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► To cite this version:

Angela Barthes, Caroline Ladage, Agnieszka Jeziorski, P. Champollion, Alain Legardez, et al.. Theoretical reflections about education for sustainable development concept: cultural and territorial dimensions as social innovations. 9th International conference of territorial intelligence, ENTI, Strasbourg 2010., Nov 2010, Strasbourg, France. 7p. halshs-00770825

HAL Id: halshs-00770825

<https://shs.hal.science/halshs-00770825v1>

Submitted on 7 Jan 2013

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THEORETICAL REFLECTIONS ABOUT EDUCATION FOR SUSTAINABLE DEVELOPMENT CONCEPT :CULTURAL AND TERRITORIAL DIMENSIONS AS SOCIAL INNOVATIONS

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Keywords : Education for sustainable development, international dimensions, territorial context

Abstract : This communication proposes a theoretical and methodological framework for a research which finds its place in the project “*new-LIFE*” responding to the topic "Europe moving towards a new path of economic growth and social development" of the last call for project of the 7th Research Programme of the European Union published on July 20, 2010. The project attempts to answer a crucial question: What are the cultural and educational developments which will promote the support of citizens and territories on the path to a successful socio-ecological transition? In connection with the research conducted within the ANR project “Education for Sustainable Development: Opportunities and Challenges” we propose to study the educational dimension of territorial intelligence as a tool for sustainable development, in particular to question several types of territoriality (rural, mountain, urban, etc.) and educational areas (related to school or not) to characterize the educational practices of territorial intelligence, and to assess the impact of those territorialities on education for sustainable development, as well as on the eco-citizen identity construction.

The first goal would be to study the ESD concept, in its international dimension, as a continuity of the “Education on Environment” concept. ESD as a «key dimension of basic education » (Sauvé, 2002) enjoys a specific status amid education for (Lange and Victor, 2006) which needs to be polished. The second goal would be to study the educational dimension of territorial intelligence as a tool for sustainable development. Bertachini (Bertachini Y, 2004) suggested that territorial intelligence “can be understood as territoriality resulting from the phenomenon of appropriation of resources of a territory than from the transfer of competences among local actors of different culture”. From this point of view it seems to be important to question the educational practices of territorial intelligence and to assess the impact of specific territorialities on ESD. This include territorial context (Champollion P., Poirey J-L., 2008) as a key contextual factors on education, adding the sociological approaches (Bourdieu; Passeron, 1964, 1970) and positioning territories as an analyzing tools for educational processes. The objective would be to include the territorial dimension of ESD, mainly dealing with rural areas, such as mountain areas, which are left aside by the present network. The question is: how can we include rural areas in the global system involving sustainable development and eco-citizen identity construction, one of the current human sciences issues (Barthes, Martinez, 2010). In the context of the socio-ecological transition this research aims to explicate the ESD concept and practices in its international and territorial dimension. It adopts the perspective of an education based on collective action and co-construction of knowledge. In order to attempt the objectives several innovating methods are used. Especially, the multidisciplinary approach and the intercultural, social and territorial dimension emphasize the innovative character of the research project.

Theoretical reflections about education for sustainable development concept : cultural and territorial dimensions as social innovations

INTRODUCTION

A recent report by the European Commission "The World in 2025" broadly characterizes the global prospective by two trends: rising Asia and the socio-ecological transition. The first trend is a geographical one at continental level. The report also discusses the differences between European territories as an important potential to exploit. It shows that the development of Europe should not be addressed in a European analysis but in a global perspective. The second trend is an urgent challenge. Socio-ecological transition constitute the new condition to answer jointly to the social and environmental emergencies resulting from the development model based on the waste of natural and human resources, the pursuit of short-term financial gains as an exclusive objective and pattern of bureaucratic "vertical" top-down making decision process. The socio-ecological transition conditions should fund the sustainable development paradigm through its economic, social and environmental objectives combination, in both governance shifting and cultural assessment.

Everyone agrees that the socio-ecological transition needs a change in consumption patterns involving each individual. As the changing patterns of production are now placed in territorial dynamics, the combination of the objectives of sustainable development interests the individual, the territorial as well as the national, supranational and global levels. It is clear that education, culture, training, information and communication are a vector for new development trajectories, not only for individuals but also for communities. Territorial intelligence driving modes should imply convergence between actor's cooperation, economical efficiency and environment respect through intercultural transactions and territorial governance. Those objectives involve conditions at many levels, from individual implication to transnational policies.

