

To open up the dental science: epistemic searches for a more plural and democratic, human and worldly education

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ABSTRACT

The purpose of this text is to report the experience started in 2016 regarding an epistemic twist of the Health Practices discipline (DSC/UnB) to align it with the pragmatic effort to train students to become more able to assign meaning and value to their future presence in complex practice settings, such as the internship fields in the SUS. The article considers that without Modern Science it would not be possible to consolidate the Health professions as equally modern professions, but it problematizes the epistemic perspective (reductionist and positivist) that supports its theorizations, and understands the current scientific culture as an obstacle, either for the updating of epistemic references or for a democratic training that considers the plurality of discourses within the culture. It presents the institutional difficulties in the Health courses at UnB to introduce students of the initial years in field activities in the SUS, and it justifies the option of betting on pragmatics as an anticipation to the praxis and making of the action of discourse an accumulation for subsequent actions of intervention in the field. Within this context, the option selected was the strategy of conversely extension (reverse extension, reversal of extension) to open the dialogue of knowledge with other epistemic communities in the university professional training. The article describes the process and makes a critical-reflexive analysis of it.

Descriptors: Education. Dentistry Education. Science. Democracy. Culture.

1 INTRODUCTION

Among the forms of social labor division that emerged with the neolithic revolution and the advent of civilizations are the professions. Ancestrally, they present the product of their labor in the urban area, in the public economic sphere of the marketplace. They derive from the organization of "merchants and free workers" in those occupations that were not of interest to the slave (or serf) economy to internalize its means and relations of production in the form of private property of the land lord structure. And, even

though they were needed, they existed for tens of centuries as complementary and secondary forms to the fundamental economic relation of those societies (slavery or serfdom)¹.

For a little more than 500 years, the manorial societal structures have been radically and progressively modified by a process of adjustment and conformation to the bourgeois value system in order to give structural centrality to the market and to the forms of economic and juridical-political relations signified therein. Bourdieu (1996)² describes this process with the

sign of "modernization", a gigantic and secular effort of formation, accumulation, and use of economic and symbolic capital capable of re-signifying social institutions. With the modernization, values, logics, and ancestral purposes of the bourgeoisie are raised to the foreground of role in the civilizing process.

By the 19th century, the pillars of modernity were already consolidated: the notarial institutions, the judicial system, the command and administration of the State, the religious institutions, the political public sphere, and the economic institutions (financial, agricultural, commercial, and industrial) had already been modernized. Even culture had been modernized since Modern Science, namely the discourse of bourgeois episteme, had imposed itself as the dominant discourse, and promoted the "modernization" of other orders of cultural discourse: the common sense (through published opinions), the arts, politics, law, religion, philosophy. Science became the embodiment of the truth itself.

With the fundamental pillars of modernity in place, one can undertake the modernization of the professions, by plucking them out of the bowels of the vast world of human occupations. In this process, how can one distinguish a profession from an occupation, since, in the common sense, every person who is busy with something and is economically supported by this occupation is considered a professional, from the gardener to the engineer? Or otherwise, when in the common sense, any occupation that has even been recognized by the State in its legal system and protected by it (labor and safety rights), is now also considered a profession?

Occupations have their ancestry associated with what Arendt (1993)¹ highlighted as expertise (*téchnē*) which is the mastery of the arts, tricks, and artifices of the trade. This mastery distinguished the ancient free worker in the

public sphere of the market and his activities from those assigned to masters and slaves. In the modernity era, the justification of the professions was somewhat more complexified.

According to the Sociology of Professions, a profession is an occupation and an association. If not every occupation is an association, then a profession is a special kind of occupation and association.

Weber (1988)³ designated association as any social relationship that is closed or whose regulation limits the participation and he defined profession as a particular type of such relationship. Profession is an association that is autonomous (its members define their own order) and self-governing (its members define their own leaders and administrative cadres).

