ABSTRACT: The variant of "Ph.D." (Philosophiae Doctor), called Professional Doctorate, was established as a notion, with genesis in the academic locus, as an asynchronous response of the university, facing a wide spectrum of challenges and criticisms raised by a society, increasingly permeated by needs involving technical knowledge and specialized scientific knowledge, as well as increasingly robust professional knowledge and skills, in order to respond to the corresponding challenges for a given professional field. In this sense, this paper discusses an evolutionary process on the notion of Professional Doctorate, through a necessary examination of professional knowledge, which is sometimes pragmatic and that, in some way, requires certain paradigms, aiming at its recognition by the academy. Then, with the support of the assumptions of Professional Didactics, it presents some implications that allow the establishment of a validation protocol for knowledge originated in products.


RESUMO: A variante do “Ph.D.” (Philosophiae Doctor), denominada de Doutorado Profissional, se estabeleceu como noção e gênese no locus acadêmico em resposta assíncrona da Universidade diante de um amplo espectro de desafios e críticas levantadas por uma sociedade cada vez mais permeada por necessidades envolvendo conhecimentos técnicos e científicos especializados, bem como conhecimentos e habilidades profissionais cada vez mais robustas, no sentido de responder aos desafios correspondentes para determinado campo profissional. Nesse sentido, o presente trabalho discute um processo evolutivo sobre a noção de Doutorado Profissional, mediante um exame necessário dos conhecimentos profissionais, por vezes pragmáticos e que, de alguma forma, requerem determinados paradigmas, visando seu reconhecimento pela academia. Em seguida, com o amparo dos pressupostos da Didática Profissional, apresenta algumas implicações que permitem estabelecer um protocolo de validação de conhecimentos originados em Produtos Educativos.

RESUMEN: La variante de "Ph.D." (Philosophiae Doctor), denominada Doctorado Profesional, nace como una noción, con génesis en el locus académico, como una respuesta asincrónica de la universidad, ante un amplio espectro de desafíos y críticas planteadas por una sociedad, cada vez más permeada por necesidades que involucran conocimientos técnicos. y conocimientos científicos especializados, así como conocimientos y habilidades profesionales cada vez más robustos, para dar respuesta a los retos correspondientes a un determinado campo profesional. En este sentido, este artículo discute un proceso evolutivo sobre la noción de Doctorado Profesional, a través de un necesario examen del conocimiento profesional, que en ocasiones es pragmático y que, de alguna manera, requiere de ciertos paradigmas, apuntando a su reconocimiento por parte de la academia. Luego, con el apoyo de los supuestos de la Didáctica Profesional, presenta algunas implicaciones que permiten el establecimiento de un protocolo de validación de conocimientos originados en productos.


Introduction

Within the framework of the History of Universities (COBBAN, 2001; COMPAYRÉ, 1902; MOORE, 2019; RASHDALL, 1936; RÜEGG, 2004; WENER, 2013) we can see that the notion of Ph.D. (Philosophiae Doctor) has accumulated an emblematic tradition in historical - evolutionary and social context, insofar as the University itself has undergone changes and meanings, as a natural consequence of the demands of a country's local culture, of the time considered and, above all, of the needs and challenges imposed by society (RÜEGG, 2004). Moore (2019), for example, explains certain influences of the ancient medieval schools in the formation that, hodiernly, we consider as the third cycle, by pointing out the influence still present of the notion of Ph.D. (Philosophiae Doctor), according to a modern and, also, quite hegemonic bias of University, by observing that:

Medieval treatises in the sciences were routinely written by professors of theology, who were continuing the scientific interests they had developed while studying natural philosophy. The continuing influence of these three philosophical categories can still be seen today in the degree of Doctor of Philosophy - a degree routinely awarded to people in almost all disciplines. [...] a doctorate in theology, law, or medicine, would qualify them, at least in theory, to teach their subject at any university - and the Ph. (MOORE, 2019, p. 23).
More recently, through the explanations of Lee et al. (2000), we can see that over the centuries, the meaning of the notion of Ph.D., as a configuration of the highest degree awarded by the Universities, faced the transition from a greater emphasis on teaching and, according to the molds of the modern University, to a process that made preponderant the interest for the importance of research, supported by a bias not always applied, as we can see below.

The acquisition of a PhD has been, at least since the end of World War II, the university's license for independent, discipline-based research. The PhD has become so naturalized and ingrained in the history of the university and its modes of knowledge production that it is easy to forget how recent it has become. In light of the recent rapid change and debate in higher education, however, it is not surprising that the PhD and research training more generally are under intense scrutiny (LEE et al., 2000, p. 118).

After a few centuries, particularly in many countries of Anglo-Saxon culture and other European countries, we can see that a bias towards expansion or modification of the notion of Ph. Thus, there was the emergence of what some authors (GREEN; POWELL, 2005; KEHM, 2005, 2007; PARK, 2005) call variants of the traditional academic doctorate and, specifically, the Professional Doctorate presents itself as a variant, in an extremely recent way and with little known repercussion in Brazil. Such fact distinguishes an accumulated experience that we have found in other countries, unlike the first courses in this new modality that, here in Brazil, were guided by the guidelines of the CAPES's New Course Proposal Presentation Manual (APCN in the Portuguese acronym) of September 20, 2017. In this context, Curi et al. (2021) present an interest or important indicators that should be incorporated into the training profile of a doctoral degree holder, in a professional modality, when they note that:

Therefore, it is aimed that the graduate of a PD of the Teaching area should have, at the end of his course, the competence for critical evaluation and intervention in professional practice with a view to problem solving, besides having developed skills for project development and fundraising compatible with the title of doctor (CURI et al., 2021, p. 220).

We notice in the previous excerpt, recurrently, the use of the term "competence" that, in terms of better subsequent understanding, we will call "professional competence" and/or "academic competence". Moreover, we can observe in the considerations of Curi et al. (2021) that the binomial professional competence-problem solving, in the same way, acquires a distinguished and expected meaning to the Professional Doctorate graduate. In turn, when we resort to the thought of Pastré (2002), we can see that the notion of "professional competence"
is viscerally evidenced in a modern society and, to some extent, Universities need to respond to such indicators and incessant demands. In these terms, Pastré (2001) explains and produces a meaning of the term with roots in the Piagetian thought, by indicating that:

[...] is that the problem of competences has become and is becoming more and more an important issue of our time and our society and that this is expressed, in particular, in debates of a social type, by the fact that we are in the process of changing from a system of qualification to what can be called a system of competences. My second conviction is that if we want this problem of competences to occupy the place that it should occupy, we must not first of all reduce the issue to the qualification / competences debate, that is, to a problem of social recognition of competences, but we must also think about the development of competences, that is, have a pedagogical vision (PASTRÉ, 2001, p. 1).

