# Learning Environments and the Scientific Dimension of Didactical Endeavor

Marius Costel EŞI, *Lecturer Ph.D.*
*Faculty of Educational Sciences,*
*"Ştefan cel Mare" University of Suceava, Romania*
*mariusesi@yahoo.com*

**Abstract**

*Axiological and pragmatic valences of the teaching/pedagogical dimension express the important role that communication strategies have in the educational management. For this purpose, the organization of specific skills into the practical dimension of the educational process utterly indicates the relevance that didactical innovation has within a learning environment. Such an innovation falls within the professionalism, experience and originality of the socio-educational actor. Moreover, the scientific basis of education involves a rational recovery in the teleological dimension of scientific knowledge. It is about assuming, practically and theoretically, the axiological approaches in the simplicity-complexity relation. No doubt, this kind of understanding reflects the fact that, in social terms, the development and the acceptance of educational standards imply discursive forms of pragmatic explanation. Thus, the instrumental value of the social act refers to specific arrangements of particular forms of knowledge, like the knowledge of teaching. Therefore, optimizing a process of socialization involves learning and accepting a well established system of values*

**Keywords**: *Learning Environments, Teaching Approach, Didactic Obstacle, Social Pragmatism, Educational Structure*.

*Introduction*

The possibilities of representing a specific form of instructive strategies reflects the manner in which human subjectivity reports to specific dimensions of social reality. We are considering the fact that the sequential organization of the paradigmatic methodology has to be in connection with the socio-economic reality. This type of understanding highlights a particular nature of the educational structure that resides in the social form of manifestation of human activity itself.

In this regard, an involvement of social actors in the educational process can only provide a realistic perspective regarding the assumption of a teaching

paradigm. Such an assumption basically legitimizes the existence of methodological strategies designed to support epistemological theories newly promoted. Thus, the forms of expression specific to the educational system reveal the need for methodologically well-structured information structures. In addition, the priority given to an epistemological content indicates the important role that value rankings holds it at an educational level. The new topic brought into question illustrates, on the basis of eligibility criteria, an unique form of social pragmatism.[1] Thus, within the education logic, the aims of social activity gain validity to the extent that the existence of significant phenomena, in terms of teaching, implies some possible connections between different areas. In this context, we consider that are necessary some justifying reasons providing a necessary and sufficient basis with regard to the assumption of a new education paradigm. This approach emphasizes the idea of pragmatic assimilation of knowledge within the educational reality, accepting the idea of changing at the level of educational paradigms. Furthermore, through this optimal didactic model, learning content is closely related, on the one hand, to the diversification of critical thinking, and on the other hand, to the design of teaching and learning activity.

Moreover, a new approach of the realistic education, by relating it to the idea of ethics,[2] reveals the need to integrate the human personality in a social typology. We envisage the perspective of an effective social policy, considering that the plan should illustrate the pragmatic and the informational directions from an axiological point of vieew. Therefore, this case involves a scientific operationalizing of the concepts underlying the newly assumed education paradigm.

In this situation, is significant the fact that an optimal evaluation of educational activities allows even the assumption of a logic about the social field, through which an optimal methodological model contains varying degrees of complexity. Therefore, the acceptance of an educational conformism reflects the existence of a structure whose pragmatic function can be correlated with certain epistemic capacities of understanding. The activities developed within the learning process express, within the educational of reality, issues that justify the instrumental nature of pedagogical innovation.

The practical-theoretical share of methodological strategies reveals the idea of logic of the social in which the strategic algorithm holds a major role. We are

[1] M. Tomasello, "The social-pragmatic theory of word learning," *Pragmatics* 10, 4 (2000): 401-413.
[2] D. Jeder, "Education and structures of responsability for life and environment," *IPCBEE* vol. 1, Singapore: IACSIT Press (2011): 420-423.

dealing in this case with an epistemic model of understanding the social logic and hence the educational logic. This prompts us to argument for the point of view which supports the question on necessity of professionalism in education.

*Epistemological nature of didactic dimension*

Learning environments relate to the idea of pedagogical relevance, and this aspect suggests the explanatory dimension of the epistemological perspective on education and implicitly on the didactic field. This is about understanding didactics from the epistemological perspective. In fact, this *epistemological didactic* phrase is justified in the education system by the fact that, on the one hand, didactics itself has as object of knowledge the specific nature of the learning process, and on the other hand, *the didactic-epistemological* term is analyzed with reference to the *didactic-comparative* phrase.[3] In other words, through the epistemological function that it involves, didactics relates to a scientific dimension of knowledge. Therefore, an epistemological didactic is necessary into a learning process that aims to stand at the level of performance and competitiveness.

