

Educational Evaluation and Codeterminations of School Production

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Abstract

This article is about school evaluation. The objective was to explain critically the mediating relationships between educational evaluation and the production of school knowledge from the perspective of the Dialectical Historical Materialism. With this interest, a documentary analysis was made, obtaining as result four explanatory categories: production, subsumption, distribution and exchange of knowledge, which form a concrete totality with distinctions and antagonistic relationships between them, limited by their opposite. It is concluded that the evaluation as a mediating form lacks antagonistic pair and consequently of control by opposition, emerging from the school daily as autonomous and sovereign entity, oppressive of school subjects.

KEYWORDS

Evaluation; Critical Theory; Assessment

1 Introduction

According to Houaiss et al. (2009), to evaluate is a direct and indirect transitive verb. That means that it has no complete meaning and therefore demands direct as well as indirect complement. Who evaluates, evaluates something from someone; something answers to: what or what is it? So the direct object can be identified, it's to say, what the direct action of the verb receives: it is what will be evaluated.

Roegiers (2010) argues that the verb meaning comes from the term ex-value expressing extracting the value of, highlighting the value of. While for the Real Academia Española (2016), to evaluate has to do with Estimate the knowledge, skills and performance of students.

In line with the Real Academia Española, dictionaries specialized in education -such as Garrido (1996)- define the act of evaluating depending on the student group and in terms of teaching responsibility. This concept is associated with the control of the institutions educational quality and school systems based on the note or qualification.

Etymologically, Vogler et al. (1996) claim that the power of the term is due to its Latin roots worth and value. The strength of a radical that, by prolonging and attenuating a prefix and a habitual suffix, does not alter its origin. This word evokes the price notion and at the same time that of estimation. In this sense, evaluation values the measure of everything. To

evaluate is to demarcate the success degree and at the same time it is to point out the possibilities of a realization (Barlow, 2006).

Ambiguities that in the final end up mixing the quantitative with the qualitative (Hadji, 1995). Thus, “the value of” sometimes acquires a quantifiable connotation, of measurement, of price; while at other times it gives a less weighted sense, of qualitative estimation, facilitating the diagnosis of learning difficulties and the possibilities of improvement.

Recent research accounts for the above. Business schools have the strategy of examining and implementing pedagogical studies based on the measurement of learning outcomes with sufficient statistical power Bacon and Stewart (2017). Although the evaluation process is not limited on identifying student knowledge (Santiago et al., 2017), it also serves as a mediator to balance different types of data and knowledge flows (Ellis and Smith, 2017).

It can be observed that the notion of evaluation mixes the quantitative (measurement) and the qualitative (ideal norm), the real (the universe of objects) and the ideal, ethics (that worthy of esteem) and the desire world (Hadji, 1995).

Therefore, until now, two matters can be inferred. First, that knowledge dge is the answer to what? / What is it? In other words, it is the value to extract. It is assumed so, knowledge is the value on which evaluative practice is constituted and, inside school environment, it is the matter to be evaluated in attitudinal and cognitive terms.

Second point, evaluation would involve the constitution of two worlds: ideas world and real world.

From the perspective of the Dialectical Historical Materialism (MHD), the idea is one of the three modes of intercorrelation between the living things and the real world (Pinto, 1969).

So that knowledge, in all its degrees, is always one of the modalities by means of which a part of the biologically organized matter suffers the action of reality and reacts to it.

In the case of the human being, the idea arises in the process of transforming reality as an reaction and alteration instrument of the ways of confronting the world (Pinto, 1969). Reason why, the idea and the circumstances transforming operation are dialectically unified in the work. But in turn, idea and work are synthesized in a higher concept: the existence production.

Likewise, idea is a possession that manifests a contradictory essence. On one hand, it turns out to be a consumption good: when it incorporates the productive action result on nature; while for another, it is a production good when it directs the human being creative action in nature (Pinto, 1969).

Human beings, by developing material production and material relationships, manage to transform reality and also their thinking and its products (Marx and Engels, 2010). In this way, the human being produces his own representations and ideas, which are direct emanations of his material activity. Under this perspective, production is the dialectical unity between being human and reality, as well as between idea and work.

