistry, physics, biology,

mathematics), Human and Social (philosophy, theology, sociology, anthropology, economics, psychology, law), Engineering (environmental, agricultural, industrial, electronic and of systems, etc.), Education, Art, among others (El Bosque University, 2008, s.p.).

However, in an earlier version of its web presentation, accessed in 2011, it was stated that, what the program was looking for, was:

To promote in its students an inter-transdisciplinary and *pluralistic dialogue* that enables the formation of research groups that achieve academic progress and favorable exchanges around the decisions and problems that bioethics deals with (El Bosque University, 2011 s.p.).

And in the justification, the *interdisciplinary* character is again pointed out, but the practical nature of dialogue is highlighted as a peculiar element of Bioethics: «through this space for reflection, a *new discourse* and a *new ethical approach* to all these, are suggested issues in a *pluralistic, interdisciplinary*, global and prospective environment» (El Bosque University, 2008).

«New discourse» and «new ethical approach» can be understood as methods of approaching or working on bioethics. The pluralistic aspect is also pointed out where there is a need to adjust the bioethical discourse to the different background and cultural context of the participants. These characteristics, proposed in the second section of this article, can be interpreted with the categories of *extended reason*.

As part of the purpose of the program, it is stated that:

It seeks to foster in its students an *interdisciplinary, transdisciplinary* and *pluralist* dialogue that enables the formation of research groups that achieve academic progress and favorable exchanges around the decisions and problems that bioethics deals with (El Bosque University, s.f.).

What is interesting about this purpose is the assumption of considering Bioethics as an *inter-transdisciplinary* dialogue, which refers us

again to the idea of teaching from different *disciplinary* angles united by the unifying discourse of ethics (Abel, F., Cañón, C., 1993). Likewise, a way of approaching or communicating the themes of Bioethics implies approaching from a perspective of practical rationality or, to put it another way, from a discursive and open rationality (Sada, D., 2014). This element together with the others highlighted below is used for the teaching proposal.

#### *1.4 The CISAV programme (Querétaro, Mexico)*

The Center for Advanced Social Research (CISAV, 2018) points out the generalities of its program. Similar to other programs that I have already mentioned, it is indicated that it usually lasts two years and uses a subject system. On the electronic page, it is stated that Bioethics:

In a time of profound changes in which the need for a *new alliance between science and consciousness* is being experienced, CISAV's Master in Bioethics seeks to offer an *interdisciplinary* educational experience that allows placing the dignity of the human person as a criterion of judgment and principle of action for real decision making. [...]

Bioethics is a *discipline* that is increasingly having an impact on people's lives (CISAV, 2018, s.p.).

Again, an element that arises in other Bioethics programs is reflected: one speaks of *interdisciplinary* experience and insists that it is a *discipline*. I think, this again shows the difficulty of, on the one hand, understanding that Bioethics is an ethical subject and, on the other, its interdisciplinary character, at least in the practical sense of deliberation.

#### *1.5 Other current programs: what approach do they have?*

In a brief way, I point to other programs in which the diverse character of the delimitation emerges again:

Institution	Text referring to the epistemic statute of Bioethics	Reference web page
Ramón Llull University	«Bioethics is a <i>discipline</i> ...»	Master in Bioethics, 2019. <a href="http://www.ibbioetica.org/es/modules/tinycontent/index.php?id=8">http://www.ibbioetica.org/es/modules/tinycontent/index.php?id=8</a>
La Laguna, Las Palmas, Basque Country and Rovira i Virgili	In the indication of the characteristics of the program, it is stated: « <i>Multidisciplinary</i> and open». And in its objective 5, it is stated: «To delve into the theoretical foundations and research in Bioethics and the Bio-law to interested people from <i>multiple disciplines</i> ».	Interuniversity Master in Bioethics and Bio law, s.f. <a href="http://www.ebioetica.es/EBIOETICA/inicio.html">http://www.ebioetica.es/EBIOETICA/inicio.html</a>
Comillas University	The <i>interdisciplinarity</i> of bioethics has meant that the Master has always been aimed at various professionals in medicine, nursing, law, philosophy, theology, psychology, pharmacy, etcetera.  In the <i>Interdisciplinary</i> Seminar, we find a clue: «...students have the opportunity to participate in the <i>Interdisciplinary</i> Bioethics Seminar that the Chair organizes annually around a topic of special interest and timeliness. About fifty top-level specialists in the field of Spanish and Portuguese Bioethics meet for three days on an intensive basis. It is organized into eight conferences that address the topic from different <i>disciplines</i> involved in it (philosophy, psychology, law, medicine, sociology, theology, economics, etc.), which are followed by many other <i>dialogues and debates</i> in which all participants in the Seminar intervene».	University Master's Degree in Bioethics. s.f. <a href="http://www.comillas.edu/es/postgrado/teologia/master-universitario-en-bioetica">http://www.comillas.edu/es/postgrado/teologia/master-universitario-en-bioetica</a>
FUNIBER	The <i>multidisciplinary</i> nature of the program allows different types of professional opportunities.	Master in Bioethics. 2019. <a href="https://www.funiber.org/maestria-en-bioetica">https://www.funiber.org/maestria-en-bioetica</a>