Scientific substantiation of didactics requires some explanatory and normative valences of cognitive contents that encompass, from an epistemological point of view, the educational reality. For this purpose, at the axiological level, the educational activities initiated and assumed by socio-educational actors express an educational philosophy that emphasizes a conceptual-theoretical approach, a prospect of a new scientific paradigm. Therefore, taking into account the pragmatic reasons requires the acceptance of a reassessment of curricular dimensions and their correlation with some aspects of scientific nature. Moreover, scientific interpretations on the educational dimensions reflect a certain understanding of learning paradigms. Social reality reveals a way of expression of the educational models that have manifested over time.

Epistemological analysis of the concept "*didactics*", and therefore of the phrases *overall didactics* and *didactic specialty* refer to a review of scientific nature. Therefore, given the subject matter, we admit the idea of a theory on the educational level (for example,the analysis of the relationship between epistemology and didactics in economics and social science,[4] theorization

[3] C. Peyron-Bonjan, "Problèmes épistémologiques de la didactique comparée: méthodes, concepts, champ(s) théoriques," *La Revue française d'éducation comparée* 5 (2009): 31-48.
[4] C. Dollo, "Épistemologie et didactique en sciences économiques et sociales: de la recherche à la formation," (2012) accessed October 21, 2012, http://www.lille.iufm.fr/IMG/pdf/247-259_DOLLO_Tome1.pdf.

corroborated in the specialty literature with an algorithm teacher.[5] Moreover, considering that these theories are reported to the idea of self-determination and adjustments of the educational phenomenon in general, we consider that it can justify the fact that didactics represent, on the one hand, a theory, and on the other hand, a science field. In this way, the explanatory-normative valences encompass, from an epistemological point of view, those components specific to education. We consider that we must, nevertheless, pay attention to the analytical approach in terms of conceptual-theoretical demarcation where practice and methodology requires this (for example, the operationalizing of general / specific objectives or assuming certain general / specific skills).

Through an epistemological analysis of didactics, we basically assume an upgrading of the educational dimension. Precisely, the paradigmatic changes are those that reflect at the social level the need for an educational pragmatism. High academic potential allows, based on social interactions, an understanding of cognitive structures from an epistemological perspective, through which theory is combined with the experience. This approach expresses the idea of a strategy whose dynamic results precisely from the relationship revaluation-competition. In this manner, the valorization of a design depends on a particular understanding of didactic sequences and processes available within them.

The existence of an organized conditioning of the cognitive structures at an educational level allows socio-educational actors to engage in a whole process through which performance and competition are encouraged. In fact, the educational activity is an important aspect in the subsequent formation of the student's personality. In addition, the concern for the application of educational methodology reflects some communication forms through which theoretical constructions guide the type of research towards pragmatic action. So, a didactic process (general / of specialty) becomes effective to the extent that it relates to the educational realities in the true sense of the term and considering that it gets a positive feedback from the education approaches assumed in the education process.

*Learning Environments and "The Epistemological Obstacle"*

The didactic activity should focus its concerns towards specific forms of materialization of interpersonal relations. This is why communication requires to send a significant message. Didactic action itself should be granted with a proper

[5] M. Allard, "Une méthode de recherche en didactique des sciences humaines," *Revue des sciences de l'éducation* 4, 2 (1978): 163-169.

role, aspect that otherwise requires, within the decision-making process, taking into account the pedagogical experience. Taking place in the educational system, such discursive structures designed to provide validity to the educational activities are obvious. In this sense, the benefit of such an approach methodologically depends on the involvement degree of socio-educational actors.

In this manner, the cognitive function and the pragmatic function are obvious at the level of such a didactical message. In other words, didactical communication, seen as a specific component of general communication, points to the idea that the message sent and subsequently received on a educational dimension must relate to the concept of *didactical interpersonal structure.*

Through the concept of *didactical structure* we understand *Learning Environements* (as part of the educational environment),in which takes form the didactic communication (eg, classroom, virtual laboratory, etc.). In this connection we are considering the way in which we convey the message through the communication channel. In this way, we believe that should be given some consideration to the actual communication structure. Here intervenes that psycho-pedagogical context through which communication must become pragmatic. The front, individual activities are obvious at the group level. An important role in this context holds therefore the didactic "ergonomics" (teaching environment, non-disruptive factors, specific forms of communication and so on).

Communicating also means to relate to the scientific nature of the (sent / received) information. Here intervenes of course, from a theoretical point of view, the idea of didactic transposition. However, the comprehension of a didactic message faces in the communication certain *epistemic errors*[6] generated precisely by the one who transmits them.