Therefore, it is possible to infer that if the evaluative practice, as a mediating process, involves the ideas and real world, then the educational evaluation would be mediation of a certain type of production: school production.

Now, school subjects would be producing and managing school knowledge as a consumer good by subsuming the educational action result within the school, and a

production good, by using it as a guide to the educating practice (school production). Therefore, it would be worth analyzing the mediation relationships between educational evaluation and school production from the MHD perspective.

Thus, the question that I intend to answer with this research is: how are mediation relationships established between the educational evaluation and the school knowledge production from the MHD perspective? Therefore, the research objective is to critically explain the mediation relations between educational evaluation and school knowledge production from the MHD perspective. It should be noted that this approach is justified based on the material, historical and dialectical constitution of knowledge.

Likewise, I assume a critical position regarding evaluation as instrument of power, control and selection, considering school evaluation as an educational practice in line with an education that aims to the progressive elevation of the critical-collective consciousness, social transformation and human being liberation through the full realization of his faculties.

2 Method

The seven phases of the MHD that Dussel (2012) comments on were implemented. These are: (1) the real concrete (existing); (2) chaotic totality; (3) abstract determinations; (4) the constructed totality (concrete); (5) explanatory categories; (6) all historical concrete explained and, finally, (7) known reality.

In phases (1) and (2), through the use of the Eric and Scielo databases, I procured and selected articles related to school production, school results, school evaluation performance and school knowledge (Augusto, 2012; Bergamo and Bernardes, 2006; de Miranda Barbosa and Vieira, 2013; Erazo, 2013; Mesquita, 2012; Milner, 2013; Nonay, 2014; Trindade and Prigenzi, 2002). Official documents of the colombian national government on evaluation (ICFES, 2015) have been also studied, which is the reality closest to the research. In addition, I have taken into account the Ocede's evaluative vision from the manual on school improvement for Mexico (OECD, 2010), taking into account that this organism is responsible for the international test of PISA.

Other official and bibliographic sources have been used during phase (5) too, Among the first ones, the Decree 1279 of 2002 establishing the teacher salary regime based to academic production (Congreso de Colombia, 2002) and the Unesco world report 2005 on knowledge societies. Finally, in terms of bibliographical sources, studies on education and new technologies are included (Calle-Álvarez and Pérez-Guzmán, 2018; Chacón et al., 2014; Hernández et al., 2014; Moral Pérez et al., 2014; Morales Romo, 2017; Rincón-Bustos et al., 2015; Tedesco, 1998); as well as Alvin Toffler's (1980) futuristic ideas about information and knowledge distribution besides statistical data from The Scimago Institutions Rankings (sd) website about colombian scientific publications between 2002 and 2017.

In this phase (2), I tried to appropriate the research problem representations as chaotic totality part (Dussel, 2012). I assumed representation as the petrified historical characteristics projection in subjects consciousness which constitutes neither a natural quality of the thing nor the reality, but allows individuals to appropriate the real, seeking better orientation and familiarization in the world (Kosí k, 1995). In phase (3) the part of

the whole was separated, considering it at the same time as a whole. It is the analytic phase, where representation volatilized itself in abstract determination (Dussel, 2012). The contradictions seem to be isolated, abstract elements, without any relation.

Then, in phase (4), the reverse movement has been made: relocating the part in the whole. The production explanatory categories, subsumption, distribution and knowledge exchange formed a structured whole based on co-determinations (phase 5).

Thus, contradictions cease to be isolated elements, forming a more concrete whole, which explains reality (phase 6), becoming less unknown (phase 7). The contradiction is no longer the formal contradiction, it is the dialectical contradiction, this also means unity of contradictions; it is identity as well (Lefebvre, 1975). Fundamental definition for the present study.

3 Results Analysis

3.1 School knowledge production and subsumption

Educational process complexity in School environment has been reduced in a tendentious way to certain visible products production that ended up inducing an evaluation limited use. Standardized tests, for example, went to play a leading role within institutions and educational systems to offer results that subsidize easily comparable market indicators, stimulating individual and institutional competition through the scores comparative distribution (rankings) (Afonso, 2009).

