

Distance Education and Interdisciplinary Teaching: A Discussion of Knowledge and Power in the Context of Curricular Mutations

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Abstract

The dynamization of information in recent years has provided significant advances in classroom and distance education. Despite the advances in structure, technology and in the internalization of distance education courses in Brazil, there is little progress in discussions on the curriculum in this method of education. We can no longer think of distance education courses as a transposition of the classroom teaching curriculum as had been previously elaborated in a content-focused manner with disciplinary closure. We must think of a curriculum for distance education that is able to overcome the barriers imposed by the disciplines of classroom teaching, less content-focused, an interdisciplinary curriculum. Within the alternatives of possible questioning to the curriculum in this context, Michel Foucault is a theorist who contributed considerably to the poststructuralist critique that sustains addressed considerations (these ideas are addressed in Foucault's section) to resume the discussion. The change of the historical-cultural context implies the need for proposals to consider the multiplicity of cultural texts, in the disciplinary spaces hosted in Virtual Learning Environments (VLE) in a trans disciplinary manner. This conception in the elaboration of the curriculum enables the development of a "mutant curriculum" which is more than just a simple modification starting from the replacement of terminologies and deletion/addition of contents. One has to think of the curriculum changes as possibilities of metamorphic changes in response to "evolutionary adaption" of discussions regarding syllabi which constitute the disciplines hosted in VLEs and impacts the learning of all those who make use of digital technologies in distance education.

Keywords: Curriculum; Distance Education; Foucault; Interdisciplinary Education.

Distance Education in the Context of (inter) disciplines

Contemporary society has experienced, in recent years, major changes in technology that have caused important changes related to the dynamization and expansion of access to information. This expansion has enabled a breakthrough for higher education in Brazil and an increase in the demand for courses that train teachers for basic education, contributing, in this manner, to the implementation of Article 87, § 4 of the Law of Guidelines and Bases of National education (LDB), which states: "by the end of the Decade of Education only university educated teachers or those trained by in-service training will be admitted".

In this context, distance education began to be structured since the LDB and by Decree No. 2494 of February 10, 1998 [1], Decree No. 2561, of 27 April 1998 [2]. All these official documents focus on the need for teacher training to fill the gap that the educational system has of professionals with academic training in their specific areas of expertise [3, 4] According to the data of Sanchez [5] only 11% of young people aged 18 to 24 have access to higher education. In this sense, with this growth, distance education will be able to minimize the demand for science professionals, thus, distance education, supported by technological advances, becomes a fertile field to enable differentiated training strategies and ensure training conditions for professionals who are already practicing teachers.

There is great interest in the implementation of distance education for teacher training, however, little has been standardized and discussed about the curriculum of this type of education (REFERENCE). Soon, there will be a transposition between the curriculum guidelines of classroom teaching for distance education. What is at stake, however, when it comes to distance teacher training courses; it is to understand whether this curriculum implementation is able to train teachers for teaching that can include classroom and distance teaching, the use of technological resources and transdisciplinarity. Problematizing these issues of curriculum denote the need for a new dialogue and a critical look at distance education, which does not necessarily go against classroom teaching, but differs in some respects, like the relationship established in the mediation of learning through the virtual platform, in a dynamic and interactive way. In drawing up a curriculum for distance education, there is a need to establish strategies of significance and coordination between the specific content hosted in virtual environments and the excess of information that may exist in these spaces.

With the dynamization of information, educational simulations, virtual laboratories and virtual learning environments it is no longer possible to design the curriculum for distance education as had been previously prepared. In this sense, the disciplines of distance education are a good archetype for the analysis and understanding of how this curriculum was structured for this type of education. In these disciplines, we can identify the content-focused manner in which they were designed, which in some cases, still permeates the pedagogical discourse which results in a disciplinary closure. As a way to help the difficulties encountered in existing disciplines in classroom teaching, sometimes new disciplines are created as ramifications; unfortunately, by already treating complex objects these new disciplines cannot solve the problems that persist from the previous disciplines [6].

