

## **Methodological controversies and teaching process**

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**Abstract:** Contemporary pedagogy and didactics has still been marked by numerous controversies. The article considers the controversies essentially influencing the grounds of teaching process and its effects within pedagogic methodology. Before all it points out the differences between “conflicting” paradigms – qualitative and quantitative, as well as their reaches in didactical research. The paper considers the extent to which the applied methodological approaches managed to grasp complexity of teaching, to contribute to more grounded teaching process and more efficient didactic guidance.

The importance of coherent approach when studying teaching process is emphasized, as well as the need to apply as diverse research strategies and procedures as possible in the scope of both paradigms, in order to gain new insights offering teaching process which would be better grounded.

**Keywords:** quantitative paradigm, qualitative paradigm, methodological controversies, teaching process.

Various methodological approaches in pedagogic research tradition have had their influence in the field of didactics. Namely, the variety of didactic theories and styles of didactic guidance is a result of different methodological approaches and orientations – positivistic and neo-positivistic paradigm, i.e. empirical and experimental methods have affirmed didactics as a theory of teaching and learning, didactic as learning theory, informational-cybernetic didactics, etc; preference for historic-hermeneutic approach, humanistic paradigm and spiritual-scientific

orientation has influenced the development of didactic as educational theory; under the influence of critical orientation, critical-constructive didactic and critical-communicative didactics have recently been affirmed.

Differences, and we could even say controversies, in methodological approaches have influenced contemporary didactic thought, as well as school teaching process. The movements of the 1960ies (education theory didactics, learning theory didactics, informational theory didactics, communicative didactics, curricular movement) have constantly been supplemented and changed. As a consequence, the movements arising out from them created in 1980ies have the following characteristics: in critical – constructive didactic the main teaching aim is emancipation implying ability for self-determination and solidarity, while learning is seen as a process of interaction, rather than the encounter with educational contents; in Habsburg didactic model based on learning theory, learners are subjects and the purpose of teaching lies in their emancipation; teaching is considered to be interaction in which students are subjects as well, not only teachers; critical-communicative didactic also puts emphasis on the categories of emancipation and interaction and focuses on the connection between education and social-political contexts. It is noticeable that contemporary didactic theories have *focused on the learner*. Such a focus has been manifested in setting the basic humanistic aim and purpose of school as social institution – *personal development of a student*.

Consequently, the main aim of school is to educate individuals who will be useful to society through their personal self-realization. Such tendencies and pluralism in contemporary didactic theories are the result of different methodological approaches, i.e. differences between the so called “great paradigmatic epistemological-methodological orientations”: *empirical-analytical (positivistic)*, *historical-hermeneutic (interpretative)* and *critical research orientation*.

### **Epistemological-methodological orientations as grounds of didactic theories**

*Empirical-analytical (positivistic) research orientation* starts from the viewpoint that objective reality can be observed, learned and measured and researchers should gather facts and explain reality according to them. Pedagogic research grounded on this epistemological orientation was striving for discovery of various laws relevant for various pedagogic situations. The criterion of truthfulness of scientific insight is empirical

record, implying independence of observation from theory. Having in mind that the intention was to confirm real facts according to empirical-analytic procedures, with an emphasis on quantificational aspect in data analysis the paradigm was also called quantitative or explication paradigm. The purpose of the paradigm is *nomothetic* – establishment of scientific assumptions on constant relation between two or more phenomena, reached according to larger number of scientific observation units, i.e. representative sample.

***Historical-hermeneutic (interpretative) research orientation*** does not see reality as an object that can be revealed and measured, but as a *construct of human thought*; there is not one, sole reality, but there are *multiple realities*; *the world is highly subjective phenomenon* which should be *interpreted*, rather than measured. What has recently influenced hermeneutic tradition is existentialism, phenomenology, symbolic interactionism, as well as analytic philosophy representing “learning paths” which are more interpretative, intuitive, subjective and qualitative. The purpose of hermeneutics in didactic research is to *establish the meaning of various experiences in teaching practice*. Hermeneutic procedures offer answers to the questions how certain teaching practice is understood, if such a practice has a hidden meaning how to interpret it in a broader social and cultural context. The most comprehensive answers to such questions are gained according to interpretation, offering more complete understanding of educational process at school. *A researcher is involved in what is being researched* – he/she is not at distance as it is the case in positivistic approach. The following research procedures are most commonly used: *interview, study of document contents, process observation* etc. *What is the subject of research is the meaning of certain problems, how processes develop, what is going on in the course of development*.

