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The Hidden curriculum of sustainable development: the case of curriculum analysis in France

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Abstract

Since a curriculum represents a selection of socially constructed knowledge, it should be interpreted as a stakeholder in an ideological process. It is a political issue whose forms depend, among other things, on the degree to which education systems are centralized. Today, supranational bodies can influence the curriculum, particularly within the framework of UNESCO's implementation of the decade of Education for Sustainable Development (ESD). Consequently, examining the curricula associated with the emergence of ESD involves examining the politics underlying them, politics which are not always explicitly stated – hence the interest in the concept of a hidden curriculum. The purpose of this study is to analyze the ESD curriculum in France. To this end, we use a methodology that considers the main work conducted about ESD in the framework of French research programs and based on the concept of hidden curriculum. This requires performing a diachronic analysis of changes in curriculum choices and forms of schooling, and identifying the value system underlying those changes. We identify several of the main characteristics of those changes, including in terms of project dynamics, partnership, transdisciplinarity, the role of knowledge, the distance from practice, and the persistence of a western conception of development. We then situate the French specificities within the international context.

Key words: Education for sustainable development, curriculum, hidden curriculum, sustainable development, values, institutional education, France, comparison

Introduction

The concept of sustainable development has become a commonplace of most discourses, and education for sustainable development (ESD) is now considered essential in the education of future citizens, even though there is debate over 'mainstream' versus 'alternative' curriculum orientations (Morris 2002; Moroye 2009; Foster 2011; Farey 2012; Reid, & Dillon 2015) or over the instrumentalization of curriculum policy and practice for economic purposes. (Fien 1991, Greenall, Gough & Robottom 1993; Jickling & Wals 2008). Thus, ESD was one of the key themes discussed during the 2015 World Environmental Education Congress (Reid, 2016). But actors involved in ESD research, particularly in France, driven by this innovation dynamic and an apparent social consensus concerning the necessity of ESD, tend to forget the need to understand the social implications of those innovations. Paradoxically, French researchers, confronted with increasingly targeted and utilitarian studies, also tend to be caught up in this situation. Describing the changes that occur in education for sustainable development, in school or non-school settings, does not involve the same work as trying to understand its meaning or the social issues it raises. The concept of hidden curriculum is useful for identifying the meaning and the social implications of ESD, and should, therefore, be considered in any reflection on ESD in France. Understanding the hidden curriculum in ESD constitutes a preliminary step for any didactic or pedagogical analysis or proposal. Since it is true that every curriculum has three aspects (real, formal, hidden) (Perrenoud 1993), the hidden curriculum is particularly important in ESD (but not really identified in France) due to its basic orientation: ESD is associated with a strong commitment to certain "values" (citizenship, responsibility, solidarity, etc.) and with a determination to change behaviours "for the better" – which is expressed in the phrase "best practices".

This article provides an analysis of the ESD curriculum in France, based on a methodology that takes into account the main work conducted on ESD in the framework of French research programs, and on the hidden curriculum triangle. A diachronic analysis of the curriculum helps to understand the school forms chosen in the context of curriculum changes, which then helps to identify the value systems driving those choices. We identify the characteristics of curricula that shed light on the value system generated by these new curricula.

1. A theoretical framework analysis for “hidden curriculum”

First, we discuss the different theoretical dimensions of a curriculum as used here to develop our analyses of education for sustainable development curricula in France.

1.1 Genesis of the concept and its plural dimensions

Emile Durkheim (1992, 1st ed. 1922) noted that one learns more at school than what is explicitly included in school curricula. He was referring to the system of rules associated with the school form that contributes to instilling in children a sense of discipline and described a system of moral education that produces a given value system. Philip Jackson (1968) formalized and developed this idea by extending it to the values of respect for authority, courtesy, and cooperation among peers. According to Dreeben (1968), the hidden curriculum has a function of social regulation in that it prepares students - who all have different social backgrounds and parental antecedents - to be taught a common culture, a system of norms that prepare all students for participation in public and productive domains. The hidden curriculum teaches students to form specific social relations, to “submerge much of their personal identity” and to accept the legitimacy of categorical treatment.