Consequently, new articulations come forward to meet this demand and some curriculum proposals are developed. In this article we defend the interdisciplinary curriculum in distance education. Chassot [7] says that the new educational realities of contemporary times require a new type of teacher and the academic curriculum should be restructured so that the disciplinary may turn into interdisciplinary, with the proposed use of interdisciplinary as a methodology.

Chassot[7] proposes that the school should assume postures that pass through trans disciplinary concepts and adopt interdisciplinary methods. The prefix "inter-" in the word "interdiscipline" has many interpretations, some of which are addressed, to know: indicates to include, in various disciplines, characteristics of a first, sharing specifics of a particular discipline to be used in others; also indicates the idea of incorporating elements, methods and knowledge from other disciplines, suggesting that no discipline can be "complete" alone; may indicate a sense of denial, where disciplines are denied in the etymological sense of the term, since they cause a certain type of submission which should be put on trial.

In this analysis bias, discussions involving distance education can be (re)considered, taking into account this new educational conformation that denotes the existence of knowledge societies that share information in real time. For these courses created within the distance framework, it is urgent to think of the articulation of disciplines from strategies that enable the exchange of information between them, allowing disciplinary transgressions in order to deny the rigidity that the traditional conception of discipline advocates. This makes the understanding of disciplines necessary in the context of distance learning, which are steeped and wreathed by a scientific method that is able to make use of available technological resources, in a streamlined manner.

Although it is very widespread, it is necessary to reiterate that the mere existence of technological resources in academic spaces does not guarantee a consistent teaching practice, in the sense of enabling multiple forms of significance to the student who comes into contact with the contents presented and developed in virtual environments. Often times it reduces the importance of methodological dialogue systematization of these changes which necessarily involve disciplinary and trans disciplinary issues.

It is not permissible to think of the use of methodological proposals in the context of distance education making use only of the dynamic adopted in classroom teaching and, in addition, whose methods employed do not, in many cases, accompany technological evolution. The change of this historical and cultural context implies the need for proposals to consider the multiplicity of cultural texts, in the dynamization of disciplinary spaces hosted in Virtual Learning Environments (VLE) in a trans disciplinary manner.

Historically, humans have been "molded" to be disciplined subjects. In every scientific revolution, science and knowledge become more streamlined and fragmented, which, in a way, makes understanding them more difficult. Transdisciplinarity requires knowledge not be restricted within its own disciplinary field; beyond encompassing it, it should expand beyond to something that is contrary to it or at least different. This, however, should not be understood as a unifying super-discipline which includes other disciplines within one. The concept proposes that a discipline is simply and simultaneously, open and closed [6].

Taking into account the aspects which involve hypertextuality in the context of distance education, it is possible to see the need for the use of trans and interdisciplinary methodological strategies, which contemplate a broader discussion that can be established when discussing teacher training in the face of the educational demand as mentioned above. Once humans made progress in the sense of thinking multiple forms of access and democratization of higher education through distance education, it became necessary to analyze the required didactic transposition which is minimally able to meet contemporary educational aspirations.

Based on the above, this article aims to think methodologically in the creation of a curriculum for distance education, taking into consideration this new contemporary dynamic, which reflects the postmodern nuances under the umbrella of a differentiated curriculum which we refer to as mutant curriculum.

Reflections Regarding Curriculum

In the educational context, especially in distance education, the term curriculum is used to describe the program of a discipline, a course, or can be described as that which covers the various educational activities through which its content is developed, and its materials and methodologies used [8]. It is important to stress that the dimension which holds curriculum nowadays consider a multitude of factors that act as a driving force in changes that are observed in culture, economy, politics and education.

In 1918, Bobbitt wrote "The Curriculum", a work considered a milestone in the history of the curriculum. In it, he proposed that the school should function just like any company, based on the principles of Taylor's scientific management. In his view, the issue of the curriculum becomes a matter of organization, a technical issue.

