THE EPISTEMOLOGICAL BASES OF SCIENCE AND ITS INFLUENCE IN EDUCATIONAL AND PEDAGOGICAL RESEARCH

(Research project)

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Summary

This project propose a research about the development of the epistemological systems that have founded, justified and validated the sciences, from the middle of the XX century until today, in three moments or aspects of the sciences: the epistemologies that have had their genesis and development in the sciences of nature and in physics too; the epistemologies that have emerged from the life sciences and the emerging epistemologies that are developing in the social and human sciences. The research aims to be a theoretical contribution and a tool for the research carried out in the Faculty of Education at Santo Tomás University in Colombia and mainly at the levels of Masters and Doctorate.

Palabras clave:

Epistemology, natural sciences, life sciences, social and human sciences, research.
The problem:

From the conceptions and conceptualizations of scientific knowledge, as a proven, ordered and systematized set of knowledges that are obtained in a methodical way, based on principles and reasons of the same knowledge and its search: practice, study, experimentation, observation, subjective experience, understanding and analysis of the facts or phenomena of nature, life processes and social and human events, science seeks, through methodological, epistemological and heuristic processes, to increase existing knowledge, to produce new knowledge, to understand, how to transform reality and also to solve problems. Therefore, it is necessary that the researcher, in addition to the competences on the understanding and the management of the methodologies and the search instruments, must also be able to justify, sustain and substantiate, the processes and the scientific production from the same epistemologies that originate or have their genesis in their own problems.

On the other hand, disciplines such as education and pedagogy and, in general, social and human sciences, have not yet had enough debate about what are their theoretical-epistemological foundations that justify and validate, from their own rationality, the production, development and systematization of their knowledge for the construction of knowledge as sciences, since traditionally teaching and learning have focused much more on their disciplinary aspects and, in the case of research, attention is usually focused, with greater emphasis, on methodological processes, neglecting, almost completely, the epistemological foundations and aspects, that is, its history, its genesis and its development. These epistemological aspects are those that facilitate the understanding, intelligibility and rational sense of the investigative processes.

In addition, from every point of view and from the conception of science as a complex reality, researchers lacked a broad and deep knowledge of the different currents and movements related to theories and paradigms that historically have oriented, validated and justified the beliefs and epistemic values that have contributed to the construction and development of science, especially from the epistemological and methodological debates since the middle of the last century to what is happening in the present century, when these discussions have been more intense.

If we remember those words of the philosopher of science and epistemologist Mario Bunge, when in the first semesters of the career almost by obligation and in all professions, one should read his book titled: Science its method and its philosophy (1998), and in the fourth of these essays and under the subtitle Some of the reasons for the backwardness of epistemology in Latin America read the following phrase perhaps without understanding it enough: "Epistemology is hardly cultivated in Latin America, and does not even enjoy a good reputation there" (Page 61). If we continue reading the reasons of the author to write this, that is to say, since 1959, when these writings appeared in Spanish for the first time, they
still have resonance, because it seems that things have not changed much, has lagged in time:

Also, the scientific level of Latin America is low, although it rises rapidly. We have a remarkable deficit of scientists: we need with anguished urgency mathematicians, physicists, chemists, biologists, psychologists and sociologists [and pedagogues] who contribute to the rational exploitation of our wealth, to supply our economic deficiencies and to overcome the stage of colonial culture.

How can one wonder that among the few Latin American scientists, burdened with tasks of all kinds, there has not been a considerable number of epistemologists? Presumably, at most ten out of every hundred scientists often have philosophical concerns, and of these ten scarcely one is resolved to deal with them in a systematic way (pp. 61-62).

This failure in the investigative processes of students and teachers, and their products derived from their research, is easy to observe in the works and in the thesis of degree, especially in the masters and doctorate levels, where it would be thought that the level of Epistemological foundation, and argumentation and expository demonstration, should be more solid and rigorous as scientific productions.

It is necessary to clarify that there is no epistemology, but epistemologies, in the sense that each discipline or each science, from its own problems, raise and generate the cognitive and epistemic ways of solving them.