Source. Own elaboration.

## 2. The *interdisciplinary* statute of Bioethics and teaching work: discussion and analysis

In the first section, we saw that different names are used to describe Bioethics: *Interdiscipline*, *transdiscipline*, *multidisciplinary*, *discipline*.

Some common features were found regarding how the terms are used. We can define these common features as openness or dialogue. Bioethics as a promoter of working together with the methodologies of each participating science or discipline: approach or open up to other *disciplines*.

One of the uses or forms of *interdisciplinary* use is its collaborative nature. In this sense, the following observation by Ana Marta González suitably summarizes the position that is sought to be shown in this document (I have underlined what is considered most important to highlight):

Those in favor of constituting Bioethics in an autonomous science, can argue in their favor the undeniable fact that it has generated, in a few decades, a huge and specific reflection that, in addition to requiring the application of ethical principles to a very specific matter. Internally it requires the adoption of a *multidisciplinary perspective* when facing their specific problems; although this position is defensible from a practical point of view... After all, the same *interdisciplinarity* could be seen as a systematic extension of deliberation that must precede any ethically acceptable decision, the acceptability of which, in any case, corresponds to be examined through ethics (González, A., 2001: 305).

Ethical reflection belongs to the common person and at the same time is reciprocally enlightened and illuminating of the *disciplines* studied with it. That is an *interdisciplinary* character understood as a true joint work not only of the same object of study, but in exchange and cooperation (Luengo, E., 2012). I reiterate this idea in This aspect of the way of working bioethics is reflected in the manuals. Thus, for example, in the Sgreccia Manual of Bioethics (2009: 23 *et seq.*) it is stated: «there are those who shape Bioethics [...] a methodology of *interdisciplinary* confrontation [...] as an autonomous *discipline*». The author seems to lean towards the latter: «from all that we have presented the conclusion is drawn that the new *discipline*», and in the following paragraph, he points out: «the need for an *interdisciplinary* approach, *peculiar characteristic* of Bioethics».



From the methodological and teaching point of view of Bioethics, I suggest using the concepts of *prudence*, *council* and *wisdom*. These concepts inspired by the notion of *expanded reason* used by the disciplines participating in this process of finding the answers about the lawfulness of intervention in life would facilitate the search for ethical answers and can serve as strategies for teaching. Ethics and its questions have that possibility of being transversal, as one of the mentioned programs pointed out, due to the moral dimension that all human action implies (Agejas, J., 2014). These concepts can be useful when configuring the dialogue between disciplines and in seeking that ethical response. These terms I propose should be understood as follows:

a) *Prudence*. Admitting that rational response pathways are not unique. Ethics connects cultural dialogue, as one of the programs pointed out: What must be shown is the prudential nature from their own *disciplines*, such as to look previously where one goes through different ways of realization of the good from each participating *discipline*. Prudence is constituted in admitting the direction of the virtuous act «taking into account the complexity of the particular circumstances» (Simon, R., 1987: 349).

b) *Council*. Over-specialization has the risk, on the one hand, of separating ourselves from the overall vision in the solution and exposition of an ethical problem or of leading us to consider the ethical as an expression of the subjective. The *council* is that my ideas of conscience are compatible in community, because there are elements of reality accessible to all that conform it or not. If as a doctor I reflect on the reason for my action, thinking at the same time about the nursing care involved and what the law indicates, I could discover that my own action is incomplete or that technically and in protocol valid, but erroneous in terms of human goods which it protects. This is a way that is suggested that can be understood as an «*inter transdisciplinary* dialogue» that was seen in the programs.

c) *Wisdom*. The criteria of this are *openness to the other with the other one*. Moreover, that openness is to admit that my perspective explains and supplements, although the meaning of the action or situation that I evaluate does not remain in a sum of techno-scientific knowledge, but is to have a different vision that reveals meaning. This search for meaning occurs in a pluralistic vision of the world, as indicated by another of the academic programs. It implies that the meaning is not exhausted in my vision and *discipline*, but requires the vision of others.