Understanding the communication in an educational activity means to take into account the conceptual-theoretical reassessment of the operational dimension. We have in view, in this connection, reporting didactic activity to a scientific spirit, the dual feature of which is revealed in the basis of an epistemological profile of different conceptualizations.[7] Moreover, this idea of an epistemological profile can be found in Gaston Bachelard` papers, within the rational analysis of scientific knowledge. In this context, Gaston Bachelard asserts that an epistemological profile should always be relative to a specified concept.[8]

---

[6] I. Moraru, *Ştiinţa şi filosofia creaţiei* (Science and Philosophy of Creation) (Bucharest: Didactică şi Pedagogică Publishing House, 1995), 204.
[7] G. Bachelard, *Filosofia lui nu* (The Philosophy of No) (Bucharest: Univers, 2010), 42.
[8] G. Bachelard, *Dialectica spiritului ştiinţific modern* (Dialectics of the Modern Scientific Spirit), vol. 1 (Bucharest: Ştiinţifică şi Enciclopedică Publishing House, 1986), 302.

This perspective sends, from an operational point of view, to a particular understanding of what conceptual dimension of scientific content means, and, in this regard, we believe that it should be noted the concept of *epistemological obstacle*.[9] This concept of *epistemological obstacle* (which is found in Gaston Bachelard`s papers and sends to a psychoanalysis of knowledge) is analyzed in the specialized literature by comparison with the *didactic obstacle*.[10]

So, G. Brousseau[11] distinguishes between the *epistemological obstacle* (following a learning task whose "materialization" generates the error of understanding), *the ontogenetic / psychogenic obstacle* (obvious when it is reached a limit of understanding: for example, the student`s age does not allow the understanding of a certain content) and *the didactic obstacle* (result when the content understanding is impeded if there are no didactic tools / means / appropriate pedagogical instruments).

It is obvious that an understanding of the didactic communication is possible by following a scientific analysis of the discursive-argumentative forms. In other words, we believe that theoretical and practical understanding should materialize in terms of a well defined scientific language. By reference to didactic communication process, we can admit that by *didactic obstacle*, we mean a comprehensively unsatisfactory image resulted from a previous process of learning, which is in contradiction with that image resulted from the current process of learning.

As a component of social work, the educational - scientific paradigm involves an explanatory dimension of the revaluation process in the informational content. Such an explanation is given through a set of analysis developed for the educational process. In this regard, methodological openings towards a new paradigm emphasize the very pedagogical-didactic share, initiated towards efforts according to the objectives and the competences assumed, related to the public communication campaigns.[12] However, we believe that special attention should be paid to the contextual paradigm of education. As a result, we consider as justified

[9] D. Sălăvăstru, *Didactica psihologiei: perspective teoretice şi metodologice* (Didactic of Psychology: Theoretical and Methodological Perspectives) (Iaşi: Polirom, 1999), 21.

[10] G. Brousseau, "Les obstacles épistémologiques, problèmes et ingénierie didactique," in *Théorie des situations didactiques*, Guy Brousseau (Grenoble La Pensée Sauvage, 1998): 115-160.

[11] G. Brousseau, "Les obstacles épistemologiques et les problèmes en mathématiques" (Texte d'une conférence exposée lors de la XXVIIIe rencontre organisée en 1976 par la CIEAEM), Louvain-la-Neuve (Belgique) (1976): 101-117.

[12] M. Pătruț, C. Cmeciu and L. Miron, "NGO annual reports as a device to frame education in Romanian public communication campaigns," *Public Relations Review* 37 (4) (2011): 432-434.

the idea that a foundation of a new educational model materializes according to the specific mechanism of individualization of the spontaneous education.

The educational reality highlights a distinct communication through which the epistemic way of understanding relates to what in the teaching experience is known as axiological potential. In this regard, specific forms of socializing reflect educational paradigms within the cognitive structures, which are based on scientific grounds. Therefore, the conceptual dimension of an educational culture does not exclude the idea of limit with regard to an assumption of some methodological strategies.

*Conclusion*

It is obvious, in this context, that assuming an educational-epistemological architecture highlights some questioning that need to be solved by reporting the informational content to the attitude of social actors. Scientific responsibilities assumed at the educational level illustrate an epistemological correlation between conceptualism-theorizing and social praxis. As a consequence, the scientific knowledge becomes relevant to the extent that the assumed responsibilities involve some methodological approaches that can be operated around the concept of educational tolerance.