Vallance (1973) formalized the notion of a hidden curriculum by identifying its three main components: 1) the contexts of schooling, including the student-teacher interaction unit, classroom structure and the whole organizational pattern of the educational establishment as a microcosm of the social value system. 2) The processes operating in and through schools, including the acquisition of values, socialization, and maintenance of the class structure. 3) Schools are thus considered as places where pedagogical ideologies are applied in order to maintain the existence of dominant cultures. Bowles and Gintis (1976), Willis (1977) and Gorden (1984) explained that the hidden curriculum had the function of maintaining a society’s class structure. Jean Anyon (1980) indicated in this respect that the hidden curriculum of schoolwork is tacit preparation for relating to the process of production in a particular way.

The concept thus gradually shifted the intentional but hidden dimension of a curriculum. Lynch (1989) explained that the universality of education, which removes particularisms, serves to maintain social inequalities among students. Wren (1999) and Giroux (2001) explain how the curriculum not only provides instructions but also teaches norms and principles experienced by students throughout their education life. Margolis (2001) explained that organized schooling is a reproduction of social organization and its “hegemonic” nature.

1.2 Definition of the legitimate knowledge to be taught

“What is the most valuable knowledge to be taught?” This seems a commonplace question but it is one that clearly raises the issue of the value of the knowledge taught, and which can be considered central to any political analysis of education. In this regard, what counts as legitimate knowledge at school is clearly a social construct (Bernstein 1996; Forquin 2008; Young 1971; Young 1998), that is to say, the product of a selection. This implies the existence of agencies whose purpose is to select, to prioritize and to justify specific contents, i.e. academic knowledge, which differs from other types of knowledge available in society due to its social status and the ways it is constructed. Young (1971), developed the idea of the stratification of academic knowledge and argued that school curricula and the criteria for deciding what knowledge should legitimately be included in them reflect the relations between education and society as a whole. Thus, a curriculum is a set of knowledge and skills selected by interest groups and must, therefore, be interpreted as a stakeholder in an ideological process. In this context, ideology is a set of ideas, beliefs, and values that emerge from an identified interest group. White (1983) pointed out in this regard that there was no “ideologically and politically innocent curriculum”, and that any curriculum definition is inextricably linked to issues of social class, culture, gender and power

This posture is indicative of the relation between socially constructed knowledge and the powers that be, who claim for themselves the ability to select knowledge that serves their own interests; which raises the question of who constructs the curriculum, and why? This leads us to analyze both the hegemonic forms of knowledge that operate in social reality and in collaborative, passive or resistant social dynamics. These forms are related to

social organization, social realities of gender, ethnic origin, social categories and specific situations (war, for example). Thus, the concept of hidden curriculum was introduced, curriculum whose main objective is the preservation of the order it is intended to generate. According to Bernstein (1996), the hidden curriculum serves to reproduce the cultural capital of certain interest groups. McLaren (2007) has argued that the hidden curriculum is a means of keeping students in line with the dominant ideologies.