Given the previous arguments, we propose the following problem: How does the training provided in a Professional Doctorate need to consider the mechanisms of learning on and from work? What factors or elements need a better understanding of this new variant and what can we expect from a Professional Doctorate in the future?

In order to answer, at least provisionally, the previous question, we indicate the following objectives: (i) to identify historical and evolutionary aspects around the notion of Ph.D. (Philosophiae Doctor); (ii) to describe the current Brazilian scenario concerning professional master's degrees and professional doctorates and certain imposed difficulties; (iii) to apply certain notions originated from the French branch of Professional Didactics to the context of the professional career - academic, competence and training.

In the subsequent section, in order to answer the aspects indicated in item (i), we will highlight an evolutionary itinerary on the notion of Ph.D. (Philosophiae Doctor) up to the present day. Then, we will describe some elements that should help the understanding of the current formative practices developed at the professional master's level and, more recently, at the professional doctoral level, with the purpose of answering item (ii).

Some aspects about the history of universities and the notion of Ph.D. (Philosophiae Doctor)

Before we delve into some further discussion about the notion of Professional Doctorate, it is essential to understand some invariant traces or characteristic features that we can perceive in the past, when we examine the component of the History of Universities (COMPAYRÉ, 1902; MOORE, 2019; RÜEGG, 2004; WENER, 2013), in order to understand
an updated scenario of the academic locus. In these terms, the funding of in-depth and specialized studies has always occurred according to an accommodation of societal interest and demands. To exemplify, it is enough to consider one of the historical settings considered as the "cradle" of an ancient medieval yet European design and culture of University. The problems and tensions with the financing of specialized studies can be seen, for example,

\[\text{[...]}\text{in the 17th century the academies did not suffer as much as the universities from the general reduction in available public resources, which were almost exclusively used for building churches and palaces and for entertainment purposes (PEPE, 2006, p. 144).}\]

A little further on, the Italian researcher explains about the phenomenon of social attraction and investment in Universities:

\[\text{Italy is home to many of the oldest universities in Europe, beginning with the founding of the University of Bologna in the 11th century. Initially, professors were paid by the students, but over time public contributions were provided by Renaissance communes and rulers. Italian universities attracted famous students and professors from all over Europe (PEPE, 2006, p. 143).}\]

With the flourishing and its dissemination to other European countries we can see the configuration of a class of individuals with an extremely important role. In these terms, teachers acquired an increasingly erudite education, with repercussions for their social distinction and other rights that reflected in prestige (social and academic) and the acquisition of titles granted to, and distinguished by, holders of the title of doctor, whose English word "doctor" comes from the Latin "doctus", which involves the past participle of "docere" and "docerem" meaning, respectively, to teach (toteach) and professor. In Italy, for example, the title was already granted in 1219.

Thus, according to modern terminology, the "Ph.D." (Philosophiae Doctor) carries a whole meaning of the centuries-old prestige exercised by the traditional field of Philosophy and the Arts, as an area of knowledge that used to challenge its speakers to the field of systematic inquiry and vigorous scientific debate. To the ancient doctors of the Universities, according to the medieval style, it is up to them to understand the meaning of the Latin expression "licentiadocendiubique", as we deduce from the following considerations of the historian Moore (2019).

The development of universities tended to follow the patterns established at the end of the 13th century. At that time, universities had systems of oral examinations that allowed the student to obtain a certificate or diploma which certified that he was qualified to teach liberal arts or one of the
advanced disciplines. Holders of the license to teach anywhere in Christendom (*licentiatdocendiubique*) could be called masters or doctors, although the doctorate came to be required for teaching in undergraduate colleges (MOORE, 2019, p. 30).

Still on the academic culture that originated in Italy, we urge an evolutionary and not static understanding around a broad spectrum of social relations around the interest for "teaching" and, differently as we identify today, not so much for research and the production of new knowledge. For example, in the Italian Universities of the seventeenth century, a particular set of professions (of jurists, physicians and theologians) acquired their greatest prestige and benefit. In this context, according to the academic culture originated in Italy, the environment of the "Universities" and the "academies" was distinguished. Pepe (2006) emphasizes and differentiates the behaviors and habits developed in the "Universities" and in the "academies".

Thus, throughout the 16th century in Italy it would be wrong to contrast the universities and the academies. They were in some ways complementary, and the university towns were animated by the same people. University education was taught in Latin, and served to train jurists, physicians and theologians. Lectures in the academies, almost always in Italian, were less formal and, at first, aimed at increasing knowledge and enjoying communication among scholars. This freedom within the academies also had its negative side. [...] In the universities of the 17th century, Italy ceased to attract distinguished professors for lack of adequate salaries, while political and religious divisions considerably reduced the flow of foreign students (PEPE, 2006, p. 143).

Also in the 17th century, Italy lost its earlier hegemony in literary and scientific culture, lagging behind at least 20-30 years in comparison with other European countries. The Italian nobility, which did not require university accreditation for the legal and medical professions, continued to abandon the Universities, whose attendance was restricted to those who wished to enter the professional classes of the cities, largely the children of lawyers, physicians, apothecaries, and some men of letters. Pepe (2006) points out a recurrent criticism of Universities, mentioning the case of the University of Bologna:

Anton Felice Marsili believed that the creation of the academies serves to reform the university, in which the number of faculty members has come to exceed that of the students enrolled. He recognized three main defects in the University of Bologna: 1. The failure to meet attendance requirements as a condition for receiving a degree. 2. automatic confirmation of temporary professors (in practice, an annual appointment became permanent). 3. seniority of enrollment in doctoral schools as the sole criterion for priority in appointments to faculty positions (PEPE, 2006, p. 145).
The institutional paralysis into which the University of Bologna gradually fell in the seventeenth century and the unsuccessful attempts at reform reflect this situation, which was not limited to Italy. An important episode in the relations between universities and academies in the seventeenth century "can be seen in Bologna, when Anton Felice Marsili proposed to found an ecclesiastical academy in 1686 and another of experimental Philosophy" (PEPE, 2006, p. 145). To exemplify the case of one of the most socially valued medieval professions, we recall that, "to situate historically the development of medical education during the Renaissance, we must remember that, at that time, Medicine was the only type of scientific occupation that had become professionalized" (PINERO, 2006, p. 65). Other qualifications began to be regulated in the 12th century and the 13th century and also the education to be received by those wishing to qualify as physicians. Pinero (2006) explains an itinerary of education in the third cycle of Medicine, when describing the nature of a thesis.