Such an assumption is that didactic performance requires within The Learning Society[13] some approaches that can indicate the role of the idea of management control in the education system. In these circumstances, we admit that the cognitive structures, regarding the practical dimension of learning, justify the validity of an organization level. However, we consider that a well-founded educational model must lie in a coherent educational logic. Therefore, evaluated from the perspective of reality, education generates some pragmatic, meaningful debates.

Also a real / realistic education represents the one through which *pedagogical improvement* means adaptation and ability to make connections between theory and practice. Such an assumption reveals the social need of an well-founded educational policy. This prompts us to argue for the view according to which social education must be closely correlated with the economic reality. This concerns in particular those activities through which the application of the specific research methods is based on taking into account various levels of reality.

[13] A. Barman, "Social Responsibility of Management Teacher – Beyond Teaching," *Postmodern Openings* 3 (2) (2012): 19-36.

At the same time, the methodological dimension designed at the level of skills assumption socially concentrates the optimal capitalization of the learning content. According to this view, within the training-learning process,we believe that a systematic approach to cognitive structures is required. In this regard, we support the idea that educational structure can not acquire methodological validity unless the organization of skills in a system of values relate to the didactic activity itself.

The competences organization of a certain system of values can be understood in so far as it is translated in conceptual terms into a dimension of epistemological understanding. The approaches of a social reality, in connection with a value education, generates a conceptual formalism submitted to some specific forms of organization. It is about assuming a discursive strategy through which information structures are related to pragmatic criteria of knowledge. As a result, we take into account a social perspective in which it is obvious the idea of legitimacy of the educational alternatives.

A significant attitude reflects in this background some scientific criteria designed to rank the methodological sequences within the education system. The importance of this situation lies in the idea that the development and acceptance of social norms requires some discursive forms of argumentation. At the same time, these issues of pragmatic nature involve the consideration of an epistemological review.

In this way, the scientific arguments materialize themselves by comparing them to an educational model that seeks to clarify the social reality in terms of the new knowledge society. The assumed scientific context points to the idea that a competitive strategy must relate to a whole reorganization and restructuring process. Therefore, advanced solutions in the use of specialized language prove their efficiency by making methodological correspondences.

**Bibliography:**

1. Allard, M. “Une méthode de recherche en didactique des sciences humaines.” *Revue des sciences de l'éducation* 4, 2 (1978): 163-169.
2. Bachelard, G. *Dialectica spiritului ştiinţific modern* (Dialectics of the Modern Scientific Spirit). Vol. 1. Bucharest: Ştiinţifică şi Enciclopedică Publishing House, 1986.
3. Bachelard, G. *Filosofia lui nu* (The Philosophy of No). Bucharest: Univers, 2010.
4. Barman, A. “Social Responsibility of Management Teacher – Beyond

Teaching." *Postmodern Openings* 3 (2) (2012): 19-36.

5. Brousseau, G. "Les obstacles épistémologiques, problèmes et ingénierie didactique." In *Théorie des situations didactiques*, Guy Brousseau. Grenoble La Pensée Sauvage (1998): 115-160.
6. Brousseau, G. "Les obstacles épistemologiques et les problèmes en mathématiques" (Texte d'une conférence exposée lors de la XXVIIIe rencontre organisée en 1976 par la CIEAEM). Louvain-la-Neuve (Belgique) (1976): 101-117.
7. Dollo, C. "Épistemologie et didactique en sciences économiques et sociales: de la recherche à la formation." (2012). Accessed October 21, 2012. http://www.lille.iufm.fr/IMG/pdf/247-259_DOLLO_Tome1.pdf.
8. Jeder, D. "Education and structures of responsability for life and environment." *IPCBEE* vol.1. Singapore: IACSIT Press (2011): 420-423.
9. Moraru, I. *Ştiinţa şi filosofia creaţiei* (Science and Philosophy of Creation). Bucharest: Didactică şi Pedagogică Publishing House, 1995.
10. Pătruţ, M; Cmeciu, C; and Miron, L. "NGO annual reports as a device to frame education in Romanian public communication campaigns." *Public Relations Review* 37 (4) (2011): 432-434.
11. Peyron-Bonjan, C. "Problèmes épistémologiques de la didactique comparée: méthodes, concepts, champ(s) théoriques." *La Revue française d'éducation comparée*, 5, (2009): 31-48.
12. Sălăvăstru, D *Didactica psihologiei: perspective teoretice şi metodologice* (Didactic of Psychology: Theoretical and Methodological Perspectives). Iaşi: Polirom, 1999.
13. Tomasello, M. "The social-pragmatic theory of word learning." *Pragmatics* 10, 4 (2000): 401- 413.