These categories can be assistant for listening and teaching one's own arguments and those of others. In other words, due to its practical nature, reality can be better understood or accessed by considering those three principles. It is thus possible to have an open vision without implying that Bioethics is governed by an «epistemological syncretism in which theorems and paradigms will be mixed [...] where such upsets in which [...] the language of Quantum Physics is simply extrapolated to the treatment of cardiovascular diseases, is a *New Age* quackery» (Calderón, D., 2003: 193). The above is compatible with *interdisciplinary* intervention that «respects and assumes the methodology of each one of the knowledge involved» (Calderón, D., 2003: 193).

The categories thus imply reasoning with the recognition of the limit of one's own discipline and the discipline of others, where when collaborating together one can find lawful responses that somehow integrate a complex ethical response but more realistic and closer to human reality. Also recognizing that ethics is a question about the meaning of life, that goes beyond mere biological functioning, which reminds us that rationality, when it asks about the meaning of action, its ethics, speculative reason and practice, have to collaborate to find the ethical reasons for the action.

This idea of interactive experience goes well with teaching resources like those that «problem based learning» pointed out in the next section.

### **3. Teaching proposal how to teach research methodology: a proposal from one subject**

According to what was analyzed, Bioethics, without abandoning the rigor of each *discipline* participating in the process of reflection, maintains a dialogical attitude, which is manifested in several of the programs outlined in section I, as part of ethical practical judgment. In this elaboration process, I suggest the use of the indicated elements of *prudence*, *wisdom* and *council*, complemented with the observation of profesor Pastor Bueno in relation to ethical deliberation:

Moving from contiguity into an integration in a higher rank unit, without both losing their own nature. In this way, not only is avoided the error of wanting to deduce bioethics from scientifically experimental or sociological claims, but also the error of not manipulating the data based on previous philosophical positions. Bioethics needs the sciences in order to develop properly as a science, but at the same time, this does not mean that bioethics is reduced to and derived from, biomedical or social sciences. In the construction of bioethics, the empirical data will be necessary but not sufficient; it is a determining factor in the solution of the problem or conflict studied, but to solve it, it is required that it be integrated into reasoning of an eminently ethical nature (Bueno, P., 2013: 281).

That is to say, always seek deliberation for the human own good<sup>3</sup> and not the strategic or calculated response of the consensus that ends up not being an ethical response, but a *political* solution that, although it is obtained together, is sometimes obtained, in a union of votes without further ado (Pastor, B., 2013).

If you consider as a principle the indispensable nature of dialogue, which is adherence to the truth and trust with the one with whom you dialogue (Llano, C., 1995: 168-195), and the above supplement it with the characteristics of the methodology of ethical reflection and exposition that have been mentioned. Therefore *prudence*, *council* and *wisdom* lead to a true community of dialogue see-

king meaning or, as it was seen when reviewing academic programs, to a true openness to dialogue between *disciplines*.

The characteristics of *interdisciplinarity*, understood as that dialogue between disciplines are compatible with didactic strategies, such as Problem-Based Learning (ABP) (Brunet, J. *et al.*, 2015). The author's experience with the Research Methodology subject was to combine the ABP and the aforementioned categories, through a blended learning tutorial work. This tutorial was applied in such a way that an ethical problem approach, clarification and resolution, and new problems were followed; in short, an epistemic spiral within the sessions themselves so that they reach not only a *knows-understands* but also a *knows-how* (Brunet, J. *et al.*, 2015: 305).

In the last course (2017), the topic of *interdisciplinarity* was studied in the thesis topics themselves and experienced in interdisciplinary resolution. Thus, for example, the class methodology within the framework of the ABP was carried out from small introductions and theoretical classifications; for example, in argumentation in the thesis, the topic of fallacies. After posing ethical problems in each thesis topic presented by the students and moving on to its development with a group/individual/group scheme or, in terms of class development: presentation, general application, individual setting, resolution in general class again and recap. Another way to summarize it: an interaction of personal reflection, contribution, reasoning the contribution, the process of obtaining it, and the teaching and learning cycle is repeated.<sup>4</sup>

This methodology allowed students to work among themselves as professionals, who sought a common answer guided by the question of meaning or ethics. Now, in working with them, not only did the teacher interact as a philosopher but also as a nurse and a gerontologist, in such a way that they discovered that *interdisciplinary* openness is a shared attitude among all the participants.