Ensuring the autonomy of each professional, as well as the collective autonomy and autocephaly of the profession implied initiation, training, accreditation, participation, supervision and control of the associated practitioners. It also implied vetoing expressions of heteronomy such as "I was doing what I was asked to do" or "I was following orders!". In Weberian terms, modernity has forced professionals into the legal domain, to follow maxims such as: "my practices are subject to the set of legal order" (laws, resolutions, rulings, codes, opinions)⁴.

Freidson (1988)⁵ defined profession as a particular type of occupation. If over the millennia, expertise (*téchnē*) was already the basis to justify the professions in relation to other occupations, it is not difficult to understand why in contemporary times the author adds to expertise, the domain of scientific knowledge (*episteme*) in its foundation. It is also because the ancient *téchnē* of the craftsmen and artisans was requalified as technology by being equally exposed to Modern Science¹.

By invoking science and technology in the

modernization of professions, practices are rationalized, disciplined, standardized, and normed. In view of modern knowledge, practices are launched into the process of progressive rationalization of time and concealment of its qualitative aspect⁶. Mechanistic rationalization of reality, deriving from an experimental dialogue mediated by quantitative methods, by the judicious selection of objects suitable for reductionism (Ockham's Razor, principle of parsimony or economy)⁷, and by scientific laws raised on denser and physically tangible dimensions of the complex reality.

In health care, the mechanistic and epistemic reductionism restricts the 'experiential' dialogue to what is soft (cultural, evaluative, qualitative, and subjective), by limiting approaches to human health, by providing safety and cognitive potency (narrative and practical) for professionals with this training.

Based on this science, there was an epistemological break with common sense^{8,9}, the victory of the Newtonian episteme over vitalism¹⁰, the favoring of the applied knowledge¹⁰, reductionism⁷; and, philosophical and scientific positivism was imposed.

The access to the scientifically grounded profession changes. It is no longer through blood ties, territoriality, or other ancestral criteria of initiation and inclusion of practitioners, but through a teaching that has long been modernized, as Foucault reflects in part of his work¹¹⁻¹³.

In this struggle, despite the difficulties, there were gains, particularly those that have been translated into economic privileges of the patrimonial type: the property rights over a set of productive practices that, when sanctioned by the State, become private (property) of the professionals. This is not the case for other work practices that are maintained as occupations and are not upgraded to the sociological status of profession. Welcome to the club!

In this relationship of science and modernization of Health professions, it does not make much analytical sense to repeat the ballad of considerations and criticisms on the ground of the global and national repercussions of the Flexnerian role, if not to explore the clay that lies underneath this ground. It has been the epistemic foundation on which teaching in the entire large Health field is built, and on which professional practices are legitimized, from the beginning of the 20th century to the present day¹⁴⁻¹⁷.

Without a scientific basis, the endeavor to modernize Health professions would not be possible. Brazilian dental historiography registers efforts to achieve this scientism. It is observed that Dentistry had to rely on medical and pharmacy courses for the federal recognition of its higher education courses, and thus be able to distinguish itself from the craftsmanship of other occupations equally dense in *téchnē* and weak in episteme. It is worth remembering when, during the 1915 educational reform, there was a ministerial veto against the creation of autonomous dental schools, and the prohibition of their existence independent from Medicine and Pharmacy, since it considered that Dentistry was nothing more than an art without a scientific background, like goldsmithery¹⁸⁻²⁰.

With time, after overcoming difficulties, dental surgeons share the patrimonial legacy of the fight for modernization. Nowadays, there are thousands of professionals, owners of a share of the club of accredited owners of dental practices, and of all the socioeconomic and political income derived from it.

In the flow of events of the last decades of the 20th century, dramatic changes have occurred in the world of work and sciences! Work has been thrown into the drive of information societies, automation and artificial intelligence. Throughout the century, major fields of the natural sciences such as Physics, Chemistry,

Biology, Meteorology, among others, and part of the Social Sciences were born or have imposed themselves to the challenge of the complexity episteme.