It is for this last reason that to carry out this investigation will start from the genetic epistemology of Piaget (1970), according to which:

The new fact that has incalculable consequences for the future consists in the fact that epistemological reflection increasingly emerges within the very sciences, not because certain scientific creators of genius, such as Descartes or Leibniz, leave there, for a time, their Specialized works and dedicate themselves to the construction of a philosophy, but because certain conflicts arise as a consequence of the inner march of deductive constructions or the interpretation of experimental data, and it becomes necessary, to surpass the latent traditions or Explicit, to subject to a retroactive criticism the concepts, methods or principles used until then, so that their epistemological value can be determined itself (p.56).

The purpose of this research is to construct a systematically organized and unified set of knowledge, not only to fill in the shortcomings and weaknesses in relation to the epistemological foundations of the writings of students and researchers, but also to present a text and a suitable instrument, In a unified and systematic way, to provide him with the necessary elements for such a foundation. In this way, the research will be carried out in three historical moments, significant and relevant in the development of knowledge from the second half of the twentieth century to today, based on the currents and epistemological approaches that have impacted the most Development of science.
Thus, the problematizing question is as follows:

What are the main epistemological systems that since the mid-twentieth century have founded, justified and validated scientific knowledge in the natural sciences, life sciences and social and human sciences, and what contributions have been made to research in education and pedagogy, considered in the context of the social and human sciences?

OBJECTIVES

General:
To rebuild epistemological currents and approaches from the paradigms of science that, from the mid-twentieth century until now, have justified and validated knowledge in the fields of natural sciences, life sciences and social and human sciences, with the aim of identifying what contributions have been made to research in education and pedagogy in the social and human sciences.

Specific:
1) To determine the historical-conceptual elements and the processes of development of the epistemologies that have their genesis in the sciences of nature and of the physics.
2) To determine the historical-conceptual elements and their development of the epistemologies that have their genesis in the life sciences and in the evolutionary processes.
3) To determine the historical-conceptual elements and the development processes of the emerging epistemologies, based on the human social sciences.
4) To infer the contributions that have made these currents and epistemological approaches to the social and human sciences and, among them, to the educational field and pedagogy.

JUSTIFICATION

Research is rarely done on the problems that arise in the methodologies and epistemological systems that are often used in research processes to measure and determine the effectiveness and goodness of these knowledge instruments. This research proposes a theoretical search of the epistemologies that have been developed in the sciences since the middle of the twentieth century so far, not only as a compilation of the different currents and approaches, but more than anything else, through a critical analysis of the epistemologies which have had their genesis in natural and physical sciences, such as classical or traditional epistemologies, in the life sciences, as evolutionary epistemologies, and in those of the social and human sciences, such as emerging epistemologies. It is a sort of meta-research,
in that it seeks, not only to reconstruct them, but to make them an analytical and critical process.

In addition to this critical analysis, the research aims to demonstrate the contributions of these epistemologies to the development of the social and human sciences, and particularly to education and pedagogy.

Perhaps the most important contribution is to try to make a contribution to both student-researchers and teachers-researchers, so that they can have an instrument of consultation, not only theoretical, but also didactic and practical to support the research processes, in such a way that the products, results of the investigations, and the theses, both doctoral and masters, have the argumentative quality and the necessary foundations from the epistemological and methodological referents to carry out their investigations in greater depth, as that these levels require higher quality results in relation to scientific developments, contributions to knowledge, originality, novelty and social impact of their processes and products.

FRAMEWORKS

1. State of the art

A brief state of the art allows us to establish which have been the main epistemological currents and approach that have justified and validated scientific knowledge from the 50's onwards and which of them are still valid. On the one hand, positivism since Auguste Comte, in the nineteenth century and in Discourse on the positive spirit (1985) and in the Course of positive philosophy (1984), proposes a doctrine about the sciences and especially of society and the necessary rules to reform it and lead it to its “positive stage”. For Comte, Reason and science were the only guides of humanity capable of establishing the social order without appealing to the obscurantism of theology and metaphysics; therefore, the positive state correlates with the majority of social and intellectual age of humanity which, in overcoming mythic and metaphysical states, evolves into the ideal state of reason that will bring order and social reorganization. It organizes the sciences in a hierarchical way in such a way that each link depends on the previous one, according to the complexity of the studied phenomena, from mathematics to sociology.