This was followed by an average of 3 or 4 years in the medical faculty culminating in the bachelor of medicine degree, which was normally required to be a practicing physician. However, to obtain the degree of licentiate or doctor, the only requirement was the defense of a thesis on a certain subject. The didactic method was scholastic, based on the "lectio" that consisted of texts from classical authorities being read and interpreted, and any difficult or obscure passages that generated problems ("quaestiones") were then discussed ("disputatio") (PINERO, 2006, p. 65).

We deduce from the considerations of Pinero (2006) that the title of doctor was awarded to an individual with recognized teaching ability and distinguished in-depth knowledge in certain classical texts, depending on the most evidenced and valued areas, from a social point of view. In the medieval period, not by chance, the great influence of Philosophy and systematic debate determined its influence and a residual mark until the present day, when we examine the modern title or label called "Ph.D." (Philosophiae Doctor). Alemu (2018) comments, for example, on the prominent role of Universities in the Middle Ages and their broad cultural influence.

Universities derive great prestige from their history, where they have secured some kind of administrative autonomy. Universities, in the medieval period, were one of the most privileged and prestigious institutions for scholarly and academic development, thought and culture. By constituting, in the same place, diversified academics, universities were and still are agents of growth of a knowledge that has the power to change the world (ALEMU, 2018, p. 211).

We deduce from the considerations of Alemu (2018) and other authors, that Universities came to represent an environment aimed at the development of thought and
culture. However, when we confront the "research" developed in the ancient medieval schools and the modern research developed nowadays, we can understand an evolutionary process and a change of the paradigms valued in previous centuries. In these terms, MacIntyre (2009) points out that modern university research has been remarkably successful in at least three ways. In the following excerpt the author points out a first reason.

The first is - not surprisingly - in research: in Topology and Number Theory, in Particle Physics and Cosmology, in Biochemistry and Neurophysiology, in Archaeology and History, and in many other areas - the list of discoveries and advances in almost any year is extraordinary. Success in research is the effect of the successful production of researchers, narrowly and intensely focused inquirers to solve well-defined problems, based on an in-depth knowledge of their particular limited area of investigation. The directions taken by research, however, are usually dictated not by researchers but by those who provide their funding - and what is funded depends on a variety of intellectual, economic, and political interests (MACINTYRE, 2009, p. 173).

A second success of the research university is not independent of the first. "Research universities, through their various graduate enterprises, provide the specialized and professionalized human resources and skills needed in an advanced capitalist society" (MACINTYRE, 2009, p. 173), not only specialized and professionalized research scientists, but also the doctors, the economists, the lawyers, MBAs, engineers, and specialists in public relations and advertising.

A little further on, MacIntyre (2009) indicates a second reason, viscerally conditioned by the complexity of social relations and demanding the University. A profusion and specialty of emerging disciplines, whether constituted by autonomous itineraries or not, confer an increasingly evolved stage of human thought.

Undergraduate education has now largely become a prologue to specialization and professionalization, and the prestige in providing undergraduate education is mostly tied to those institutions that prepare their students most effectively for admission to prestigious graduate programs. Thus, the curriculum has become increasingly composed of a variety of disciplines and sub-disciplines, each exercised and taught relatively independently of all the others, and the achievements within each consist in forming the mind of a dedicated specialist (MACINTYRE, 2009, p. 173).

MacIntyre (2009) indicates, finally, a third aspect that, through the traces of the past, we can understand a current scenario that involves and demands, on the one hand, research funding and, on the other hand, unequal access for certain social classes that reproduces, in certain aspects, such as desimetrics and inequalities to the access of scientific knowledge of strategic level and high intellectual level for a country.
The third aspect in which research universities are remarkably successful is not independent of the first two. These universities have become increasingly wealthy and richer and, at the same time, increasingly expensive. They have become richer because they attract massive funds and endowments from governments, corporations, and individuals because of their place in the overall economic order and in the lives of students committed to acquiring those qualities and qualifications most likely to make them exceptionally successful. They have become more expensive because they charge what their market can bear. Research universities in the early 21st century are wonderfully successful business corporations subsidized by tax breaks and exhibiting all the acquisitive ambitions of such corporations (MACINTYRE, 2009, p. 174).

Finally, through the viewpoint of MacIntyre (2009) and other authors, we gain an understanding about the responses of the University, in the face of the interests of a society and the most important factors for Economics in a given historical-social context and the professionalization character of the career. Therefore, it would be a naive perception to believe that academic paradigms and interests in the highest academic research are devoid of economic interests and, depending on the branch of research or the nature and social position of the future holders of a doctoral degree.

In a special way, when we examine the training paradigms in the educational field and, why not mention it, teacher training, under a necessary prism of continuous training and investments supported by medium and long term planning, we can identify certain phenomena, such as the lightening (shortening) of the training period, and the response of the University, relative to the indicators of graduates. Under these conditions, when we examine the case of other countries, we deduce important lessons that we can extract with the necessary scope of understanding the phenomenon of proliferation of post graduation in the professional modality in Brazil (OSTERMANN; REZENDE, 2009), namely, in the case of professional master's degrees and the modern professional doctorates.

Two decades of experience in Professional Master's Degrees and the Professional Doctorate in Brazil

In the previous section we confirmed an evolutionary historical process about academic practices and culture, however, with a bias expressly determined by a Western culture (ALEMU, 2018). In the current section we will address a specific example called by some authors a variant of the academic and traditional doctorate (Ph.D.). In a particular way and following a systematic logic, let us see that professional master's degrees have
accumulated in Brazil about 20 years of experience and dissemination. In order to provide the reader with a better understanding, we will examine some relations and concerns about professional masters, concerning the area of EDUCATION (38) and TEACHING (46) - CAPES.