Indifferently to these changes, professional training in Health in Brazil continues to bet on the classical episteme and the conventional epistemological rupture. Young people coming from the experiences and challenges of the school world, made of pen and paper, are led to the pen and to the contra-angle of the dental equipment. They advance in their training with little or no experience in the world of work, with almost no contact with communities of practices, of professional or others, nor with good sense nuclei of the common sense (the democratic principle of common sense)²¹. Being confined, the professional and intellectual training practices reiterate a solipsistic productivism. Five years later they are handed over to the Brazilian society with the credentials of "office professionals" who reproduce in an atomistic way and uncritically what they learned in a university simulacrum.

In Brazilian Dentistry, tensions accumulate between powerful forces that structurally condition professionalization advances and collective actions seeking for changes. On the one hand, there are 544 authorized undergraduate courses (82 out of which have not started their activities), an offer bubble of higher education in private institutions²², a context of professional plethora in the private dental services market and the stagnation of the expansion of jobs in the SUS. On the other hand, there is the search for the consolidation of Collective Oral Health in its own field of knowledge; militancy gathered around ABENO, ABRASCO, and its GT-SBC; ministerial initiatives for the advancement and reorientation of dental education; National Curricular Guidelines for undergraduate Dentistry courses²³⁻²⁶; changes to break the

dichotomies between theory and practice and the tight basic and professional cycles.

It is worth to highlight the introduction of professional practice from the initial years of the undergraduate course; the expansion of the practical workload (up to 40% of the total workload) and internships (up to 20% of the total workload); the use of active learning methodologies; the diversification of internship fields as learning scenarios in the SUS; the orientation of curricular contents towards integral care; and, the regular evaluation of courses in accordance with the National System for Higher Education Evaluation (Sinaes)²³⁻²⁶.

Unless a better judgement, all this does not seem to be, *per se satis*, the connections to bridge the gap between university education and the worlds of work and culture. Apparently, the classical scientific epistemic legacy embedded in the Flexnerian model has been an iron shirt against the advancement of professionalization. What potential for effective change is achieved when curricular "formulae" are changed, without necessarily changing the basic epistemic "ingredients" in the formulations?

Theoretical considerations - the epistemic twist of science as a challenge to health professions

Beyond the boundaries of Health education, the means of producing scientific and technological knowledge has undergone an epistemic metamorphosis, it abandoned reductionism, positivism, and mechanistic principles, while assuming the episteme of complexity and it continues to conquer Nobel Prizes. Relativity, complementarity, uncertainty, and metastability are epistemic fundamentals of the complex approach that have not yet been properly presented to the Health Sciences. This complex science remains distant from college classrooms, particularly from Dentistry courses.

Relativity makes it possible to remove the observer from the position of interrogating the reality from a divine, universal, overlying perspective, by giving him a referential place in the world that humanizes and relativizes his position. Complementarity likewise removes him from the position of interrogating reality with externality, by giving him a place of inescapable worldly interaction with his object of study. Uncertainty removes the observer from the position of omniscience, by allowing him to distinguish what is an eliminable epistemic error from what is imponderable, inherent to the complex ontology of the object. Metastability provides the observer with the arrow of time of the thermodynamics of complex systems, living or not; for, existing systemic exchanges (energy flows), not only entropy, but also its negation (negentropy or syntropy) can generate either the emergence of order as well as new degrees of freedom (disorder). If there is no dissipation of the flows, the system is closed and there is prevalence of entropy, the system tends to stability by degradation of initial conditions... to chaos. But if there is dissipation, the system is open, there is a prevalence of syntropy, the system tends to metastability by development and complexification of the initial conditions, in a permanent dynamism of emergence of new levels of order, from the reiteration of small variations/fluctuations in the generating level; as well as the recursive process of these new orders on other previous levels of order of the complex system⁷.

Without an epistemic twist to relocate the subject-object relationship within these perspectives of dialogue with the complex reality, possibly there are no substantive chances of the scientific opening of the Dental Science (and other Health Sciences) to the complex and cultural reality where one is immersed at present.