In this way, the school is conditioned to produce quantifiable results. I have called this production type a *cognifiable* production. A particular school knowledge production case that tends to produce visible and measurable products. Overall, it is the attempt to quantify the school knowledge production in general.

Well now, this general production is also an subsumption immediate form. Double subsumption: objective and subjective. On one hand, every school institution needs financial resources that allow its proper functioning, among these, those destined to the teaching salary payment and those directed to educational practice sustenance. Also, the knowledge subsumption and educational practices are required. Teachers, professors and students are configured in school subjects subsuming content and pedagogical actions.

A particular case concerning educational evaluation results to be decisive for this codetermination. The external evaluation tests constitute a considerable factor in the mutual determination between curricular contents subjective subsumption and pedagogical actions, since through their mediation the teaching practice is affected. In a report on educational reforms and teacher work, that pressure on the teacher in student training has been shown to solve external exams and limit the curriculum to common core content are practices that lead to the teachers de-professionalization (Milner, 2013).

On the other hand, subsumption is also production. During the school educational practice, evaluative practices are activated allowing approving or not each student in relation to the contents. This is expressed in terms of performance and efficiency rates. That is to say, insofar as the curricular content and the schooling forms are subsumed, the school in general and the student body in particular produce their own *cognifiable* production.

When analyzing both phenomena under dialectical logic, where contradictions can concretely become identical (Lefebvre, 1975), it is possible to affirm production is also subsumption - an absurdity for formal logic. Although each one be its immediately opposite, it does not negate a mediating movement existence between both. Something that I will try to demonstrate.

On one hand, school production mediates the content subsumption by creating and conditioning materials and practices aimed at teaching it. In the *cognifiable* production particular case, the training practices and simulators are an example of this mediation applied in schools to ensure optimal results in external evaluations. Proof of this is the influence of the Ideb index on the daily life of Brazilian public schools (Mesquita, 2012).

Yet. The *cognifiable* production, with the external evaluation tests mediation, would be creating the consumerist need for the private nature complementary courses, promoting so a new educational market. This is the case of Colombian companies, which offer students training courses for State Tests (Remolina Caviedes, 2017). In this way, I could affirm that the educational market of external evaluations (training courses, promotion and / or sale of simulacra, teaching material production and sale) would be determined by the fact that *cognifiable* production is immediately subsumption.

In addition, I am trying to demonstrate that *cognifiable* production would also produce subsumption particular forms, beyond producing quantifiable objects. The curricular content and educational practices are not the same in schools with technical and pedagogical resources, with well-trained and well-paid teachers, as in those where there are terrible working conditions with unqualified teachers, so, given that the form of schooling is a social subsumption of the ideas, this curricular content and this educational practices would also be produced from the resources (tangible and intangible) that can be obtained through *cognifiable* production effect.

An example: school ranking would be a motivating factor in the educational practices improvement, either to maintain or achieve better positions, which would produce certain types of subjects committed or not to the institution. The foregoing allows me to affirm that *cognifiable* production would not only be a matter of objectification but of subjectivation too, when creating schools users (subsumers).

On the other hand, I also try to show that subsumption equally mediates *cognifiable* production, since it procures a subject from school results perspective. Subsumption produces *cognifiable* production in two ways. First, in the concrete use of school results, since the school product is true *cognifiable* product when used in one way or another. Either in the educational policies implementation and justification, or also, as a determinant of the financial resources distribution. That is to say, the educational indicators stop being simple numbers until when they serve to justify and legitimize political and / or financial decisions.

Second, subsumption creates a new *cognifiable* production. It establishes a production ideal around an idealized object: quantifiable goals. Therefore, if the *cognifiable* production externalizes the numerical object, the subsumption produces the object subjecting it like an educational purpose.

Finally, we can admit that school production in general and *cognifiable* production, in particular, creates, produces subsumption. School rankings based on quality indicators produce contents subsumption, resources and teaching strategies. They even produce

courses and didactic materials, generating the educational market of the external evaluation tests.