In fact, Ribeiro (2005) emphasizes a dichotomy that involves a bias of tension between the academic and professional modalities that persists until today. With such concern, although not exclusively, the author explains that "in the MA, the intention is, through immersion in research, to form, in the long term, a researcher". In the MP, according to the author, immersion in research should also occur, but the goal is to train, although with a markedly utopian bias, someone who "knows how to locate, recognize, identify and, above all, use research in order to add value to their activity" (RIEIRO, 2005, p. 15).

Although the reasoning expressed by Ribeiro (2005) is reasonable and understandable, we could not be mistaken if we understand that the abilities or skills to locate, recognize, identify and, above all, use research in order to add value to their activity are not inherent, to a greater or lesser extent, in the case of the academic modality. A little further on, André (2017) reports a character of resistance, corresponding to the process of installing and offering professional master's degrees. Certainly, the subliminal ideology pointed out by André (2017), which we interpret as a judgment involving qualifying the professional master's degree at an inferior level and of denial (and less rigor) to research, does not reveal an understanding typical or restricted only to specialists working in the area of Education (38) CAPES. To this end, André (2017) unveils a thought circumstanced by the academic locus and, likewise, irreducibly linked to the field of professional activity of a certain category of researchers, in this case, the specialists who work in the field of Education (area 38 - CAPES), when observing that:

The area of Education was very reluctant to accept the implementation of professional masters in Brazil, based on reasonable justifications, one of which was the fear of loss of appreciation of research, a space conquered with much effort. Thus, because it is a fairly recent initiative - the first professional master's degree in Education was approved by CAPES in 2009 - it becomes opportune to discuss the differences and similarities between professional and academic master's degrees (ANDRÉ, 2017, p. 826).

A little further on, André (2017) reveals a dilemma and/or obstacle that reaches and affects both the field of students' understanding, as well as the understanding of teachers - trainers, about a pragmatic understanding necessary to separate, not in a watertight way, an
academic training itinerary from the corresponding itinerary of professional training, avoiding certain dichotomies (practice/research) by observing that:

We were aware that our work in the Professional Master's could not repeat what we did in the academic master's; we would have to learn to do it in a different way. A basic question was the following: how to structure the program in such a way as to contemplate the articulation between research and practice? Underlying this was the larger question: what distinguishes the professional master's degree from the academic one? And associated with this, there was another very specific question: what does the final work for the conclusion of the professional master's degree consist of? (ANDRÉ, 2017, p. 827).

Once again, when we rescue the thought of Ribeiro (2006), we find an understanding or typification of difficult or impossible demarcation (whether inherent to the academic modality or professional modality), to the extent that the importance of research, in any case, seeks to collate a dense spectrum of arguments or indicators that confirm or drive the engagement of the researcher, in any of the modalities. Moreover, there is an idealistic bias, to the extent that the expectation of the emergence of the ability to foresee, with respect to the dynamic scenario of conducting research, aiming at a certain object, depends on the ability and experience of the researcher. In the same way and manner, the ability to find it, with property and efficiency, not even at a level of training in the third cycle (doctorate) we usually register such a substantial evolution of a candidate. In any case, Ribeiro (2006, p. 215) insists on the following utopian thesis:

The goal is something apparently simple, but quite ambitious and difficult, that the student understands the importance of research in his professional area, that he knows where to find the research that has not yet been done, but will be done in the future - and finally, that he is able to incorporate it in his professional practice.

The indications of André (2017), Ribeiro (2005, 2006), and other authors, even in the face of an accumulation of two decades of experience, confirm that the performance of the teacher, corresponding to the two scenarios or both training modalities, involve conditions of complex resolution, to the extent that, even for the experts, of extensive and prestigious academic career, misunderstandings about the professional modality occur, in view of their training having occurred primarily in the academic modality. Rizatti et al. (2020, p. 3) confirm this understanding, to the extent that:

Although the concept has been built over the years of existence of the Teaching area, as we can see in the guiding documents and in the Memory of
the Area, it has not always been completely assimilated by researchers directly linked to this modality. We assume as hypotheses for these misunderstandings the fact that most of the faculty of the PPGs (Postgraduate Programs) were trained in academic courses, together with the lack of knowledge of the guiding documents by teachers and students of the programs.

It is not worth mentioning that, in Brazil, in terms of its own ideology responsible for the conformation of university models and paradigms, we identify an essentially exogenous influence, to the extent that countries such as France and the USA have disseminated, through the dissemination of ideas coming from researchers of broad prestige, responsible for the formation of several generations of Brazilian researchers who, to a greater or lesser extent, replicate and reproduce a training model under foreign and exogenous influence. Calderón et al. (2019, p. 142) confirms this scenario when they explain that:

In Brazil, originally, the constitution of the universities followed a strong European influence, especially, seeking grounding in the French model regarding the organization of professors in professorships. Until before the University Reform of 1968, according to Verhine (2008, p. 168), a few doctoral courses were created in the country by major universities, and the doctorate was obtained through the defense of a thesis (typically prepared without an advisor), before a committee of professors. In this same perspective, according to Sguissardi (2006), the doctorate existed, but it was a free system, without a uniform curricular structure and followed the European model, in which the relationship between student and advisor was the almost unique factor for the title to become effective. With the 1968 reform, the Post-Graduation in Brazil was restructured, having as reference the North-American model [...].

Similarly, a trend we encountered in several countries, the University was the target of constant criticism, to the extent that it did not always respond synchronously to the challenges, interests and dynamic demands of society. In particular, in Brazil, a form of response to society, through an expedient of criticism of the academic modality can be registered since the 1960s, when Calderón et al. (2019) contextualize a movement of a Flexibilization Program of the stricto sensu Post-Graduation Model, under the influence of a foreign academic culture.