Twists are ruptures in the modes of

constitution of thought elaborated at the interface of different disciplines, as devices that integrate currents of knowledge and articulate themselves in integrative discursive networks for the constitution of new forms of knowledge at the borders and fringes of the disciplines in an effort to deconstruct the previously established paradigms, thus opening horizons for what is new²⁷. From the 1960s and 1970s on, multiple twists (linguistic, semiotic, hermeneutic, and the aesthetic-cultural ones) were produced as reactions to scientism or to the modern scientific discourse, which were based on the analytical philosophy applied to the social sciences and education, called positivism²⁸.

Boaventura de Souza Santos is among the authors who sought to rethink the values of scientific knowledge, considered hierarchically superior to other knowledge within culture. He points out the need for a reunion between these two cultures so that an enlightened common sense and a prudent science can be formed for a more decent life. A science that avoids ethnocentrism, esotericism, elitism, and the judgment of non-scientific beliefs as irrational; that is practical, yet enlightened; and, being wise, is democratic²⁹⁻³³.

To open up science, Boaventura proposes a strategy of reverse extension (reversal of extension, or inverse extension), that is, bringing knowledge or other epistemes (ecology of knowledge) that are outside, into the University³⁴; by promoting dialogues between university knowledge and common lay, popular, conventional, and traditional knowledge coming from all kinds of culture, subculture, and counterculture that are present in society³².

2 EXPERIENCE REPORT

Health Practices is a direct inheritor of the first attempts to introduce medical students to the field of Primary Health Care services in

Sobradinho-DF, implemented since the creation of the Medicine Course in 1966, which, from 1969 on, was integrated to the other courses when the Health Sciences College was created³⁵.

It is nowadays a basic introductory and integrative discipline "of services", as it is open to all universities as an optional subject, and compulsory for some courses in the health field (Dentistry, Pharmacy and Nutrition). It was redesigned in the 90's as part of the efforts of curricular reforms of the Health courses promoted by the UNI Kellogs Project. It was created with the general objective of enabling students to have an early insertion in the practice territory of Primary Health Care of SUS. It opened a "corridor of service disciplines" of Collective Health for the health courses of the Faculty, to which General Epidemiology, Social Sciences in Health, and Health Administration have been added.

In this configuration, it was characterized by having field activities operationalized by learning workshops in the practice settings, with valorization of participation, dialogue and problematization of the reality experienced by the students. It developed the students' ability to carry out participatory diagnoses of local health, together with the health staffs, and to communicate the results found to the community. The students discussed the foundations of collective health, the concepts of health-disease identified in the integration activities; they got to know the SUS system and its organizational principles, with emphasis on the Primary Health Care guidelines; they understood the health conditions of the population in the coverage areas, and how to insert health professionals in changing the local reality; and, finally, they came into contact with the organization of health services in the Administrative Region of Paranoá-DF, with health and social control practices.

With successive changes in the local management in the health region, the practical objective of conducting participatory diagnoses lost its initial power. The relationship of the university by offering undergraduate students in their initial years, the regional management of the SUS with very little political and operational autonomy, among other vicissitudes, degraded the original Carlos Matus' proposal to contribute to the SUS governance in the explanatory moment of the Situational Strategic Planning - PES. The limited usefulness of participatory diagnoses for concrete changes in the territories weakened the element of consequentialism of the discipline's repeated actions. Not surprisingly, the complementary elements ended up by becoming central; i.e., the theoretical topics that subsidized the practical actions prevailed, by making the discipline more theoretical than practical: a journal of introductory topics of Collective Health.

Re-founding the ideals of the original proposal would depend on many agreements, on reflections about the most appropriate time and form to put the students in the field by considering, at least, the objective possibilities of effective contributions and the appropriate local conditions of the SUS management for the exercise of the PES (which almost always escape the reach of the university's actions). In 2016, a new Health Practices approach was proposed that was not the rescue of the original design worn out by *realpolitik*, nor was it the model centered on lecture classes on introductory collective health topics, to which it had been reduced over time.

Given the difficulties in sustaining the insertion of students from the initial years in field activities, the changes implemented considered the importance of introducing the "practice" in the form of discourse-action, by anticipating and preparing the students for future interventions in the field. The pedagogical approach was based on

pragmatics as an anticipation of praxis.