In a deeper and more complex analysis which considers other historical, social, economic and political elements, Silva [9] presents some considerations regarding the curriculum, which are applicable to distance education.

"It is always the result of a selection: a universe of broader knowledge and expertise selects the parts which will be, precisely, the curriculum. The curriculum theories, having decided what knowledge should be selected, seek to justify why "this knowledge" and not "that knowledge" should be selected."

Even if they follow national curriculum guidelines each institution has a unique curriculum, permeated by the specifics of the organization, the society that puts it into practice and the citizen who intends on obtaining a degree, since all people related in one way or another to the curriculum have some influence on it [8].

The post-critical model shifts the focus from capitalist logic of the Marxist tradition to the classes of culture, ideology, subjectivity and appreciation of the experience lived by the student. The curriculum is directly related to the "I", how people develop and what they become, involving issues of power in all relationships that permeate the everyday life in and out of school.

The curriculum seeks to change the people who will interact with it, having as its goal an education committed to developing the plurality and diversity of cultural universes. This cultural diversity is in agreement with contemporary reality and needs to permeate the discussions within the scope of distance education. The current context is privileged when considering the discursive wealth fueled by the endless possibilities of meaning in syllabi content, which go on to include a portion of the curriculum in distance education courses.

In this sense, a curriculum proposal for a new distance education curriculum design, which is consistent with the postmodern condition and which minimizes the incompatibilities between the proposed curriculum and the contemporary dynamic, will be discussed. These propositions denote the existence of a new curriculum, henceforth called mutant curriculum.

Curricular Incompatibility in Distance Education: the Mutant Curriculum

To explain the context of the curricular mutations that are being proposed in this article, we will start with the definition of mutation and present the idea behind the design of this mutant curriculum- a term not yet used in the literature.

According to the Aurélio Portuguese dictionary [9], mutant refers to an animal or plant that introduces new characteristics for the whole of their ancestors. In this sense, the mutant curriculum, according to our proposition, is the result of a process of "evolution" being triggered by the need to think of new curricular proposals for distance education, as well as classroom teaching. These adjustments are generated from the need to minimize the incompatibilities generated in the postmodern context. Incompatibilities in relation the curricula, the pedagogical practices, and the subjectivities.

To properly analyze this context of curricular mutations, it is necessary to refer to the historical aspects of the school's birth and the curriculum proposition that permeates the practices in distance education.

Considering the creation of the school and present time, Sibilia indicates that there are historical and anthropological explanations for the disparity between the school and students of today. This did not happen from one moment to another, this is a long historical process which now becomes increasingly evident and of which the recently popularized digital technologies are not restricted. This process makes it latent that, "on one hand we have a school, with a classicism that it carries on its back; on the other hand, the increasingly undeniable presence of these 'ways of being' which are typically contemporary".

In times of globalization and connectivity, digital technologies are gaining more and more space and come to occupy the daily lives of people. Authors who study the educational process point out those digital technologies affect school. Silva and Claro indicate that:

Traditional roles of teachers and students undergo profound changes, since the teacher, instead of merely

transmitting knowledge, must learn to provide multiple experimentations, educating based on dialogue, in the construction of collaborative knowledge, in the provoking of creative authorship in the learner. According to Sibilia, in school today characteristics that were previously combated such as originality, free initiative, motivation and proactive vocation are now being invested in. These characteristics present an approximation with an entrepreneurial profile that stand out as a profile of individuals of this time. For Sibilia the school is becoming antiquated machinery, and therefore, its components and operation are increasingly in conflict with the subjects of this time. All these changes occur so that the subjectivities formed in scholarly spaces meet the demands of contemporary society.

Along with the gleam and utensils that contemporary times have given birth to, it disseminates other forms of building subjectivity itself, and also new ways of relating to others and to position or function in the world.

From the understanding of these presented incompatibilities, we see the need to think urgently of a curriculum that is not restricted to a simple transposition of classroom teaching, but is the result of an "adaptation" to the new media and technological context of postmodern society.