***Critical research orientation*** is based on different philosophical, epistemological and axiological grounds in comparison to positivistic and interpretative orientation. The central role in critical approach belongs to *actor's interpretation*, with an emphasis that practical judgement is not sufficient. What is necessary is *systematic understanding of the conditions shaping, limiting and determining actions*. J. Habermas has emphasized that cognition is a result of human activity motivated by natural needs and interests. His conception of interests is critical response to positivistic conception and its research orientation. The second central point of critical theory is *communicative competence*. What is important is democratic

discussion among subjects, i.e. “symmetric communication” without domination (discourse). Critical reflection is to be developed in such a discussion (discourse). The function of science and scientific research is not the discovery of universal laws of social life, or mere interpretative understanding of subjective meanings of social situation actors and their enlightenment, but emancipation and change of practice. Having in mind that learning is understood as *active construction and reconstruction of theory and practice*, critical epistemology can be described as constructivistic. Critical research orientation demands *full cooperation between the researcher and the actors of the studied practice*. Social actors are not the *subjects* of the research for an objective and neutral researcher (like in positivistic paradigm). At the same time, interpretative paradigm has its limitations as well, having in mind that the interpretative researcher, although close to the observed subjects, still remains value neutral and action disengaged.

### **The influence of contemporary methodological tendencies on didactic thought**

“The shift” from unrefined empiricism and positivistic orientation towards contemporary scientific thought and alternative orientations has influenced different methodological approaches. Thus, *the need for holistic approach* has been emphasized within new research paradigm when studying a person as a whole in a context with which it also makes another whole; a demand has been imposed for *persons to be treated as human beings* rather than subjects during research; one-sided objectivity, typical for traditional paradigm is to be overcome by strict *synthesis of objectivity and subjectivity*; *idiographic approach* has been adopted, not completely excluding nomothetic approach; research should lead to *active learning* to increase abilities for *autonomous, self-aware and self-guided behaviour*; *value of salient understanding* has been emphasized, as well as the *acceptance of ambiguity, imprecision, digression, or, even, contradiction*; instead of the research based on the relation *I – Him* (characteristic for traditional paradigm, resulting in observational knowledge), the *relations I – You* have been included (resulting in experiential knowledge).

New qualitatively oriented research methodology involves various theoretical paradigms – hermeneutics, symbolic interactionism, philosophy of postmodernism and deterministic chaos, social constructivism, critical theory. It has been framed by specific research strategies: action research,

case studies, ethnographic research, grounded theory methodology, ethnomethodology. Having in mind that the differences from quantitative and qualitative research tradition come from the differences in reality understanding views on the nature of knowledge, research aim, research techniques, methods and procedures, it seems that methodology is facing a great challenge. Can it overcome the existing dualism?

*The influence of constructivistic meta-theory* – Constructivistic views represent methodological alternative to positivism; it has been pointed out that persons need an approach different from the one to subjects and phenomena. It has been taken into consideration that different persons experience “the same” event in different ways. Constructivistic standpoints are featured by *relativism* – according to constructivism advocates, there is not one “truth”, but versatile versions of an event and status and value should be attributed to all of them. The application of constructivistic viewpoints in pedagogy implies emphasis on the need for *understanding of those who we educate*. The difference in relation to traditional methodology lies in the fact that the focus is on the interest in persons and individuals, rather than variables and statistics.

*Chaos theory as research paradigm* – the issue of linearity and predictability, as significant features of modern studies has been brought under dispute, since it is considered that the connection between phenomena is not linear, but there is so called chaotic order. The study of phenomenology of deterministic chaos provides new conceptual and methodological framework enabling understanding and taxonomization of complex forms of behaviour. Sekulic-Majurec has emphasized that it will never be possible to completely quantify and anticipate with mathematical accuracy fine fluid events in pedagogic processes; order cannot be noticed due to the numerous elements creating it and the latency of their interactions. Another statement should also be brought in mind: the smallest change of independent variable can have influence not only on dependent variables, but on numerous independent ones, which is characteristic for pedagogy, as well. Phenomena related to subjects have been studied, and they do not commonly behave according to the rules of linear causality and determinism. All this poses **controversial issues**. Causality laws have been under dispute while their application in scientific research has not been completely explicated by the theory of chaos; on the contrary, it has only been deepened, increasing the number of problems to be studied and understand according to chaos theory. Anyway, researchers in humanistic sciences are nowadays more careful when making

conclusions according to linear causality. The time will, of course, show the reaches of chaos theory as a new research paradigm.