We are equally involved in a research linked with the CAENTI European project (<http://www.territorial-intelligence.eu>) (6th Framework Programme for Research, Technological Development and Demonstration Activities of the European Union) and in the ANR (National Research Agency) project. "Education for Sustainable Development: Opportunities and Challenges" (2009-2012). This ANR Project is led by J-M Lange (ENS Cachan), L. Simonneaux (ENFA Toulouse), Y. Girault (Museum, Paris), A. Legardez (ADEF, Université of Provence). Education for Sustainable Development (ESD) aims to make people eco-sensitive and develop a proper culture. Sustainable Development should be included in didactical tools. Those different projects are based on long term collaborations between the researchers and teachers for one another similar research with the INRP (led by A. Legardez (IUFM Aix-Marseille et ADEF).

Our research finds its place in the project "new-LIFE" responding to the topic "Europe moving towards a new path of economic growth and social development" of the last call for project of the 7th Research Programme of the European Union published on July 20, 2010. The project aim to answer a crucial question: What are the cultural and educational developments which will promote the support of citizens and territories on the path to a successful socio-ecological transition? We propose to study the educational dimension of territorial intelligence as a tool for sustainable development, in particular to question several types of territoriality (rural, mountain, urban, etc.) and educational areas (related to school or not) to characterize the educational practices of territorial intelligence, and to assess the impact of those territorialities on education for sustainable development, as well as on the eco-citizen identity construction.

I. GOALS

The first goal would be to study the ESD concept, in its international dimension, as a continuity of the "Education on Environment" concept. (Mappin & Johnson 2005): Education on environment is not a form of education for sustainable development (ESD), but ESD belongs to this field and has to take into account the previous approaches (Meunier, 2004; Sauvé1997). It is a "key dimension of basic education" (Sauvé, 2002). Nevertheless ESD enjoys a specific status amid education for (Lange and Victor, 2006), status which needs to be polished. It requires specific educational projects to be set in sustainable development perspectives and in an interdisciplinary approach. Besides, ESD tends to modify teachers' practices. This new process would be fruitful to investigate. The ESD also concerns the field of socially sensitive questions (SSQ) (Legardez, 2001, 2008, Simmoneaux, 2005). It calls the teachers to shift their strategies. From now on, the teachers ought to concentrate less on academic knowledge than on project building (Girault 2006; Simmoneaux 2005). This generates fears and resistance studied by Audigier (Audigier, 2001). At the same time, this challenges ESD many sided concepts. The teachers underlying motives conveys a cultural dimension which we intend to study in depth. In this working direction, multidisciplinary study groups of ANR ED2AO organize international comparisons in Europe, North Africa (Girault Y, Jeziorski A), Northern America (Bader B), and Pacific area (Simmoneaux L.) (not yet published). It is also planned to study in depth the Australian issue (Barthes, A.), following Jenking and Tilbury's path (Tilbury D., 2004) and to contribute the Asian issue with a short study in China (Suzhou

University) and Viet Nam (Hanoi University), considering rising Asia as an aspect of a sustainable development based socio-ecological transition. Various contacts have already been made.

The second goal would be to study the educational dimension of territorial intelligence as a tool for sustainable development. This will be pursued in connection both with the team “School and territorial and social contexts” integrated in the CAENTI European project of the research unit (UMR ADEF, education scientists), and with the sustainable land planning team (UMR TELEMME, geographers). “The CAENTI project state of art of the clarified the field of territorial intelligence (Bertacchini Y., Girardot J-J., Gramaccia G., 2006) which “requires the whole range of multidisciplinary knowledge in the field of territory knowledge, territorial governance and territorial engineering”. Dumas (Dumas, Ph. 2004) put forward “intelligence as a cognitive process and organization of information and territory as a place of meaningful relations”. Bertacchini (Bertacchini Y, 2004) suggested that territorial intelligence “can be understood as territoriality resulting from the phenomenon of appropriation of resources of a territory than from the transfer of competences among local actors of different cultures”. It seems to be important to question the educational practices of territorial intelligence and to assess the impact of specific territorialities on ESD. This in connection with the ANR group working on territorial contexts (Champollion P.)