In this sense, this is another way of avoiding the reductionism of reason, or if you want to name it that way, a *science-based reason*

(Agejas, J., 2014) that usually occurs, sometimes, within the teaching itself or in the process of bioethical deliberation. It is meant a «bioethics» reduced to the paradigm of evidence-based medicine, of lawyers, reduced to a casuistry. For example, when meaning or the search for meaning is abandoned and this *interdisciplinary* approach is posed as if it were only he would seek to find rules of ethical procedure, as if equivalent (by analogy) to rules of procedure of basic science.

Thus, rather than asking about the norm to apply, you should ask yourself about the meaning of the action in a horizon that is not reduced to efficacy and consensus. Thus avoiding that: «bioethics and its relationship with the health professions abandons the interpersonal concern that belongs to it, trying a normative path that solves the dilemmas through a schematic decision process and approaching an algorithm» (Kottow, M., 2015: 17).

An example of this methodological experience by the author of this article was given in a thesis project presented by a student, related to IUD implantation in postpartum patients after a risky pregnancy. It was insisted on questions of the type: what sense or horizon of life is expected when carrying out a hospital policy of implantation *suggested* to patients who have had a difficult experience in pregnancy? And avoided just asking himself: what rule is violated here? Is it legal? The first question is open to all disciplines and I consider that it invites an *interdisciplinary* attitude when posing the human goods involved as a horizon of human meaning.

A second example of another thesis presented and that raised as a problem: is it lawful to have a child and *fill* that lack of impossibility of conceiving it? The reductionist answer remained in the legal field when, for example, lawyers were asked and used to circumscribe the answer to questions of criminal or civil law. The work posing the problem from a meaning question asking the participants to use the concepts seen facilitated the passage to the questions of the ultimate meaning of the action and the courses

of action to follow. It was easier to lead to questions of the type: Is motherhood the recognition of such right a sample of the idea of fullness of development from the one to be born, not limiting itself to the will to have a child? In this way, once again, the invitation to a bioethical answer is open to all *disciplines* without abandoning its own methodology and contribution, asking about the goods that perfect human nature.

#### 4. Conclusions

a) The discovery of the exploration of the different programs in Bioethics has shown the plurality of expressions used to indicate this interrelated character among the disciplines. It shows that, although there is no unanimity in the use of the term *bioethics*, nevertheless, a certain *family air* is discovered by insisting on dialogue between *disciplines* to seek a comprehensive response to the problems of Bioethics.

b) This plurality of terms to refer to the methodology in Bioethics, leads to the discussion about the need indicated in the second section, to have an expanded rationality and to integrate into the questions of the degree works. As it is indicated in the third section, that perspective of question of meaning among all the disciplines that try to answer bioethical questions.

c) The *pluridiscipline*, *multidiscipline*, *interdiscipline* are terms when compared and analyzed show that the participation of specialists from their *discipline*, but with a meaningful horizon, allows to avoid methodological mixtures, but at the same time eliminates the barrier to common participation in the solution. The *interdisciplinary* understood in this way does not cancel the anthropological principles of human dignity, nor the horizon of meaning, but avoids mere intuitionism without scientific foundations, the mere subjective intuition.

d) The differentiation of knowledge united by the common objective of giving an ethical answer to the problems of human life is compatible with *differentiated instruction*, which means adjusting teaching to the individual or prudential context of the student. In this way, the examples of methodology must be given from different disciplines, even the same subject must be worked with the students from their *discipline* compared to the others. Thus, *differentiated instruction* also implies seeing an argument or a justifying path of a subject from the *disciplines*, with its methodology and the common root that rationality does not end in any, but helps to find the meaning of the ethical response.

## Bibliographic notes

<sup>1</sup> At the time of doing the research in the course of 2018-2019.

<sup>2</sup> Those elements have been underlined in the various citations of the cited documents.

<sup>3</sup> This supposes a basic anthropology where there is a human nature accessible to human reason. In addition, being able to recognize in that nature, gives us guidelines about human assets. This is beyond the purpose of the article.

<sup>4</sup> The seminar sessions are divided in two-hour session on Friday night and five-hour sessions on Saturday until the minimum number of contact hours is completed. Additionally, there are virtual follow-up sessions on the indicated platform.

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