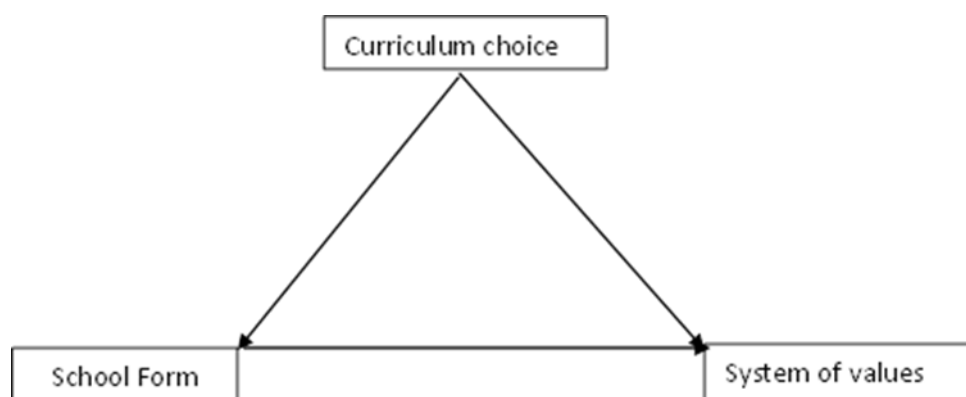
2. Methodology

2.1 Hidden curriculum triangle

The history of the concept of hidden curriculum thus shows that it contains several dimensions.

Based on the theoretical elements discussed above, we suggest a framework for studying the hidden curriculum of sustainable development. The first element of the framework consists of identifying the possible changes in the forms of organized schooling associated with the introduction of a curriculum, and of analyzing it in terms of the rules and norms implemented in order to establish the value system associated with it. We are referring here to a “system of moral education associated with the curriculum” (Jackson 1968), which is linked to an implicit form of organized schooling. The second element consists of identifying the contents that are taught and those that are not, that is to say, it represents an effort to understand the curriculum choices as having sense and an intentional societal function. Understanding the hidden curriculum thus involves clarifying this intentionality, its main actors, and its objectives. The third element examines how a hidden curriculum establishes a system of values. This value system has an impact on individuality (identity, behavior and so forth), and, because it arises from an interest group, its purpose is to generate a dominant ideology, a common culture and a system of norms, which all have a function that must be viewed as part of historical processes.

Figure 1: Hidden curriculum triangle



2.2. Case study in France

Now that I have clarified the various components of hidden curricula, I introduce a case study.

In order to identify the ESD-related hidden curriculum in the French context, I did an analysis of all the studies conducted between 2009 and 2014 in the framework of the French research project on “Education for sustainable development (ANR ED2AO). The corpus consists of the following:

- The ANR ED2AO proceeding work: 12 chapters in 4 books (Legardez & Simonneaux, 2011; Girault & Alpe, 2011; Bader, 2011, Diemer, 2013);
- 11 papers presented at the mid-term conference; and 8 papers presented at an international conference (ACFAS, 2012);

- 19 papers (listed in bibliography) published in a special issue of the journal “Penser l’éducation”
- 26 papers published in the final conference of the ED2AO research program (Lange, 2013; 2015);
- 17 articles published in various scientific journals (listed in the bibliography) linked to the ANR ED2AO researchers (2011-2015)

A word occurrence analysis of all the above-mentioned publications was then performed using the Tropes software. I then created a file of the words identified through the analysis and isolated those that referred to the hidden curriculum triangle, that is to say, those referring to the form of organized schooling and to curriculum choices. I used word occurrence method, referring to social representation theory in education (Barthes & Alpe, 2016). I thus consider that highest numbers of occurrences in papers are indicators of the importance of elements analysed. Then, I evaluated the total number of occurrences of each word in each publication and listed each word in decreasing order of occurrence. I sometimes grouped occurrences, using synonyms or closely connected terms. For example: “project” was linked to an institutional project category such as “Agenda 21”, or “regional project”. This technique allows us to deal with less vocabulary.

The following stage consisted of selecting the most used words, concentrating our analysis on the first top deciles in the list of words. The latter was established by researchers and based on scientific works in environmental education (not published). I selected the most used words as well as those that are new in the vocabulary and then attempted to identify and understand the political significance of their emergence.

2.3. Results

I selected 14 words before examining their meaning and implications, particularly in relation to the ESD curriculum in France.

In table 1, relative to the form of organized schooling, there are 7 recurring keywords: project, partnership, association, disciplines (interdisciplinary, transdisciplinary - disciplinary, disciplinary brakes ... etc.), co-construction, locations (including local roots, local particularities, locally, territories, local development), new teaching methods (Serious games...).