Consequently, qualitative research methodology implies multi-paradigmatically and multi-methodologically guided research including both naturalistic and interpretative approach to the subject of research. It is beyond dispute that the *new paradigm has brought about new incitements and challenges* in pedagogical methodology. As different from positivistic *paradigm of explanation*, the so called new research paradigm strives for discovery of the source of human activity and *understanding* of motives of behaviours and reactions. The need for holistic research has been underlined, based on empathy, in order to understand a man as an individual phenomenon in the given, specific context. The new research paradigm prefers the application of such pedagogical procedures and instruments which do not exert pressures on the subjects.

### **Reflections on teaching practice**

Apart from the so called “closed type didactics” which is analytically-empirically grounded, the stated tendencies in methodology have influenced the establishment of “open didactics”, whose standpoints are completely contrary to the previous one. “The open didactics” arisen out of contemporary methodological tendencies is grounded on phenomenology, Habermas’ model of interests, holistic approach, etc. It is open to instable forms of practice, ideas and cases acknowledging greater freedom and competence to a teacher. A student is, on the one hand, considered in his/her individuality; on the other hand, his/her social competency for action is taken into consideration. **The discussions on the measure of individual action on the expense of sociability** are still going on. **Other controversies** have been noticed, like, for example those **arising out of extreme tendencies of relativisation of contents and types of learning** as “open didactic” features.

Emancipatory didactics directed to a student go so far to contradict one another, having in mind that phenomenological approaches in contemporary didactics make it difficult to formulate general structures and elements; within these views, it is not possible to deduce guidelines for teaching practice according to these elements, since “didactics oriented towards a student” have various views on a single student. Thus these didactics have gained a personal note, practical-interactive, socially-

emancipatory etc (Gojkov 2007: 9). According to our opinion, it would be fruitful to deeper explicate ontologically opposed positions in didactics.

Phenomenologically oriented teaching process implies a path from pre-experience of students towards understanding and generalization, so that the basic task of teaching is thematization of scientifically proven standpoints according to experiential aspects. Learning is taking place in the encounter of an individual (student) with the contents and him/herself, gaining experience and knowledge how to formulate them. Subject contents are mostly unfixed, while didactic problem is to create places of connection which will encourage a student towards “co-determined” learning.

New research paradigm in didactics pays more attention to interpretative frame of didactic issues. Nevertheless, according to many authors, the ongoing discussions are on the meta-level of theories and models, rather than checking and fitting them into teaching practice. In other words, descriptions and explications are not followed by empirical documentation, which is called by some authors as “half-way hermeneutics”. More detailed considerations are necessary in order to overcome the gap between didactic theories and empirical teaching research.

Qualitative strategies, techniques and procedures (phenomenology, case studies, action research, grounded theory, participatory observation, in-depth interview, etc) provide *better insight into concrete educational reality in schools*, having in mind that a researcher can get immediate knowledge on the studied processes and phenomena. In such a way not only *a better insight into existing regularities*, but also on *peculiarities* is gained. Accordingly, generality enables perception of trends and characteristic features. However, immediate didactic activities ask for more than that – i.e. deeper understanding of situations and elements, for didactic guidance to be more efficient.

It is necessary to properly estimate when it is suitable to apply certain strategies, techniques and procedures, or their combination, regardless to the paradigm they belong to. At the same time, conditions should be created for methodological flexibility, since different ways of research open up a choice between nomothetic and idiographic approach, as well as for their complementarity. New research paradigm has offered a different approach and alternative procedures significantly contributing to a more comprehensive and in-depth study of didactic issues. Nevertheless, the disputes in both didactic theories and methodology itself cannot be

ignored, as well as the fact that, in spite of the fact that they are numerous, new methodological techniques (e.g. constructivistic) have not touched the myth on essentialism and positivism in didactic research (Gojkov 2007: 13).

Complexity, instability and dynamics of didactic situations have imposed a demand for complex approaches in interventions. Having in mind that the used methodological approaches and procedures have not succeeded in considering all the complexity, what could be regarded an assumption of getting to as complete data in the field as possible is the application of versatile research procedures and strategies within both paradigms – quantitative and qualitative, having in mind that both have numerous limitations. Nevertheless there is still a controversy open referring to the possibility of triangulation. Some of the issues demanding further discussion are: is it possible to make a connection between quantitative and qualitative research methods; what would be a common setting principle encompassing both numerical and non-numerical data; is a compromise possible: validating of quantitative data according to qualitative studies, and vice versa, objectivizing interpretative results according to quantification of what has been interpreted, etc.

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