The changes that are now configured for the present and future of the Post-Graduation at professional level, especially at the doctoral level, are based on international assumptions formulated in the Ministerial Opinion No. 977/65 of December 3, 1965 (ALMEIDA JUNIOR, et al, 2005), the so-called Sucupira Opinion, which, from the North American reality, distinguished two modalities of doctorate: research (academic) and professional. [...] However, according to Maciel and Nogueira (2012), only in 1995 the MP modality started to be practiced through the Flexibility
In the previous excerpt, we can see that Calderón et al. (2019) do not miss the opportunity to talk about a variant of the academic doctorate, called professional doctorate. Let us notice, however, that the professional modality has a characteristic that is intrinsically linked to the professional habitus of the individual and that, inescapably, involves a form or paradigm of how to consider, how to evaluate a knowledge expressed essentially of a professional nature, derived and conditioned in a particular way (depending on the craft), and in what way the University references/validates such knowledge corpus or, still, if we consider a classic dilemma proposed by Bourdieu (1984), the differences between practical knowledge and scholarly knowledge. Bourdieu (1984) points out the difficulty corresponding to the nature of per se, involving a bias of experience, considering a systematic examination of its constituent parts and their recomposition. Just remember, according to Bourdieu himself (1984), that scientific knowledge, when we seek to transmit it, concerning a given object of interest, is reproduced especially when we employ the written/digital media.

Bourdieu (1984) recalls a rhetorical strategy, when we seek to make something clear and precise, through the persuasion of someone to describe their own (professional) experience. In this case, the reduction of the subjective component becomes almost impossible. A little further on, Bourdieu (1984) determines some parallels and weaknesses, for example, about sociological knowledge, as a category of interest for a researcher, however, not always fully contemplated by the abstract formalism of the academy.

Thus, sociological knowledge is always exposed to be brought to the first sight by the "interested" reading that adheres to anecdote and singular details and that, because it cannot be stopped by an abstract formalism, reduces to its common sense of the words common to academic and general language. This almost inevitably partial reading seeks a false understanding, founded on ignorance of everything that defines scientific knowledge as such, that is, the structure of the explanatory system itself: it undoes what the scientist's construction has done, mixing up what has been separated, mainly the constructed individual (natural person or institution), which does not exist except in the network of relations elaborated by the scientific work (BOURDIEU, 1984, p. 3).

In the previous excerpt, we can see that the author identifies the weaknesses, for example, of a sociological knowledge. In an expanded scenario, one cannot escape the work of construction and elaboration of a scientific object and the responsibility that this implies.
There is no object that does not carry a point of view, even if it is the object produced with the intention of abolishing that point of view, that is, partiality: to go beyond the partial perspective that is associated (BOURDIEU, 1984, p. 17).

Based on Bourdieu's thought (1984), let's look at the considerations issued by Curi et al. (2021) about a modern notion of object called within the academy as "Educational Product". (EP)

As the thesis should present, describe and analyze the application and validation of the EP, it is essential that in the PD there is a link between the research problem and professional practice. Thus, the EP should be the result of the professional's involvement with his field of work, have an interventionist character, be generated from problems identified in and by the professional practice of the graduate student, and should be the result of research that has an evident focus on the context of professional activity of this student and researcher (CURI et al., 2021, p. 219).

Once again, we rely on Bourdieu's (1984) perspective, in order to examine the information expressed by Curi et al. (2021) in the previous excerpt. In these terms, Bourdieu (1984) discusses the use of certain linguistic operations, recurrently discriminated in academic discourse, and other problems, as in the case of the "objectification of the unobjectified, for example, scientific prestige" (BOURDIEU, 1984, p. 21). Similarly, when we consider the object called Educational Product, in order to understand its elaboration and construction process, its interventionist character, viscerally linked to the field of professional activity, should condition and delimit a finite set of essential properties to it. For example, Bourdieu (1984) explains some elements linked to the process of construction of a theoretical object.

The work of constructing an object delimits a finite set of pertinent properties, instituted by effective hypotheses and variables, whose variations are associated with variations in the observed phenomenon, and at the same time defines a population of constructed individuals, themselves characterized by the possession of these properties to varying degrees (BOURDIEU, 1984, p. 21).

Again, with the support of Bourdieu's perspective (1984), we cannot neglect, within the development of research peculiar to the academic locus, its pragmatic bias, such as, for example, the plurality of academic hierarchies and the coexistence of powers practically incommensurable of scientific prestige and that emanates a kind of university power, internal recognition, as well as external renown is essentially determined by the relationships between its occupants, depending on their academic career, which involves teachers - inexperienced
trainers and, also, other experienced. Just observe, for example, recurrent misunderstandings reported by Rôças and Bomfim (2018) that do not involve exception framework and, yes, via rule. In these terms, the authors report:

Based on the experience of our professional master's course, as well as on the exchanges with colleagues from other courses, we realize that, in general, less experienced professors in orientation (even closer to their academic training) have more difficulty understanding the path of a student in the professional modality. It takes time to understand that the dissertation should not be detached from the elaboration of the EP and that it should tell the story of its elaboration, from its emergence (contextualized from a diagnosis) to its validation, presenting a cohesive theoretical-methodological referential in all stages of the process (RÔÇAS; BOMFIM, 2018, p. 5-6).

When we examine the binomial "teacher - product" we can register two possible dialectical movements. The first one consists in emphasizing, as a priority, an unbridled race in search of the Educational Product that, mistakenly, acquires a role of "center of gravity" or justifies the whole action, more or less assuming a symbology of "Sanctus Graal". In an opposite sense, we see an academic path that aims to provide an evolution and incorporation of academic knowledge to the individual who takes a post-graduate course in the professional modality and, finally, the educational product will reflect and result from the accumulation or the synthesis of knowledge originated from his practice, and others essentially derived from the systematic research activity at the university. In these terms, we take a position in agreement with Rizatti et al. (2020, p. 14), when they state that:

Considering that the PPGs are locus of human resources formation, we emphasize that the main "product" of the professional modality is the teacher/professional who finishes the courses in the area, because they are able to reflect on their practices from a theoretical-methodological referential, identifying problem situations and proposing solutions - the EP. Therefore, dissertations and thesis are the narratives about the paths taken and the EP elaborated. And in this context we can affirm that the production that emanates from professional programs is not a technicist reproduction, but the materialization of a critical analysis of different professional contexts related to Teaching, based on the reflection and use of theoretical and methodological references.