Table 1: Table model resulting from the calculation of occurrences according to the categories “form of organized schooling”

	Publication 1	Publication 2	Publication x	Total
Project	21 occurrences	13 occurrences	....	934 occurrences
Partnership	11 occurrences	19 occurrences	....	888 occurrences
Disciplines	0 occurrence	4 occurrences	....	780 occurrences
New teaching modes	14 occurrences	6 occurrences	....	771 occurrences
Co-construction	3 occurrences	6 occurrences	....	567 occurrences
Local case studies	11 occurrences	18 occurrences	....	468 occurrences
Funding	4 occurrences	4 occurrences	....	265 occurrences

In table 2, relative to curriculum choices, there are 7 recurring keywords: behavior, act, governance, eco-efficiency (including sorting waste, carpooling, energy efficiency, etc.), communication (including awareness, communicating), responsibility (accountability, involving people) development (growth, economy, development, etc.).

Table 2: Table model resulting from the calculation of the 7 main occurrences according to the categories "curriculum choice"

	Publication 1	Publication 2	Publication x	Total
Eco efficiency	50 occurrences	12 occurrences	....	1306 occurrences
Behavior	18 occurrences	6 occurrences	....	1005 occurrences

Act	18 occurrences	18 occurrences	....	980 occurrences
Responsability	97 occurrences	18 occurrences	....	870 occurrences
Governance	4 occurrences	45 occurrences	....	667 occurrences
Communication	4 occurrences	18 occurrences	....	568 occurrences
Developement	2 occurrences	18 occurrences	....	565 occurrences

I used the words that occur the most as a basis for identifying the value system, which is the third element necessary for understanding the hidden curriculum. Then, according to the epistemology of the hidden curriculum, I answer the following questions:

- What value system is generated by the main curricular choices?
- In what contexts and in which social projects do the value systems fit, considering the fact that the legitimacy of ESD is socially constructed and that it is at the center of the political analysis of education?
- What ideology do these curriculum changes transmit? And what interest groups benefit from those changes?

3. Discussion

To answer the three questions above, using methods of word occurrences, I extract indicators considering hidden curriculum triangle. Then, discussion is about emerging indicators for each summit of it (Evolution of school form; curriculum choice, and system of values) with the aim of bringing elements of answers. For instance, the main indicators concerning evolution of school form accompanying ESD are dynamics of projects, partnerships, and transdisciplinary. Then I discuss what that means in term of ideology and political choices. In the same way, main indicators of curriculum choices are a form of rejection of theoretical knowledge and a lack of knowledge problematization, as well as negation of the distance between social practices and the knowledge to be taught. Concerning the third summit, I extract the persistence of an “economistic” conception of development and the fact that sustainable development is a seemingly unquestionable framework of interpretation of the global situation. All these elements lead to understand what ideology do these changes transmit such as (shortly) an intangible context of the western economic development model

3.1 School form: what changes can be identified in school form following the introduction of ESD in the French curriculum?

Publications from ANR ED2AO show that new recommendations have emerged, which could ultimately change the school form, in parallel with the implementation of ESD; Two, in particular, dominate: The dynamics of projects associated with partnership, and transdisciplinary.

3.1.1 The dynamics of projects and partnerships

A number of publications testify to the engineering project dynamics associated with education for sustainable development: the Agenda 21 initiatives undertaken in secondary schools in France (Lange 2013; Lebatteux 2011), the emergence of regional ESD projects (e.g. Jeziorski 2013; Peltier 2013; Pommier 2013), survey-based pedagogical approaches (Chevallard, Ladage 2011), the involvement of populations in action projects (e.g. Dussaux 2013; Leininger-Frézal 2013), etc. The term “project” associated with issues of education occurs 206 times in the proceedings of the mid-term conference of the ANR ED2AO program (Alpe, Girault 2011).