In order to tackle most of the key contextual factors on education, the most shared sociological approaches are based on (Bourdieu P., Passeron, J.C., 1964, 1970). Since 1990-2000, they have been completed by new explanations, more directly linked to territorial contexts. Besides, territories are outstanding tools to analyze educational processes. It even generated the “educational territories” concept. (Champollion P., Poirey J-L., 2008). However the social context seems to remain a main entry to understand how pupils built their territorial identities. The studies led on popular rural pupils show that these latter one are more strictly linked to their close environment immediate, and more reticent to leave their territory (Fauguet, J.L., 2005, 2010)

We intend to study further on this point including the eco-citizen's identity construction (Barthes, A., Martinez M-L, 2010). The objectives would be to include the territorial dimension of ESD, mainly dealing with rural areas, such as mountain areas, which are left aside by the present network.

The question being: how can we include rural areas in the global system involving sustainable development? The aim would be to assess rural peculiarities, ESD adaptations which have been achieved or need to be, lastly, to assess the consequences in terms of appropriate jobs to the socio-ecological transition.

On the whole, those objectives take place in a collective project answering a demand. It embodies a

scientific complement to other researches undertaken by ANR and CAENTI (6th PCRD).

II. RESEARCH METHODOLOGY

The approach would be threefold. Technically speaking, it resorts to GIS and Data base knowledge, as performed in geographic science, and processed in self governing territorial intelligence. The point would be to associate geographical expertise, sociological approach and education sciences. Respectively: rural areas, territorial practices, social representations of sustainable development, ESD practices (didactical aspects and appropriate jobs). Urban territories will be also investigated. The method is original in its cross breeding of innovating processes. Let's keep in mind that “interdisciplinary approaches is the path for researches to far reaching steps forward” (Jollivet M., 2008)

The two goals of the research (Explicating the ESD concept and practices in its international and territorial dimension) include five **objectives related with different methodologies:**

First objective: elucidating related vocational training students' and teachers' social representation of sustainable development. This is based on social representations theories (Moscovici S., 1961; Jodelet D., 1989, Abric J-C, 1994). An original approach would be to elaborate visual documents embodying social representations. Those documents would be made from surveys, with SIMILI 3000 software (Vergès P., 2001). The second original method is to clearly deal with issues of didactic transpositions (Chevallard, Y. 1991) in the field of QSV (Legardez, A. 2001), which would favor social and systemic contextualizing of data collected during investigation. The results hoped for, are in terms of didactic advocating, in its cultural and international dimensions (Legardez, Valente, Jeziorski, 2010).

Second objective: case work analysis about educational practice around ESD in vocational training and in associations working in the institution. The grid used for is the ANR project grid resulting from long term practice between the ESD researchers, including surveys methods (Lange J-M, 2006), inherited from Audigier's first implementation (Audigier, 2001). The aim is to point potential drivers and barriers for implementing learning for sustainable development. It calls the teachers to shift their strategies.

Third objective: dealing with the issue from the international point of view, include the cultural background factor analysis of the ESD, including European (French, German, Polish), Australian, Asian, African, Latin America and North American comparisons. So social representations and hence didactic transpositions will be achieved, with the same method than for the first objective, but comparisons suppose a data base building. Data base query will

include differences and similarities between ESD practices and cultural background, outlook and educational system's specificities.

Fourth objective: set the issue in its territorial context; in this project. In this project the main types would be: inventory of the educational practices related to territorial intelligence, ESD practices in rural areas and jobs adaptation. Results are expected in the fields of sustainable development rural specificities, adaptation of ESD to rural areas and assessment of consequences of a socio ecological transition in terms of "adapted" jobs. The expert's appraisal will be based on already mastered techniques (GIS, data processing, sociological investigation tools) linked to territorial intelligence (catalyse tool kit, see website) "The Catalyse method offers tools of diagnosis, evaluation and observation that are accessible to the local actors of the sustainable territorial development". (Massetot C., 2007).