Relationships of Knowledge x Power: Consequences in Curricular Mutations

Within the alternatives of possible problematization for the curriculum in the context of distance education, Michel Foucault is a theorist who contributed considerably to the poststructuralist critique that supports the considerations addressed. When discussing the relationship between knowledge and power, Foucault [13] enabled the understanding of the process of creation of knowledge that should be considered by articulated strategies in the VLE.

The vastness of Foucault's work provides subsidies for the elaboration of teaching strategies from the criticism that imposes the ideas, categories and methods that elaborate, transform and interconvert. Despite the reductionism that this may appear to be, Foucault can be understood as an "edifying philosopher" that never operates on the truth, but brings, from various readings, a range of possibilities. As an example of the applicability of Foucault's work, we can mention the intricate relationships between power and knowledge, the processes of subjectivity -understood as the mechanisms by which it becomes the subject and at the same time "subjects itself," to others and ourselves-, the archaeological and genealogical methods, the ethics -as caution of oneself-, the madness, the govern mentality, the speech etc.

According to Foucault [13], discourse is understood as a social practice, historically determined, which constitutes the subjects and the objects. In the moment of departure from modern metanarratives, taking into account the transcendentalism of the subject as a mythological approach, the philosophical view of Foucault points to problems and arduous and Hermetic tasks for which the redemptive mission of education does not hold.

When analyzing the new dynamics of power relations, Foucault demystifies the negative connotation that power denoted for centuries, shifting focus to its productive and transformative face, with unmatched ability to facilitate information fields and produce different versions of reality. The power relations established between the modern subjects, according to the author, flee their classic dichotomous form (as descendent characteristics) and which are exerted on others and on themselves. This is not a power which acts only on the bodies of individuals, but which is able to "govern the souls", or even that which produces governmentalization:

"What the eighteenth century initiated through the system of 'disciplining for normalization', seems to me to be a power which, in fact, is not repressive, but productive - repression is only a collateral and secondary effect, in relation to mechanisms which, in turn, are central with respect to this power, mechanisms which make, mechanisms which create, mechanisms which produce [13]".

Historically, there was incorporation in distance education of Cartesian elements from popular culture with regard to the relationship between education, school and body in the relations between power, knowledge and truth. For the problematization of this issue, it is analyzed, that despite postmodern theories directed at the discussion, education still has a tradition from the capitalist system. Althusser [10] has provided an economic purpose, because the school constitutes itself in an ideological apparatus central in reaching virtually the entire population for an extended period of time. Social structures principally maintain themselves through academic means. Fortunately, this reproduction of the social structures has altered substantially in recent decades, with the democratization of access to higher education, achieved by increasing the number of jobs in line with the public policies for distance education.

As the reproducibility of technical concepts is economically viable in the capitalist system, the process of targeting for a post-critical curriculum, which subsidizes the articulations in distance education tends to be resisted due to direct interference in the current knowledge and, concomitantly, in power relations. The relations, however, will not give themselves in an explicit manner. Power is inserted as a tacit, silent and stealthy war, and occurs in social institutions, economic inequalities, in everyone person

and in all of them [11]. These power relations interfere in the subjective ideology of the being, which "consists of those beliefs that lead us to accept the existing social structures (capitalist) as good and desirable" [6,10]. This resistance will be made, step by step, by the subordinate class.

In this respect it is important to think about the dynamic imposed by distance education which resizes the power relations, when one thinks, for example, of the organization of teaching, in the context of conjunct action of many teachers where tutors and teachers work sharing didactic duties. This collaborative activity may, for example, minimize the strangeness of students who may perceive themselves lost in an environment that had been pre-designed as playful.

Understanding the institutions of sequestration to which Foucault refers, enables the discussion of the relations in the knowledge/power plane and which give themselves in a capillarized manner. According to this perspective, the academic space in the figure of the university can be understood as one of the institutions which establish the control of time and curriculum, both in classroom and distance education.