Our analysis shows that the term " ESD " is frequently associated with “project-based pedagogy”, but does this really reflect a change in the schooling form? Project-based teaching has existed in many forms for a long time and has only challenged the schooling form on minor points: class' involvement with external actors, the relative autonomy of the pupils, etc. The novelty here resides in part in the multi-partnership dimension of projects and its legislative and incentive frameworks. Indeed, action for sustainable development is implemented in the form of local agendas, with the involvement, in various ways, of the local authorities. Through their role as funders, the local authorities generate partnerships between primary, intermediate and high schools, universities and local actors (such as associations). Thus, the educational action is organized partly around those projects. Public policies on sustainable development are implemented locally thanks to the involvement of associations, who respond to local calls for tender. The necessary studies are then conducted with the participation of students (who get involved through internships, tutored and personal projects). The

alleged expertise of the teachers and lecturers and their institutional participation in the project ensure the latter's legitimacy. In return, an association experienced in the implementation of sustainable development measures engage students in a concrete sustainable development project that has value for their future integration in society. As many publications have shown, ESD - more even than environmental education, places emphasis on the principle of partnership between educational institutions, local authorities and associations (Ernteins 2006; Ferrer-Ballas et al. 2008; Adomßent et al. 2007; Sterling, Scott 2011; Barthes and Champollion 2012). This idea of partnership implies that of educational co-construction, a notion that gives rise to strong reservations pertaining both to the question of ethics in education and the legitimacy of teaching contents (Sauvé 2001; Alpe 2006; Barthes, Bader, Alpe 2012).

But actions involving multi-stakeholder partnerships were already undertaken in the past, and so the novelty resides mainly in the nature of the partners and in their power of influence: financial (local authorities granting subsidies) and ideological (associations that legitimize themselves with the tacit consent of the other partners). If the form of schooling undergoes changes under this influence, it will, therefore, be because the power to define the knowledge to be taught partially escapes it.

3.1.2 Transdisciplinarity

Many publications highlight the transdisciplinary nature of ESD or examine the supposed changes in the boundaries between disciplines or the difficulties in involving various disciplines in ESD (e.g. Barroca-Paccard, Orange-Ravachol, Gouyon 2013; Diemer 2011; Floro 2013; Jeziorski 2013; Tutiaux-Guillon 2012; Urgelli, Simonneaux, Le Marec 2011).

According to B. Nicolescu's definition (2008), "As the prefix "trans" indicates, transdisciplinarity concerns that which is at once between the disciplines, across the different disciplines, and beyond all discipline. Its goal is the understanding of the present world, of which one of the imperatives is the unity of knowledge."

Unfortunately, this ambition seems unrealistic. What I observe are efforts to cross combine different disciplinary approaches. In practice, this means defining the content to be taught first, on the basis of objects of teaching that are a direct reflection of social practices; objects towards which strictly disciplinary approaches (in the educational sense of the term) can be made to converge.

In fact, this is all part of a discourse that attempts to justify certain specific aspects of ESD practices: involvement of a large number of non-expert stakeholders, a lack of epistemological reflection, a tendency towards relativism, and others. Indeed, the French consider that the emergence and development of "educations for" necessitates changes in the form of schooling (Barthes, 2014); changes that call into question the foundations of the old French model. Indeed, the latter is challenged on two fronts: first of all, the skill-based model arising from the business world (Ropé and Tanguy 1994), and second of all, the "de-schooling" of teaching, which increasingly involves utilitarian and developmentalist partnership projects, and which, as it assumes new forms, accepts many diverse participants.

3.2 Contents: What are the dominant choices in terms of curriculum, and why?

Here two dominant features emerge:

3.2.1 Knowledge is not at the centre of the educational project

As many studies on ESD curricula have shown, scientific knowledge is not at the heart of the educational project (e.g. Lebatteux 2011, 2013; Orange-Ravachol, Doussot 2013; Plazy 2013).

This tendency was discussed and highlighted in Volume 11 of the journal "Education relative à l'environnement: Regards-Recherches-Réflexions", which contains selected papers presented and discussed during the International colloquium, "Reporting on knowledge and education related to the environment and sustainable development", during the 80th Congress of the Acfas, and in the publication "Education, environnement et développement durable, vers une écocitoyenneté critique" (Bader, Sauvé 2011). The main objective of pedagogical outputs seems to be, both behavioral (focused on best practices) and developmentalist (centered on the direct economic value of knowledge). These practices are expected to cause a change in learners' relationship to the world and to promote change in societal logics.