3.2 School knowledge distribution and production

Recognizing social class division allows me to suppose that knowledge, ideas, as well as produced material goods, are distributed unequally. Each subject receives the socially produced knowledge through a differentiated educational practice depending on its location in the scale of material production. Thus, society knowledge distribution seems to be the same as the general production distribution, where the production determination is privileged over distribution (Marx, 1985). Then, from this first approach, knowledge production conditions its distribution.

Bergamo and Bernardes (2006) affirm that knowledge production appears to be linked organically with production mode realized through the relations existing between material base (productive forces unit and production relations) and super-structures (legal-political and ideological). Knowledge produced individually and collectively in various institutional spheres is transferred through institutions and circulation means that organize their own producers within the social metabolism. So that between the material base interaction and the society legal-political structure, institutions organized to produce knowledge such as the university.

That one, in turn, is organized in various spheres (pre-graduate, post-graduate and teachers) due to its producers individual and collective coexistence (Bergamo and Bernardes, 2006). For the authors, the areas diversity and university premises require transferring and obtaining information, which is organized through certain mechanisms (e.g magazines, newspapers, etc.) and institutions (the university itself).

Now, in the school environment, production seem to condition the distribution. The distribution, as well by its object (scores, ranking, goals) as its form (specific production participation mode), would seem to be a effect of the production. Each school institution, due to its *cognificable* products, is classified in function of its performance categories. This is schools and students case inside of Colombian school system. Each student is classified in function of his external evaluation tests score; therefore, each school is classified according to its students performance (ICFES, 2015).

However, before the *cognificable* production , this distribution distributes the resources and everybody around school production . It's to say, distribution is also determining knowledge production.

Trindade and Prigenzi (2002) affirm that knowledge production at universities happens to acquire strategic meaning for global economy current societies. The international scenario is divided into central countries (generators of new scientific work) and peripheral countries (consumers of new knowledge produced by the former). In this way, it seems that in the globalized societies knowledge distribution precedes and determines their production. For example, an advanced society in terms of knowledge is divided into scientific or technological poles, thus determining its way of producing knowledge.

Current knowledge distribution, based on scientific publications supported by international renown editorials, conditions the same production, even more so when it becomes a determining factor for the allocation (distribution) of financial resources.

Colombian university faculty salaries could serve as an example. With the entry into force of Decree 1279 of 2002, in all country public universities each teacher monthly remuneration is determined from the accumulated points from academic production (Congreso de Colombia, 2002). Consequently, this implied a knowledge national production increase in terms of scientific articles. This is how The Scimago Institutions Rankings (s.d) website registers a colombian citable documents increase of 1021.14% between 2002 (988) and 2017 (10191).

In attempting to extend this determination to the school environment, I may suggest that *cognificable* production is effect from the distribution.

The current digital knowledge distribution and its influence on new ways to produce knowledge could be taken as an initial example of such practical dispositions. The proliferation of the environments and virtual objects widely modifiable and infinitely accessible, has facilitated work and collective construction of the the knowledge (United Nations Educational, Scientific and Cultural Organization, 2005). Digital multimodal texts are proof of this, Since they permit argumentative training at an early age (Calle-Álvarez and Pérez-Guzmán, 2018). It has even been proven that digital sensory resources provision improves deaf students performance in reading comprehension external tests (Rincón-Bustos et al., 2015).

However, these new distributing and producing knowledge ways depend on political and economic dispositions.

An investigation of the use of ICT in rural Hispanic-American schools reflects concerns in this regard (Hernández et al., 2014). The study confirms the precariousness of technical resources and the lack of political will on the part of government entities. Concluding that, although ICTs are tools for human development, their momentum within rural schools is a political issue that depends on the economic vision of the state. Conclusion supported by other investigations (Chacón et al., 2014; Moral Pérez et al., 2014; Morales Romo, 2017).

Therefore, thinking that an information democratic distribution would guarantee the access undifferentiated poor and rich to knowledge (Toffler, 1980) is to continue maintaining an optimistic idea full of naivety (Tedesco, 1998).

This means *cognificable* production level depends on institutions classificatory disposition in practical and political terms. Among this, the segmented structure of social classes and the implementation or not of educational policies.