In times of plenty and abundant information on the Internet and easy access to contents, the semantic-syntactic linguistic domain may be within the solitary reach of every student today. But the pragmatic domain... of interpreting language, its effects in cultural and social contexts... possibly not. For pragmatics, it is the use of language that gives meaning to what is said. It is the conversational act that provokes the effect, the interaction between the interlocutors, the sociocultural elements involved, objectives, effects and consequences. It goes beyond semantics and syntax, by looking at the extralinguistic context; i.e., the speech and its cultural and social implications, the practical effects that speech acts can generate, the functioning of language among users, by focusing on the inference processes by which one understands what is implied^{36,37}.

By pragmatic intentions, the scientific content is inserted in an open dialogue with culture, whereby the long-established predictable content-driven pedagogical focus is abandoned and replaced by introducing an openness to intersubjective motivation.

This bet was justified by the understanding that scientific knowledge is a particular type of knowledge produced in the experimental dialogue between reason and scientific experimentation⁷, the basis for the training and legitimation of professional practices⁵. Its production takes place within the research community, and the consumption in the communities of practitioners and professional schools. What is produced needs to be assimilated by those who consume it. And the assimilation requires the attribution of meaning to the acquired knowledge. Hermeneutic exercise of comparison of the part in the whole and the whole in the part (knowledge x context, and vice-versa).

It is reasonable to assume that reductionisms applied to this whole weakens the meanings attributable to the scientific knowledge; while amplifications... strengthen them. Restricting the experiences to activities within the walls of professional training schools limits the exercise of attributing meanings to professional knowledge. Offering knowledge that dialogues with the complex experiences of society and culture in general gives power to this exercise, because there is inside culture a repository, alive or not, analog or digital, of distinct and plural knowledge coming from other human ways of experiencing the world (philosophy, humanities, arts, common sense, law, politics, religion)²⁹.

Opening up the professional training offered by the discipline was understood as fundamental to requalify the pragmatic exercise of attributing practical meaning to the applied scientific knowledge, through the science-culture hermeneutic.

In a new format, neither SUS workshops nor the traditional extension was proposed as extramural modalities in field activities. The option chosen was the reverse extension to expatiate on the themes of the rounds and upon the voices of activists representing epistemic communities.

Inherent in the very idea of creating an Ecology of Knowledge environment for professional training, the discipline ended up by becoming an open, public, pedagogical, community-based and collaborative venture involving dozens of people and groups who joined in. It was up to the responsible professors to define the program content and to invite the corresponding activists.

The invitation was made to knowledge and practices, full of democratic meaning, professional or not, alive, inclusive and emancipatory. Activists engaged by bonds of identity and action in communities of practices

that are also, each in its own way, active epistemic communities. What do they have in common? They elaborate their discourses and guide their practices from values justified in the ethics of life and in the critique of the reductionism of the business ethics (of utilitarianism) in their practices. Some of them participate more routinely in the discipline while others participate on a more occasional basis. It is interesting to note the willingness of all of them to accept invitations over the last eight school semesters.

As examples of these communities: SUS managers; SUS workers; SUS users; intellectuals identified with the Brazilian Sanitary Reform Movement; professionals from the private health market; party leaders; REHUNA (Network for the Humanization of Childbirth and Birth); NGO Artemis; Movement of Local Social Networks of DF; Social Technology Management / CRATS / SEDESTMIDH / GDF; Yura Kaya Xinã/Jordão-AC Project; Almas Benzedeiras Healers' School - DF; GT PICS of the Federal Council of Nutrition; GERPIS - SES / DF; CERPIS Planaltina; Center for Forest Medicine - AM; Center for Sustainable Practices of Mangueiral / IBRAM-DF; Ecovila Village of Altiplano; Network of Sustainable Agriculture Communities of the DF; CSA Bindu; WWF Brasilia; Water and Transdisciplinary International Center; World Alternative Water Forum; Subverta; Time Bank; Agroecological Communities of Well Living; among others.