Fifth objective: harmonization of European catalyse observatories will be led in the CAENTI framework and rely on a ten year practice around rural areas. This methodology belongs to diachronic analysis of classical geography dealing with interactions between local and world scales, thus to the critical rural geography mainstream. The move is by no means new in itself but it is a valuable asset in sustainable development; it also benefits from a scientific approach of data collecting and processing, allowing not only on one side a suitable tools' integration but also an attempt to a better space and time objectivity of geographic processes. Censuses are a component of observatories often used by researchers in geography as an "analytical tool for social historical facts"(Mathieu, N. 1998).

III ORIGINALITY AND INNOVATIVE NATURE OF THE PROJECT

The contribution that the project is expected to make to advance the state-of-the-art within the project field is to precise ESD concept as a continuity to "Education on Environment" concept. (Mappin & Johnson 2005), but it calls the teachers to shift their practices according to sustainable development projects. One of the originalities of the project is that we'll manage to do our work in this direction. So resistances and motives studied by Audigier (Audigier, 2001) need complementary investigations linked with the field of socially sensitive questions (SSQ) (Legardez, 2001, 2008, Simmoneaux 2005). These two dimensions do not take the same signification in different cultural backgrounds (Bader B, not yet published). In this working direction, multidisciplinary studies groups of ANR ED2AO organize international comparisons. Adding Australian issues, following Jenking and Tilbury's path (Tilbury D., 2004) and contributing the Asian field (Robottom I., 2006) would be fruitful. Pointing the cultural background of teaching rejection or acceptance in ESD projects is one of the innovating

natures of the project.

Innovating methods including social representations (Moscovici, 1961) for ESD analysis point the weight of social knowledge, and offer the link to potential didactical responses (Legardez, 2008). It allows comparisons between different contexts – cultural, social, or territorial.

Concerning territorial issues, the originality of the project is to cross the educational practices of territorial intelligence and to assess the impact of specific territorialities on ESD. It's a geographical and social approach of educational issues. This is considered as research innovating issue, as well as giving its place to rural areas in sustainable development and consequently to ESD. This include territorial context (Champollion P., Poirey J-L., 2008) as key contextual factor on education, adding the sociological approaches (Bourdieu P., Passeron JC, 1964, 1970; Alpe Y., Fauguet JL., 2008) and positioning territories as analyzing tool for educational processes. Also rural areas linked to sustainable development takes a new signification in the current evolution (Matthieu, 2007). The objectives would be to point the ESD rural dimension potentialities, in new ruralities, mainly dealing with which are left aside by the present network. The question being: how can we include rural areas in the global system involving sustainable development and eco-citizen identity construction?

Eco-citizen identity construction is one of the current human sciences issues (Barthes, Martinez, 2010) and we would link this point with ESD researches (Barthes, A.). This other work would also be an innovating point for ESD researches. The ESD adaptations which have been achieved or need to be, lastly, to assess the consequences in terms of appropriate jobs to the socio-ecological transition.

Furthermore, the use of already mastered techniques (GIS, data processing) linked to territorial intelligence, catalyse tool kit (Massetot C., 2007) and the scientific and geographical approach of data processing offer a new dimension to the research.

CONCLUSION

In the context of the socio-ecological transition this research aims to elucidate the ESD concept and practices in its international and territorial dimension. It provides to clarify the ESD concept as a continuity to "Education on Environment" concept, to identify potential drivers and barriers for implementing learning for sustainable development and to propose educational strategies based on collective action and co-construction of knowledge. From this point of view it seems crucial to set the issue in its international and territorial context. In order to attempt the objectives several innovating methods are used. Especially, the multidisciplinary approach and the intercultural, social and territorial dimension emphasize the innovative character of the research project.

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The contribution deals with topic A « **Theoretical reflections about the ecological and social innovation and the integrated innovation, in the socio-ecological transition.** », and is linked to ANR-08-BLAN-0135 (ED2AO) Education for sustainable development

Communication présentée dans l'axe A « **Réflexions théoriques sur l'innovation écologique et sociale et l'innovation intégrée, dans la transition socio-écologique** », et en lien avec le projet de recherche ANR-08-BLAN-0135 « Education au développement durable : atouts et obstacles » (ED2AO)