Before we finish, let us regatta a thesis of Bourdieu (1984) when he points out that the professors of the different faculties are distributed between the pole of economic and political power and the pole of scientific - cultural prestige, according to the same principles that reflect the different fractions of the dominant class. In effect, Bourdieu (1984, p. 56) warns that:
Indeed, the frequency of the properties most characteristic of the dominant fractions of the ruling class is seen to increase as one moves from the faculties of science to the faculties of letters, from the latter to the faculties of law and medicine (while the possession of the distinctive marks of academic excellence, such as appointments by general competition tends to vary inversely with the social hierarchy of the faculties).

Bourdieu's thought (1984) points out a concern or phenomenon, as we examine the social impact and relevance granted to the Educational Product (EP), depending on the "academic niche" of its production (and origin) and the "academic classes" of corresponding researchers linked in the academy. In these terms, could we infer that an Educational Product conceived within the scope of Health or Law research would have greater social ballast and representativeness, in the sense of referencing a professional doctoral thesis? Does the value of professional competence attached to a given Educational Product (EP) occur in the same terms or not, whether we consider research in Health or Law or in the educational field, when we examine the case of teachers?

When we consider the educational products derived from an accumulation of 20 years of experience in the TEACHING AREA - 46 do we have indicators in Brazil of a representative advance or, similarly to the criticism directed at the academic modality, is it still an accumulation, with low and/or no repercussion, of educational products that are evidenced by a "second category of rigor", supported by individual trajectories of researchers and/or incipient in the métier, with inexpressive prestige within the academy?

Certainly, this and other questions, in view of the recent implantation of the doctorate and the corresponding egress of the first holders of the title and, we add, of a "social label" granted by the university as researchers, we do not seek to answer definitively in the present work. Nevertheless, we agree with Rizatti et al. (2020, p. 4) when they observe that "the EP should be prepared with the intention of answering a question/problem arising from the field of professional practice". Given this, inescapably, we point out that professional practice, a broad spectrum of pragmatic knowledge and rituals intrinsic to a particular métier, skills and other elements deeply conditioned by the professional field require, then, a kind of "protocol" treatment by the university, since its genesis, from the point of view of knowledge, is completely exogenous to the academic locus. Therefore, in the next section, we will present some assumptions of the French branch of Professional Didactics, in order to suggest and indicate certain elements viscerally linked to educational products, under a better emphasis of an evolutionary process of professional learning (ALVES, 2021).
Professional Didactics and the notion of teacher-researcher competence

The French branch of Professional Didactics provides a differentiated bias when we examine its concern with learning at work and arising from the specialized activities developed at work. In these terms, as a consequence and extension of Piagetian thought, which places in a differentiated position the action, adaptation, and learning of the child, through the production and conceptualization of actions, as he interacts with objects and the environment. Similarly, Professional Didactics devotes special interest to professional competence, through the indispensable need for the incorporation of specialized skills at work. When we examine, for example, the academic career, we see a broad spectrum of components that require a presumed professional competence concerning those with a doctoral degree, as we see in the information indicated by Wickramasinghe and Borger (2020).

Although many start out as postdoctoral researchers, PhD the number of graduates still greatly exceeds the demand for postdoctoral researchers. And those who successfully reach this position are quickly thrown into a harsh climate of "publish or perish." As our world continues to grow scientifically and technologically, our communities must become more literate in these areas to compete successfully in a knowledge-based economy (WICKRAMASINGHE; BORGER, 2020, p. 1).

The French branch of Professional Didactics, more recently, has acquired a bias or interpretation as a branch of the Didactics of professional knowledge and, in the case of the academic career and activity developed in the academy, we can see that the role of "learning" figures in a central mode of interest, as we see below.

Professional Didactics was born from a desire to reverse, of an epistemological nature, the way of considering, in relation to learning, the relationship between activity and knowledge. In scientific practice, action is not absent, but subordinated to the production of knowledge. In school practice, action is also not absent - just look at all the development of active methods - but it is also subordinated to the transmission of knowledge. This is how disciplinary didactics was formed: the real object of learning is knowledge, and action will serve as a vehicle for the acquisition of this knowledge. This means that we can very well conceive of the "Didactics of professional knowledge" on the model of the didactics of disciplines, importing the concepts (PASTRÉ, 2008, p. 3).

From the point of view of Pastré (2001) we acquire a perspective about the notion of professional competence, whether inside the University or not, as a constitutive element and with strong nuances of relation to a certain group or professional gender. The theme of...
"professional competence" is revealed, for example, in Universities, to the extent that its main product resides, in a prosaic way, in the formation of a new researcher. Pastré (2001) emphasizes the professional qualification/competences debate within research in Professional Didactics, when he clarifies that:

Professional Didactics grew out of the convergence of these three approaches: analyzing work using a cognitive development approach in adults; analyzing work with particular emphasis on the cognitive dimension, conceptualization. Analyzing mediation activities, aiding building skills. We have a fairly strong convergence between J. Leplat, for the Psychology of Work and G. Vergnaud for the role of conceptualization. And he increasingly important to be interested in interactions, in the form of language, but also the transmission of gestures, thus taking into account the role of mediation of others in the construction of skills (PASTRÉ, 2001, p. 6).

We can register in the literature considerable elements that reveal psychological conflicts, tension, and the intellectual solitude usually identified in the formation period of a future researcher. The induction and the learning of new researchers, including personal and professional growth, are elements that cannot be neglected, as we deduce from the following considerations.

At some point during their degree, doctoral students face challenges, such as redirecting projects, maintaining life-work balance, and relationships with their supervisor, that they need to learn to manage. These struggles, along with more confronting psychological changes, including intellectual loneliness, professional and social isolation, and anxiety, are recognized by many higher education institutions. In particular, it is recognized by institutions running induction programs designed to support the doctoral student in adjusting to their new status as novice researchers. Despite these obstacles, the value of completing a PhD remains invaluable, and according to former PhD students, includes achieving broad personal and professional growth, developing specialized and transferable skills, and opening doors to diverse employment opportunities are just some of the long-term benefits of completing a PhD (WICKRAMASINGHE; BORGER, 2020, p. 1).