The program content was arranged in a series of linked rounds of talks that formed a collaborative agenda. In the Covid-19 pandemic, they became lives produced in a synchronous meeting on the MS Teams platform and published on Youtube³⁸. The order of the rounds was defined by the objectives of the teaching plan. The number of rounds varies from 12 to 14, given the possibilities of the academic semester

calendars. They are distributed in four thematic blocks: (i) modern health practices: rationale, offer, and access; (ii) the structural limits of modern health practices; (iii) what has been lost/denied with the modernization of health practices; (iv) prospects for overcoming current conventional health practices.

In the 2021/1 offering, as to the workload, the first block addressed six themes that are close to the leveling contents always offered by the discipline, namely: Round#1 Market, State and the Health practices: the professions and public policies; Round#2 Operational Concepts; Round#3 SUS: history, principles and guidelines; Round#4 Round of EaD videos without guests (video#1 - Health Systems in the World; video#2 - Have you heard good things about the SUS system?; video#3 - Why is the SUS system like this today? video#4 - The principles of the SUS system; video#5 - Get to know the Family Health Strategy; video#6 - Traditional Model x Family Health Strategy; video#7 - Community Health Agent; video#8 - NASF - Interview with Larissa de Lima Borges; video#9 - SICKO - SOS Health); Round#5 PHC and Family Health Strategy; Round#6 Public health services, disease burden and post-pandemic challenges. (The theme of Urgency and Emergency Network awaits insertion).

The second block, "re the limits", approached two themes: Round#7 Aging; Round#8 Childbirth and birth. (The theme of abortion awaits insertion).

The third block, "re what has been lost", addressed two themes: Round#9 Social Technologies; Round#10 Traditional Practices.

The fourth and last block, "of perspectives", approached two themes: Round#11 Integrative Health Practices and Use of Plants; Round#12 Water, Agroecology, Agroforestry, Social Innovation and Health Promotion. (The themes: plants and health; and, water and health await

space in future academic calendars to be highlighted by specific meetings in this block).

In the rounds, the systematic participation of the students takes place in the activation. Each student in the activation group must ask at least one question (preceded or not by considerations). These questions are freely constructed without any tutelage from the teacher or monitor.

During the round, an initial free speaking time of 20 minutes is assured for each guest, followed by the activation of the students, each of the questions presented must be answered in a maximum shared time of 10 minutes. Before moving on to the next question, the floor returns for the activator's reply; and, if needed, it goes on for rejoinders. With all this dynamic, generally, in each class, the rounds manage to answer between 6 and 8 questions from the activation.

For the students, there is also a whole set of asynchronous activities developed in the pre- and post-meeting periods. These are offered in the Virtual Learning Environment (VLE), via the

Moodle platform. In Moodle, there is support material generally in text and video formats. As a pre-round activity, the activation questions that will be collected beforehand are posted. As a post-round activity, students must report on them. The reports are structured and include, besides the identification data, items such as: Description of the activities; Considerations; What the round has added; Positive points; Negative points; Suggestions.

In the report, the students also evaluate each round individually, by assigning scores on a Likert scale between 0 and 5, where: 5 - Very Good; 4 - Good; 3 - Fair; 2 - Poor; 1 - Very Poor. Based on this evaluation, one can infer the satisfaction (sum of answers 5 and 4); indifference (3); and dissatisfaction (sum of answers 2 and 1) of the students regarding them. In this atypical, exceptional, remote, stressful, and compressed (Covid-19 pandemic) academic semester, the students evaluated the rounds held (table 1).