In addition, *cognificable* production would mediate distribution since it would be producing ways to distribute subjects (students and teachers based on performance), space and school time. Scholar performance objective character is based on note and academic average quantifiable data, which allows students to be classified according to their performance: high, medium and low (Erazo, 2013). Likewise, it determines school failure as a classificatory category.

In the same sense, school results have consequences on teaching work. Augusto (2012) showed that there are teacher work definition categories, such as: good, responsible, high performance, competent, regular, insufficient, excellent and excluded by low performance (OECD, 2010). This, without ignoring, the possible organizational forms induced within the school in attention to professional compliance: teaching staff distribution in levels and teaching areas according to the capacity or performance expectations.

With respect to space organization and school time, one of the consequences of the evaluative approach is training preponderance for the external tests resolution where time and space converge to establish an evaluative culture (de Miranda Barbosa and Vieira, 2013), which is justified by its positive impact over the quality indexes Mesquita (2012).

On the other hand, production would be mediated by distribution through the creation of specific production modes and forms, such as administrative practices execution over the responsibility logic. In other words, the distribution would be resources distribution, responsibilities and specific actions to improve production. By accepting the distribution double conformation both by its object and by its form, characteristic aspects are identified in advance in both directions. Rankings and goals would make up the objective dimension. Its formal dimension: specific means to distribute financial, technical and pedagogical resources. Thus, both distribution dimensions, when rationally articulated in the economic limitation scope, would induce responsibility logics aimed at obtaining certain quantifiable results.

In summary, the evaluative practice articulation level can be perceived in the relationship between *cognifiable* production and distribution. On one hand, as an instrument of mediation, which induces subjects classificatory forms production and organizational styles with respect to space and school time. On the other hand, it accompanies mediation in the opposite direction, that is, as a mechanism linked to the creation of new *cognifiable* production forms in general, and school management, particularly.

4 Production and exchange of school knowledge

As in the previous cases, I start affirming that knowledge production is conditioned by its exchange. This can be illustrated with the case of Colombian public schools. Remolina Caviedes (2017) discovered that educational institutions with high performance in state tests have established accords with private enterprises which social object is to train students for these tests. school institutions, through the associations of parents and mothers of families, rent their facilities to develop these kinds of courses. While the private enterprises obtaining their profit through institutional prestige.

On the other hand, the exchange would also be determining knowledge production. Knowledge with little exchange probability tend to expire. In today's bourgeois society, scientific methods, areas of social interest, priority issues, correct reasoning, all are gaining validity and value if they show conditions to effect their exchange value (Bergamo and Bernardes, 2006).

This determination is also evident at school. Disciplines or subjects whose curricular content are not evaluated through external tests, are considered unnecessary knowledge. Music education in Spain for example.

With the new Law for Educational Quality Improvement, approved in 2013, none of Spain external evaluations contemplates the possibility of evaluating students in Cultural and Artistic Competence (Nonay, 2014). In author opinion, this would lead to areas elimination such as Art and Music in Basic and Medium education system.

On the other hand, I also try to show that exchange is mediated by production, mainly when it encourages new forms creation of change, where evaluation would have a leading role.

For Suchodolski (1965), production is part of the historical and real link that unites nature with the human being; it is the dialectical unity between practice and theory. But this unit breaks under capitalist logic. The human being is separated from his production product, in addition, the means to produce are also excluded from his work. Thus, theory is distanced from the practice and ideas as production goods, are set aside from the excluded social class cognitive process (Lefebvre, 2013).

So, monopoly of theory seems to guarantee production goods monopoly. This is how education must be harmonized with the pedagogical ideal of legitimizing and reinforcing the hegemonic class power, producing a fragmented knowledge. The dominant class that thinks is distanced from the working class, with which, the theory value gains more weight against practical work, so, evaluation seems to be the mechanism to determine the value of that fragmented knowledge.

Therefore, this type of knowledge would be determining its own production form and inducing for evaluation to be its exchange form. The evaluation would thus have two functions: estimate the knowledge value and serve as an exchange device.