From an epistemological viewpoint, the aim – explicit or implicit – of most ESD actors is to construct an intermediate reference framework to legitimize a choice of teaching contents: the knowledge chosen in priority

is that which seems useful in terms of justifying the social normalization process associated with sustainable development as a political project.

The selected knowledge is divided into different categories according to its degree of immediate operationality: it mostly underpins practice, which has several consequences;

- A form of rejection of more theoretical knowledge;
- A lack of knowledge problematization, which goes against the civic educational approaches that aim at promoting deliberative (Legardez 2006; Legardez, Simonneaux 2011) or critical thinking (Robottom, Hart 1993), even though they are often formulated in relation to sustainable development. Knowledge is, instead, presented as self-evident, and is therefore not discussed (Barthes, Jeziorski 2012). What is excluded is the scientific debate about the uncertain nature of the scientific knowledge that could serve as a reference. Reduced to its most basic expression, scientific knowledge serves as an alibi, and any confrontation between scientific paradigms is systematically avoided.

But this epistemic void is filled by the emergence of new contents (new teachings or presentations of good practices) related to project management. The project becomes a non-discussed societal practice, with life increasingly conceived in terms of project management, a series of responses to project tenders – with a concomitant emphasis on performance and competitive values, to the exclusion of other forms of societal organization. This establishes new forms of governance and societal management, supported by lessons in communication and law, again without the principles being discussed. The new governance theories have, from this point of view, a performative nature in the sense meant by Callon (Muniesa, Callon 2008), that is to say, they contribute to the creation of the social reality that they purport to explain.

3.2.2 The negation of the distance between social practices and the knowledge to be taught

According to our analysis, the negation of the distance between social practices and the knowledge to be taught (generally recognized as necessary in that it ensures a degree of objectivity) is a common posture in ESD. This is evidenced by the lesson plans based on examples of practices or eco-efficiency initiatives, such as ways of organizing waste sorting, carpooling, etc. (e.g. Floro 2011, 2013; Jeziorski 2013; Orange-Ravachol, Dousot 2013; Simonneaux, Bellet 2013; Tutiaux-Guillon, 2012). Without any critical distance and by placing emphasis on technical aspects, education becomes a technique for operationalizing procedures. As a result, the ability to problematize sustainable development issues, though central to the making of autonomous citizens, is no longer considered necessary, which causes a risk of a normative drift. “Teaching becomes a training in ethics that focuses on the ‘politically correct’ to the detriment of knowledge (Legardez 2006). The normative drift continues to the point of resulting in the interpenetration of vocational logics and of the private sphere (Barthes et al., 2010). Schematically speaking, convincing individuals of the need to recycle waste at home is easier than tackling the issue through a reflection on production and on long-term waste management.

Finally, the negation of the distance between knowledge and social practices crystallizes the debate around a project of normalization supposed to be collectively accepted (Lange 2012), as is evidenced by the adoption (without any serious debate, and strongly oriented towards “best practices”) of “green plans” by some universities. Indeed, sustainable development conveys an image of collective responsibility and anything that refers to it then appears as unquestionably necessary for the construction of a safeguard project meant to avoid the destruction of the planet's ecological balances. This normative stance leads teachers to adopt a relativist approach. In other words, they place more emphasis on socially valued behavior (waste sorting, for example) than on the scientific knowledge their students would need in order to truly understand the phenomena.

3.3 What value system is generated by these new curricular elements and what sense does it make in relation to recent social changes?