When we aim at the personal and professional growth of new researchers (new PhDs), two components inherent to the process must be observed. The first component confers the professional competence of knowledge and technical-scientific mastery of knowledge inherent to a certain area of research and performance. On the other hand, a second component has an essentially pragmatic nature and its sense and meaning evolves as the individual interacts with a fundamental structure of professional situations intrinsic to the researcher's activity. Pastré (2007a) explains a little the function of the pragmatic component of the situations when he indicates certain invariants.
In Professional Didactics, I came to talk about pragmatic concepts, the conceptual structure of a situation, operational models. We are indeed in a perspective of conceptualization in action, which envisages an organization of complex activities in the form of "grand" schemas. In particular, I try to highlight the two couplings: the schema-situation coupling, with the articulation of the conceptual structure of the situation (on the situation side) and the operational model (on the schema side and the invariants that are its core) and the invariance-adaptation coupling: the invariance is represented by organizing concepts that serve to orient and guide action, in particular to establish a good diagnosis of the situation. These organizing concepts can be pragmatic or pragmatized, depending on their origin (empirical or scientific) (PASTRÉ, 2007a, p. 86-87).

Let's look at some examples of pragmatic concepts related to the determinants of career success. The variables that determine the wages received by the worker can be divided into two groups. The first set of variables allows an objective evaluation of the worker's family and work situation: personal characteristics (gender, age and family situation); training (the PhD's field of knowledge); job characteristics (seniority, activity sector, contract duration and working hours); and scientific production (number of books and journal articles published and number of patents registered). The second group of variables determines the subjective evaluation of an individual's work situation and includes three aspects: the relationship between the work position and the level of studies; the adequacy of doctoral training to the work position; and job satisfaction. In Figure 1, authors Wickramasinghe and Borger (2020) present an explanatory diagram about professional performance strands for doctoral degree holders, and for pragmatic reasons we see that a corresponding spectrum of teacher competencies is not shown symbolized. It is true that for historical reasons, in several countries, as in the case of Anglo-Saxon culture, the training of teachers with a view to their professional development has remained on the sidelines of many educational reforms.
Figure 1 – Outline of the various career opportunities available to doctoral graduates

![Outline of various career opportunities](image)

Source: Wickramasinghe e Borger (2020, p. 1)

Before ending the current section, the figure suggested by Wickramasinghe and Borger (2020), despite its absence, reveals a concern with the training of a researcher and, according to our further attention, of a researcher holding a professional doctorate. In the subsequent section, we will seek to illustrate a professional skill originating from an essentially pragmatic bias, however, increasingly required in the world of professions involving the social phenomenon of professional collaboration.

Some Applications of Professional Didactics: The Case of Professional Collaboration

With the support of the arguments indicated in the previous sections, we clearly point out a dilemma involving the dichotomy between technical-scientific knowledge, whose social prestige in the academic locus proves to be paramount, with a pragmatic and professional knowledge, deeply conditioned and aligned with a particular category of a métier. To exemplify one form of its manifestation, when we point out the component of a pragmatic and professional knowledge, let us take the case of the notion of professional collaboration. The process of professional collaboration involves a diversity of aspects and complex nuances that must contribute to a substantial constitution of a professional portfolio and an increase in conduct schemes and professional efficiency.

In turn, when we aim at professional collaboration involving teachers, we cannot disregard the nature of two distinct types, categories of knowledge or fields. The first "knowledge" is situated in an essentially epistemic (conceptual) field and is deeply marked and conditioned by a scientific and classical reference knowledge, and in this case we indicate
scientific knowledge. On the other hand, when we aim at a learning and professional training environment, we cannot neglect a whole learning process of the authors (teachers) involved. Thus, the second knowledge concerns the acquisition of an essentially pragmatic and originally circumstantial knowledge, which corresponds to a kind of professional field (PASTRÉ, 2007a; 2007b).

We point out that pragmatic professional knowledge, whose identity and characteristics are incorporated over the time of professional activity, reveals itself as an element, factor or a category of indispensable knowledge intrinsically linked to any type of professional training activity or constitution of a training itinerary, where professional collaboration is necessary. On the other hand, the process of professional collaboration can be examined from an essentially cognitivist point of view, insofar as we consider the teacher's activity and the adult learning processes arising from his/her organized and specialized activity, from the execution of fundamental work tasks, and from professional collaboration among other subjects belonging to the same kind of craft, professional category or métier.

Aiming at our discussion and an examination of elements that contribute to an identification of elements that contribute to professional collaboration, involving teachers, we cannot disregard the notion of professional genre, considering that "the professional genre can be presented as a kind of prefabricated stock, of "enactments", "put into words", but also of pragmatic conceptualizations" (CLOT; FAITA, 2000, p. 13). In the case illustrated in Figure 2, Pariê (2006) employs the anthill metaphor. The author notes that its operational efficiency is really an apparent chaos, and no "process representation" occurs, no in-depth understanding of the collective goal, no understanding is revealed of the conditions for the collective efficiency that is needed at the level of an individual agent of the anthill (the ant). Furthermore, the author also points out that "they develop and stabilize on the edge of chaos: they create order (invariants, rules, regularities, structures) against chaos, but need residual disorder to survive" (PARIÊ, 2006, p. 51).
Figure 2 – Pariê (2006) supports his thought with the metaphor of the anthill

Source: Pariê (2006, p. 51)

Nevertheless, Pariê (2006) employs the "anthill metaphor", insofar as the manifestation of a collective and organized behavior is indispensable in the professional field of subjects and, in a particular way, when we aim at the egress of a professional doctorate. In these terms, from his considerations, we understand that:

Ants have practically no brains (about one hundred neurons, compared to about one hundred billion for humans). One can then strongly reject a legitimacy of any comparison, even metaphorical, between insect swarms and human societies. However, humans exhibit collective behavior based on the interaction of fairly simple individual rules. Group or crowd behavior during the evacuation of aircraft, ships, tunnels or buildings, or simply daily flows of pedestrians or car jams can be and have been modeled using software simulators based on the interaction of low-level individual rules (PARIÊ, 2006, p. 50).