Table 1. Students' evaluation of the activities and satisfaction inference. Health Practices, class F (Dentistry), 2021/1

	Respondents n	5 - Very Good		4 - Good		3 - Fair		2 - Poor		1 - Very Poor		Satisfied =5+4	Indifferent 3	Dissatisfied =2+1
		n	%	n	%	n	%	n	%	n	%			
ROUND 1	46	31	67,4	13	28,3	2	4,3	0	0,0	0	0,0	95,7	4,3	0,0
ROUND 2	49	35	71,4	10	20,4	3	6,1	1	2,0	0	0,0	91,8	6,1	2,0
ROUND 3	48	35	72,9	11	22,9	1	2,1	1	2,1	0	0,0	95,8	2,1	2,1
ROUND 4	46	34	73,9	10	21,7	0	0,0	2	4,3	0	0,0	95,7	0,0	4,3
ROUND 5	46	37	80,4	5	10,9	1	2,2	3	6,5	0	0,0	91,3	2,2	6,5
ROUND 6	40	30	75,0	8	20,0	1	2,5	0	0,0	1	2,5	95,0	2,5	2,5
ROUND 7	38	26	68,4	6	15,8	4	10,5	1	2,6	1	2,6	84,2	10,5	5,3
ROUND 8	40	36	90,0	2	5,0	2	5,0	0	0,0	0	0,0	95,0	5,0	0,0
ROUND 9	31	17	54,8	9	29,0	3	9,7	0	0,0	2	6,5	83,9	9,7	6,5
ROUND 10	34	27	79,4	3	8,8	2	5,9	0	0,0	2	5,9	88,2	5,9	5,9
EAD 3.2	49	29	59,2	14	28,6	5	10,2	1	2,0	0	0,0	87,8	10,2	2,0
EAD 4.2	43	33	76,7	9	20,9	1	2,3	0	0,0	0	0,0	97,7	2,3	0,0
EAD 6.2	39	33	84,6	4	10,3	0	0,0	1	2,6	1	2,6	94,9	0,0	5,1
EAD 7.2	34	22	64,7	6	17,6	5	14,7	0	0,0	1	2,9	82,4	14,7	2,9

Round 1 Market, State, and Health practices: the professions and public policies; Round 2 Operational Concepts; Round 3 SUS: history, principles, and guidelines; Round 4 Round of EaD videos without guests; Round 5 PHC and Family Health Strategy; Round 6 Public health services, disease burden, and post-pandemic challenges; Round 7 Aging; Round 8 Labor and Birth; Round 9 Social Technologies; Round 10 Traditional Practices. Rounds 11 Integrative Health Practices and Use of Plants and 12 Water, Agroecology, Agroforestry, Social Innovation and Health Promotion had not yet been evaluated by the students of this semester, at the time of writing this article.

EaD 3.2 Video about the history of Public Health in Brazil; EaD 4.2 Video of SICKO - SOS Health; EaD 6.2 Video - Alive Inside; EaD 7.2 BBC What Makes us Human.

Despite the internal variations in the composition of the data in table 1, two occurrences stand out: (i) first is the inferred level of the students' satisfaction with the activities, always above 80% of the class, reaching 95% over half of the times; (ii) next, there is the dropout of approximately 25% of the class, since, given the exceptionalities of these pandemic times, there have been high student's dropout rates in practically all subjects; and, in order to minimize damages, the university has been allowing students to take a leave of absence until the last day of classes without any hindrance or penalty.

In turn, each report submitted by the student is assessed by a monitor, then graded and returned with comments. The discipline has one scholarship monitor and almost a dozen volunteer monitors. The number of students who are interested in maintaining contact with the discipline as volunteer monitors also merit a grade.

The students are evaluated by the number of reports submitted and by the average grade achieved. Attendance and participation in the activation (binary: participated or not) are also evaluated; besides, there is also a moment of self-assessment. The structured instrument used by the student to evaluate each round is also applied to the self-evaluation at the end of the semester. The student evaluates his-her activities besides making considerations about them and highlighting positive and negative points.

3 FINAL CONSIDERATIONS

Using the discourse of science in dentistry higher education in pragmatic and open modes charges us to use science as a model for the formation of critical and reflective thinking, and also as a model for breaking the expectations for absolute truths³⁹. By keeping it permanently vigilant not only against the risk of becoming dogmatic itself, but also against the dogmatism that is inherent in both the political doxa and pre-

political associations⁴⁰.