3.3.1 The persistence of an “economistic” conception of development

The dominance of the developmentalist discourse, largely illustrated by the Brundtland report and by UN recommendations, results in sustainable development being equated to a model of economic growth based on the Western one. Indeed, in the examples studied, there is no introduction to fundamental concepts of economics. Growth theories, though omnipresent in the background, are not clarified, much less discussed; it is as though there were no alternative to the dominant liberal economic order. This is particularly well illustrated by the economics curricula in French secondary schools relative to the representation of biodiversity (Girault,

Alpe 2011). Biodiversity thus becomes a resource, in an economic sense, which can be valued, and whose protection can be considered as economically rational behavior: in the long term, it brings in more than it costs.

Furthermore, I can show that the ESD practices studied are aimed at changing learners' postures by focusing on individual responsibilities, while little attention is paid to the responsibility of production systems for environmental damage. Individualizing responsibility thus acts as pressure to exercise inference, that is, through seemingly simple and self-evident reasoning. The search for explanations is no longer necessary, the answer has been found, what is needed now is to act – and to act in the intangible context of the western economic development model. The individualization of lifestyles takes place through exemplarity, based on the values of efficiency and merit. The shift of curricula towards sustainable development is therefore not just a commonplace element or an unchallengeable objective. It penetrates the private, collective, voluntary and activist spheres through the collective management of specific problems generated by the overall mode of functioning of society. Thus, reasoning processes and thought patterns are being re-assessed at every level. This represents a major change, which is likely to strongly influence societal logics and educational practices.

3.3.2 Sustainable development: a seemingly unquestionable framework of interpretation of the global situation

Sustainable development conveys an image of collective responsibility whereby the latter is necessary for safeguarding the planet.

The Brundtland Report positions this dynamic by focusing on the word “common”, which is used in all headings and occurs 31 times. The discourse formulated justifies all sustainable development activities based on the notion of common sense for the common good. This tends to result in a shift from a collectivization to an individualization of responsibilities. Individuals are thus empowered and required to take responsibility for global issues. The practical organization of sustainable development implies the idea of a “project”, as mentioned in the Brundtland report, in which the word “project” is used 61 times. The idea of safeguarding the planet's future evidently implies a need for a commitment to action, in the form of a “project” conducted by institutions or agencies with relevant resources. The discourse implies a performative intention, since the aim is to show both, the importance of the “project” and its necessity; thereby engaging society in a managerial mode that transcends the old institutional logics and goes beyond them through new procedures, such as Agenda 21. A governmental seminar on sustainable development (November 2002) marked the starting point of this global process of change in the modes of action: “Sustainable development requires fundamental changes in the attitudes and modes of action of all components of society. Given the magnitude of the task and problems to be tackled, it is important to organize approaches in such a way as to give everyone a common understanding of the issues and changes needed in short and medium term, to clarify how sustainable development will be integrated into public policy, and to be able to monitor progress in this field.” Hence it becomes imperative for public institutions to re-organize their work (Rumpala 2005), which has important ramifications for implementing ESD.

Sustainable development thus incorporates a seemingly intangible framework for interpreting the global situation. This framework is justified by collective common sense and is generally based on the shared view that the world is facing a major threat, an emblematic illustration of which is humanity's impact on the planet's climate. Yet, while a shift in the debate on development and environmental issues has occurred since the 1980s, sustainable development is usually accompanied by a demonstration of its theoretical compatibility with economic growth and accumulation of wealth. The issue of “sustainable development” thus emerges from contradictions associated with permanent growth and is associated with unchallengeable, mandatory, common sense, formalized, normative and performative processes governed by existing institutions and taken up by educational structures. This normalization of values helps to steer the way individual actions are conceived through sustainable development.

The emergence of common sense, the centrality of the project and managerial practices, the need for commitment to the collective well-being and for broad civil involvement, have all led to new forms of education through ESD. In this context, institutional and entrepreneurial interventions related to sustainable development are not just a commonplace element or an unavoidable objective. New ways of reasoning and thought patterns are emerging at every level, which may have a strong influence on societal logics in both individual and professional practices.