Although it is also possible that the exchange mediates school knowledge production, above all, through subsumption and distribution. In a first instance, when subsumption mediates production, we recognize two forms: through the exchange policies are implemented what is trying to produce new production conditions, in general, and *cognificable* production in particular. School results have a specific use in terms of public policies that may or may not modify this production.

The second form is established when subsumption, as a concrete use of school products, uses exchange to produce another way of production, pretending an idealized object or goal, which in the case of *cognificable* production would be expressed in terms of numerical indicators (for example: Ideb goals, for Brazil, minimum annual improvement - MMM-, for Colombia).

Finally, as a second instance, regarding the distribution mediation over production, I consider that this is also done through exchange. The change of school products by objects (scores, rankings, quality goals) and distribution specific forms (distributing financial and technical resources specific ways) aims to ultimately modify the *cognificable* production through administrative logic for an resources organized and responsible management.

In this way, a movement of quantitative exchange aims to homogenize school knowledge with formal principles of the distribution. This would mean establishing exchange values, as Bergamo and Bernardes (2006) already announced, since this value type allows to compare qualitatively dissimilar elements to differentiate them quantitatively (Marx, 1985). Therefore, the evaluation would go from representing fragmentary knowledge change value to be a school knowledge general representation.

5 Conclusions

Given that evaluative practice is a mediating process that involves ideas and real world (Hadji, 1995), educational evaluation could be considered as school production mediation, this being a production particularity, as a dialectical unit between being human and reality.

Within this process, school subjects are constantly producing and managing school knowledge as a consumer good and a production good. In the first case, when the educational action result is subsumed within school and, in the second, when it guides school practice.

This work consisted in explaining in a critical way relations mediation between educational evaluation and school knowledge production from the MHD perspective. Thus, dialectical contradiction was assumed as a unity of contradictions that also means identity (Lefebvre, 1975). Under this theoretical-methodological approach emerged four historical explanatory categories as co-determinations of themselves: production, subsumption, distribution and exchange of school knowledge.

Knowledge dual nature allowed a school production co-determinations critical analysis in relation to evaluation. *Cognificable* production concept was suggested to identify school knowledge production as visible, measurable and quantifiable products, despite recognizing that commercial relationships are not possible in school and classrooms.

The analysis made it possible to establish that *cognificable* production produces the subsumption not only of contents, but also of technical, financial and pedagogical resources; in addition, it stimulates educational industry development through of educational market production articulated to the external evaluation tests in the way to sell training courses and teaching materials.

In addition, in the articulation of the objective and formal dimension of the distribution with the plane of economic limitations, the administrative logics of responsibility and management are considered, seeking to improve school products.

However, it should be noted that *cognificable* production mediates the distribution with the formation of classificatory and organizational structures. Students and teachers are distributed according to the evaluation results.

The same happens with organization of space and school time. Once the interest to reach educational goals has been established in quantitative terms, the school focuses on external evaluation and prioritizes training activities for these tests solution.

Quantitative reading of the world has effectively conditioned education, the way of producing knowledge and, consequently, forms of exchange and evaluation. They become functions of the evaluative practice: to estimate the value of knowledge, on the one hand, and as instrument of change, on the other. In this way, the evaluation ends by assuming school knowledge representation. Through it the school subjects try to appropriate the educational reality. This transforms the evaluation into one of the most significant mediations between school knowledge distribution and production.

However, the evaluation as a mediation instrument lacks an antagonistic pair, consequently, of control by opposition. Thus, it is possible to understand and explain the way in which this educational practice emerges from the school's daily routine in order to elevate itself and, finally, to itself becoming autonomous. Hence, evaluation as a human knowledge product escapes the control, becoming a sovereign entity, often oppressive. A

clear example of how in the school environment the abstract becomes a concrete illusion that is too real, that oppresses the concretely true: the human (Lefebvre, 2013).

Based on representation Kosík's concept (1995), I can conclude that evaluation as representation does not constitute a natural property of school knowledge, although through it school subjects try to appropriate the educational reality, obtaining better guidance and familiarization through its practical manipulation. Which enables it to act as a of the most significant mediating forms of school production.

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