It also charges us to open science to the joy of the simple doxa opportunity. In each round, of the Freirean culture circle type⁴¹, nothing that is said among teacher, guests, and students is put in the form of annoyance, harshness, and confrontation. In an atmosphere of frank fellowship, one shares Arendt's pedagogical belief that sharing joy is absolutely higher than sharing suffering. The joy of the pleasure of truly human dialogue with another person and what is said differ from an ordinary conversation or even a discussion⁴². One bets on the joy of dialogue in political doxa and not necessarily on the compassion of the humanism of fraternity because, although important, this is irrelevant in political terms⁴².

This is possibly one of the keys to Habermas' communicative action in education. The joy for the presence of the other in relationships we have established in the public sphere; the joy for the otherness of speech in the mundanity that is configured in the common space among us that distinguishes us and unites us.

Hopefully, the expedient of the presence of guests will be incorporated into the format of the classes of other Collective Health disciplines, or related ones. Invitations should be preceded by some problematizations: Which "world" does this guest come from? Is there a worldliness, diverse and plural, associated with his-her message? Is his-her presence engaged? Does s-he come alone or does s-he represent a collective? Does his-her collective constitute a diverse epistemic community?

If internships are to provide each student with a previous and "relatively protected" experience of the practical demands of the world of work; if the theoretical contents implied in these practices are worked on in a complex, open, plural, democratic, human and worldly way in disciplines prior to and related to the internships;

perhaps, this form of offering will be the bridge, the arc of pedagogical promise, so that each student in a future internship setting can be prepared by previous and related disciplines to assign value and meaning to his-her presence in the field.

In a pragmatic linguistic context, the scientific literature used in professional training, far from remaining idealized and detached, can be desacralized and transformed into a frame of references for a humanized and worldly dialogue. Be subjected to the epistemic and ontological properties of reality: relativity, complementarity, uncertainty, and metastability. With such twist, it is expected a greater capacity for students to attribute meaning to the set of Collective Health disciplines, to the internships in SUS settings, and to other professionalization efforts in Dentistry, or in any other Health profession.

In this way, paths are opened to explore John Dewey's belief that the ultimate justification of science is democracy^{40,43}. A science that moves away from instrumental scientific knowledge, maximizing gains, privileges, subjugation and domination. A democracy that is not something merely instrumental, procedural, reduced to an electoral market⁴⁴; but a communicative environment of interaction and of rescue of the dignity (lost in the instrumentalization of relations) of plural coexistence in the political public sphere, among different respectable speeches, for equally respectable audiences that exist and express themselves within culture. A living democracy that, with its breath, allows us to continue transforming such initiatives, such as a mere university discipline, into a social and collaborative pedagogical enterprise, just as Health Practices are today.

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RESUMO

Para abrir a ciência odontológica: buscas epistêmicas para uma formação mais plural e democrática, humana e mundana

O propósito desse texto é relatar a experiência iniciada em 2016 de giro epistêmico da disciplina Práticas de Saúde (DSC/UnB) para alinhá-la ao esforço pragmático de formar estudantes mais capazes de atribuir sentido e valor à sua presença futura em cenários complexos de prática, tais como os campos de estágio no SUS. O artigo considera que sem a Ciência Moderna não seria possível consolidar as profissões da saúde como profissões igualmente modernas, mas problematiza a perspectiva epistêmica (reducionista e positivista) que suporta suas teorizações, e compreende a cultura científica vigente como obstáculo, seja para a atualização dos referenciais epistêmicos, seja para uma formação democrática que considere a pluralidade dos discursos no interior da cultura. Apresenta as dificuldades institucionais nos cursos de saúde da UnB para introduzir os estudantes dos períodos iniciais em atividades de campo no SUS, e justifica a opção de apostar na pragmática como antecipação à práxis, de fazer a ação do discurso como acumulação para ações subsequentes de intervenção em campo. Nesse contexto, optou-se pela estratégia de extensão ao contrário (extensão inversa, reversão da extensão) para abrir o diálogo de saberes com outras comunidades epistêmicas na formação profissional universitária. O artigo descreve o processo e faz uma análise crítico-reflexiva do mesmo.

Descritores: Educação. Ensino de Odontologia. Ciência. Democracia. Cultura.

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