Yet, in the face of the strong pressure to exercise inference represented by warnings of looming global disasters and an obligation to future generations, critical analyses have emerged, but few studies have as yet examined the societal implications of sustainable development. The increasingly recognized need for sustainable development seems to impact thought patterns (biodiversity, climate change, and future replace growth, economy and technical progress) through a rationalization of the objectives to achieve and therefore societal readjustments.

The social dynamics of sustainable development are now infiltrating individual behaviors, in the form of a moral and practical obligation, implying an intentionality and individuals' identification with the figure of the eco-citizen (Martinez M-L., Poydenot F., 2009). The sustainable development discourse is presented as the right response to today's social and geopolitical challenges. As several authors have shown in various ways, under the pretext of saving the planet, the short and medium-term goal of this discourse is to safeguard the globalized socio-economic free market model by pursuing it through "green" development (Jickling, Wals 2008; Girault, Sauvé 2008). In doing so, the ESD discourse implicitly demands a global instrumentalization of individuals' minds, in order to not only change individual behaviors but also to promote a sense of individual and social identity in which each individual assumes the collective responsibility for a state of affairs.

Conclusion

In this article, I have attempted to show how the dominant elements of the hidden ESD curriculum in France result in implicit changes in the systems of values, with are directly linked to global power and governance changes in the late eighties. We have not used our analytical framework in other national contexts (Gayford 1986; Gough 1989; Greenall Gough 1991; Lucas 1991; Smyth 1995; Lee, 2000; Morris 2002; Sauvé, 2005; Ross, 2007; Greenwood 2008; Foster 2011; Fahey 2012; Reid, 2015; Reid & Dillon 2016). But we can see that the implementation of ESD is performed differently from country to country. But comparative studies such as that conducted by Girault, Zwant and Jeziorski (2013) seem to point to important differences in terms of how this curriculum is implemented over time, and at national or local levels. Indeed, despite the existence of an international framework, states still have leeway in terms of political choices, which explains the differences over time and between countries.

This study shows that in France, ESD causes important value conflicts. The proximity between education and practice (such as waste sorting) generates strong scientific controversies about the goals of education. Then ESD is considered in France by researchers as a controversial issue (Legardez, Simmonaux, 2011). The international perspective shows differences and similarities that should be emphasized, comparing similar types of data. But, about what we can see in an anglophone context, the focus is more readily on projects and case studies as levers to engage students in analyzing and learning about real, complex problems (Steiner and Posch, 2006), while the project is more readily seen as a utilitarian approach with economic goals and thus the knowledge to acquire becomes determined by the market in the French context. Interdisciplinarity is also seen in the Anglo-Saxon context as a dimension that allows students to analyze the environmental, social, economic, cultural and even ethical dimensions of these issues. Thus, the question of the integration of multidisciplinary and interdisciplinary analysis in training arises on a recurring basis (Richter and Parette, 2009, Ashford, 2004).

In the French context, the discipline tends to be seen as an obstacle to the implementation of ESD and interdisciplinarity is considered difficult to implement. Thus, French studies tend to examine changes in disciplines resulting from the implementation of ESD, more than interdisciplinarity itself. The latter is therefore more readily put in perspective in the anglo-saxone than in the French context. These aspects are found, for example when it comes to training engineers for sustainable development (Emilsson and Lilje, 2008, Lehman, Christensen et al. 2008). It is also the consequence that hidden curriculum is more formalised in France than in Anglo-Saxon contexts, then more discussed and eventually contested. The issue of skill development comes up regularly, which gives rise to the question of the choice of skills to develop, of ways to teach and evaluate, a question that receives very different answers according to the contexts. On the other hand, it should be noted that ethical questions associated with sustainable development are more often discussed in the Anglo-Saxon context, and ethical decision-making is considered an Anglo-Saxon specificity. In the French context, the contents have less to do with scientific knowledge and more to do with good practices and eco-efficiency. With the integration of ESD into programs, researchers have found a shift in focus towards local project management, at the expense of scientific knowledge. Those changes are viewed, in the French cultural context, as a utilitarian shift imposed by international institutions, and part of the hidden curriculum.

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