Since power is historically inserted in society, the whole truth is inserted within in it through speeches. This truth currently has certain characteristics- it is the result of scientific discourse, it has a political truth and another economic, it presents itself in many forms and is easily propagated, it is reproduced by political and economic systems, and, consequently, it is the object of ideological conflicts.

Performing an analysis of Foucault with respect to his concept of "power-knowledge", Veiga-Neto [12] translates that, "this entire heritage of body/mind relations transits directly with power-knowledge relations and education-training". Humans have been shaped by a legacy of perspectives that, in some way, are being substantially heeded for centuries, without further reflection, for various extracts of society.

Taking up this historical relationship with power, the body and education, Foucault [13] reflects that:

"Power, far from preventing knowledge, produces it. If it were possible to constitute knowledge about the body, it was through a set of military and academic disciplines. It is from a power over the body that it was possible for a philosophical, organic knowledge."

Thus, it contributes to the perception, "that nothing is more corporeal than the exercising of power, discipline, education, institutions, media influences; everything inflicts and affects the constitution of this body/subject." For Foucault, "the individual is a product of power and of knowledge."

Nevertheless, how does curriculum currently behave? It may be noted that it behaves in a useful manner for the economy and production, being what Apple [14] calls technical knowledge- one that relates directly to the current economic structure, since it deals with relevant knowledge for the economy and production. It should be observed that this curriculum maintains the social dichotomy, for while the ruling class learns to command the subordinate class learns to obey.

This dichotomy maintains itself both in Marxism and post structuralism. While economy, bourgeoisie and proletariat, and speech, normal and viewed as abnormal. The formation of thought is a form of power, and the relationship between power and abnormality never occurs, seeing as when an abnormality is defined with its corresponding normal, always, in one way or another, the normal has power over the abnormal, above all that which differs it significantly from normal. The exclusion of difference is given in an exponential manner. Creation is undervalued.

From these considerations, it is possible to perceive the need for affirmation of curricular alterations for the adequacy of distance education in this "new" postmodern reality. The trans disciplinary design in the elaboration of curriculum enables the development of a "mutant curriculum" which is not just a simple modification from the replacement of terminologies and decreasing/increasing of contents. One has to think of the existence of curricular mutations as possibilities of metamorphic alterations in response to an "evolutionary adaptation" of syllabi discussions which constitute the disciplines hosted in VLEs and which necessarily impact the professional training of all those who make use of digital technologies in multiple learning. The evolution mentioned does not have a connotation of disparagement of the alternatives previously addressed in the curriculum aesthetic, but reflects the incorporation of important debates that established themselves from the rhizomatic conception of power and deterritorialization of institutionalized knowledge in distance education.

Final Considerations

Education in contemporary times advocates the need for a less dogmatic and skewed look into the issues surrounding the disciplinary contexts. In this sense, teacher education made viable by distance education in a new conception of reality and meeting the professional demands of society denotes the importance of thinking methodologically of actions that permit the integration of curricula creating mutant curriculum. During the curriculum integration, it is important for the existence of hyper textual practices which address the possible correlations between the various segments that make up distance education.

The sharing of information and the dynamization of access to syllabi content advocates the need for institutional articulation which makes possible "disciplinary transgressions" in the sense of denying the traditional conception of discipline.

The use of methodological proposals in the context of distance education that go beyond the linear transposition of classroom teaching is necessary, which indicates the need for proposals that consider the multiplicity of cultural texts, in the dynamization of disciplinary spaces hosted in Virtual Learning Environments (VLE) in an interdisciplinary and trans disciplinary manner.

In order for there to be compatibility between the new curricular proposals, the elaboration of a "mutant curriculum" is important, not to imprison and restrict educational activities, but to be constituted as a movement that reflects on the necessary changes and ensures practices that can be incorporated institutionally in distance education. These changes are not the solution to all the problems that arise in the context of distance education, but reflect the importance of changes that minimize the incompatibilities observed from the elaboration of content hosted in the Virtual Learning Environment to complex questions related to contemporary education.

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