In her doctoral thesis in Education, entitled "Exploring the impact of a professional doctorate in Higher Education on educational organizations: a critical realist perspective," author Lundgren-Resenterra (2017) devoted special interest to the phenomenon of the impact of a professional doctorate on students and their organizations, which has become a recent topic of interest to researchers, however, there has been discussion of the impact of the professional on their organization and whether this represents the direct manifestation of professional learning. In these terms, the author points out that "knowledge production is therefore perceived as resulting from the interaction between academia, the workplace, and the profession, and not derived solely from academic research" (LUNDGREN-RESENTERRA, 2017, p. 30). A little further on, she explains that:

This concept was transferred to the professional doctorate by Lee et al. (2000), who established a clear relationship between the learning that occurs
during a Professional Doctorate in academia, the workplace, and the profession, thus establishing a new model of hybrid knowledge production. Indeed, Lee et al. argued that the end result of a professional doctorate lies at the intersection between the higher education environment and the project workplace. Their interrelationship produces new kinds of knowledge and professional practice based on reflective deliberations that result in organizational transformation (LUNDGREN-RESENTERRA, 2017, p. 30).

With origin in the thought of Lundgren-Resenterra (2017) and, to some extent, in Pariê’s metaphor (2006) about professional collaboration, we confirm the indispensability of collating a set of changes that cannot be simply replicated from the academic modality.

Thus, in figure 3, we configure our proposal for the constitution of a doctoral jury, taking into account the technical scientific and classical dimension, regularly verified by the five examiners originated from the academic locus and, with the same value and expressiveness in the process, the scrutiny of three experts, of recognized practice and experience in the field that the Educational Product is framed.

**Figure 3 – Professional Doctorate final exam board or jury configuration: technical - scientific and pragmatic components**

According to the proposed configuration of figure 3, we assume the indispensable character of professional cooperation and solidarity of professionals from academia and professionals with recognized "notorious knowledge" in a given professional field (see figure...
3). On the left side of the same figure, we affirm a weakness bias (plus its indicators - endogeneity, low visibility and impact, etc.), when we employ the classic jury and evaluation model developed in the university. Barata (2006) expresses a point of view that is viscerally in line with ours, when he warns that:

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Once again, our configuration expressed in figure 3 is supported by the arguments and warnings of Barata (2006), indicating hindrances in primordial stages in the formation process of a future master, coming from the professional modality.

The courses have also encountered difficulties in the moments of formal evaluation: the qualifying exam and the judgment of the final product. Most of the professors who may sit on the boards are not used to the new formats provided by the professional master's degree, and there are no clear and established criteria for the examinations in these situations. Perhaps it would be interesting to have as a criterion for the composition of these panels the mandatory participation of a professional from the field in question, regardless of academic qualifications. The potentially diversified nature of the final products makes it necessary for those who will judge them to accumulate experience. Most faculty members are used to evaluating theses and dissertations, or scientific articles, but have no experience in evaluating more instrumental materials used by the services, or some products such as videos and software (BARATA, 2006, p. 278).

For all the above reasons, recovering the objective (iii) of the present work, we point out an indispensable component of the creation of an academic protocol concerning the examination of the pragmatic knowledge and professional knowledge derived from the professional field of the future holder of a title originated in a Professional Doctorate.
Final remarks

In the previous sections we oriented our discussion around a widely justified concern, insofar as the training provided in a Professional Doctorate needs to consider the mechanisms of learning on and from the job. Moreover, the interest for the factors or elements that need a better understanding of this new variant, without disregarding the component of the teachers-trainers themselves, and finally, what we can expect from a Professional Doctorate in the future.

We have identified historical aspects and evolutionary elements around the notion of Ph.D. (Philosophiae Doctor), which confirm a position of scientific and social prestige to the respective holders of the third cycle title, according to a European tradition, not disregarding a change in emphasis and paradigms valued by Universities that, in the Middle Ages, conferred greater distinction, according to the academic skills revealed by the study of ancient classical and disciplinary texts. Nevertheless, according to a modern understanding of the University, started in Germany and disseminated through Anglo-Saxon countries, we understand that the academic career and the corresponding professional competence was confirmed by the efficiency in research and in the "unveiling" of new and unprecedented disciplinary fields.

On the other hand, when we consider the current Brazilian scenario about professional master's degrees (BARATA, 2006) and professional doctorates and the difficulties imposed, we understand that the variant of an academic doctorate that, in our case, acquired its identity and its character of academic acceptance and permissibility with origin in the binomial "Professional Doctorate - Educational Product" still lacks a lengthy process of adjustment (BARATA, 2006), adaptation (see figure 3) and the demarcation of a training area that requires considering hybrid knowledge and new model of hybrid knowledge production (LUNDGREN-RESENTERRA, 2017).

To this end, we bring in figure 3 our proposal for a configuration of a jury of thesis defense in a Professional Doctorate. In the same, as we seek to emphasize the metaphor pointed out by Pariê (2006), professional collaboration is constituted as a possibility and factor of balance and evaluation of a broad spectrum of elements that constitute an Educational Product. Without disregarding a criticism, still vigorous, according to Ostermann and Rezende (2009), when they point out that the technicist rancidity of the conception of educational product, because when preparing a final product, priority is being given to how to teach, and not to why or what, besides being implicit that the introduction of a product will bring quality or solve educational problems.
In any case, from the tension originated in the binomial "academic x professional", it becomes necessary and constant "an in-depth reflection on the nature of professional master's courses in teaching and its possible impact on Brazilian society" (OSTERMAN; REZENDE, 2009, p.2) and, facing our reality, the case of the professional doctorate as well, an issue still practically absent from the academic production in the areas of Education and Teaching.

On an international and recent level, we do not disregard that the tension between supply and demand in the academic market has been studied mainly by questioning the possible shortage of faculty: from the 1970s, projections of a future shortage of faculty in the United States were made, which led to a renewed interest in academic labor markets and, more specifically, the adequacy between the number of PhDs produced and the vacancies to be filled (GOASTELLEC et al., 2013). In these terms, the demand for the training of new doctors will be increasingly representative.

Finally, when we examine certain notions and applications originated from the French branch of Professional Didactics to the context of the profile, in the professional career - academic and training, we can find an essentially pragmatic component, of social bias and, at the same time, cognitive, when we consider per se a wide range of phenomena arising from learning in and from work (ALVES, 2021).

Moreover, with support of an apparent or provisional character of a definitive answer to the questions outlined in the preamble of this work, we rescue a Latin expression that, in a prosaic way, embodies our concern with a variant form of academic doctorate, for now, with unknown repercussions (academic, social and educational) and, therefore, we reaffirm our introductory concern and not contingent, before the questioning: Quo vadis, professional doctorate?

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