On the other hand, already in the twentieth century and from the decade of the twenties, there are movements in the field of philosophy of science known as the Vienna Circle and the Berlin School, whose most important representatives were, by the former: Otto Neurath, Moritz Schlick and Rudolf Carnap; By the second: Hans Reichenbach. This movement was first inspired by David Hume's skepticism about knowledge and truth, since it can only be relied on the data of the senses; Second, in the pragmatism of Ernest Mach, which attempts to reconstruct scientific knowledge, especially of physics and psychology, starting from a
unique phenomenal basis to free ourselves from all hidden metaphysics and thus restore the lost unity of science, whose base Unique must consist exclusively of immediate sensations (colors, sounds, tactile impressions, etc.); third, the fundamental thesis of Wittgenstein's Tractatus Logico-philosophicus (2004), which establishes a close link between language and the world, in the sense that "the limits of my language are the limits of my world", and facts have a logical structure that allows the construction of propositions that represent or represent this state of things.

All this movement was known as Logical Positivism, Logical Empiricism or Neopositivism and its main theses can be summarized as follows:

1. The methodological principle of science is "verifiability", that is, a protocol statement is true if it can be verified against the facts; Otherwise it is false (inductive process).

2. They propose a method for all sciences, whose model must be that of physics. (Unity of Sciences).

3. The language of science is that of logic-mathematics (to avoid the ambiguity of ordinary language).

4. They oppose any metaphysical conception of reality. Faced with this positivist movement that permeated all the knowledge and science of the twentieth century, there were processes of continuity that still persist in many fields of knowledge; but mainly, reactions are important, particularly from the social and human sciences that failed to fit the model.

One of the first to react to positivism was the Viennese philosopher Karl R. Popper, who in his work, The Logic of Scientific Research (1982), written in 1934, and in Conjectures and Refutations (1972), rejects the "verification "of the statements and the induction of the positivists and proposes the hypothetico-deductive method. He asserts that all theories are rational attempts at explanation and solution to human problems. As such, theories are mere essays that can be overcome. For Popper, in scientific knowledge there are no truths or absolute certainties, and truth can only be reached in an approximate and progressive way; Therefore, since there is error, our knowledge can only become conjectural and hypothetical.

Another great opponent of positivism was Thomas S. Kuhn who in 1962, with his work The Structure of Scientific Revolutions, made new approaches to the development of knowledge and science from historical, psychological and social positions, characteristics that had been forgotten and perhaps, rejected, by the positivist current. Kuhn intends to demonstrate that science develops historically through processes of prescientific states, normal science and
revolutionary science, while developing the concept of paradigm, understood as the whole set of "beliefs, values, techniques, etc., that share Members of a given community "; Or also the set of concrete solutions to problems that are used as models or examples (1992, p.269). Kuhn, opens the floodgates to the epistemological problems of the social and human sciences, which are considered much more complex insofar as they are, on the one hand, inter and transdisciplinary, and on the other hand, they are historical and are loaded with values of all kinds (Epistemic, ideological, political, religious, etc.), thus modifying the positivist concept of neutrality.

Popper and Kuhn, were not immune to all kinds of reactions to their proposals, especially by I. Lakatos and P. Feyerabend. The first, in his work Methodology of scientific research programs (1998), rejects Popper's naive falsificationism and proposes a "sophisticated falsificationism", which means that science as a whole can be considered a huge research program Scientific, as a new demarcationist methodology, composed of a firm core, guarded by a set of auxiliary hypotheses that form a protective belt around the nucleus and that no experiment or observation can falsify or refute. In addition to the firm core and the protective belt, the program includes a heuristic or set of conceptual tools and methodological rules (positive heuristics and negative heuristics). For his part, Feyerabend, in his works: Against Method (1984) and Goodbye to Reason (1987), advocates a "methodological anarchism" according to which it would be harmful for science and culture in general to want to establish General and explicit rules of investigation. The idea of a fixed method, of a theory of fixed rationality, arises only from a too naive view of man and his social outline.

Around these currents and as consequences of discussions and debates, a great number of philosophical, epistemological and methodological currents and proposals have arisen on scientific knowledge, theories of science and investigative processes and other problems related to the language of The sciences, especially in the United States. Only to point out a few: Stephen Toulmin, Patrick Suppes, Bas van Fraassen, Ronald Giere, Ian Hacking, Larry Laudan, and one more list that would be long to list. On the other hand, some authors, such as Mario Bunge, have been kept in very similar positions with positivism, but defending a realistic position of science. Parallel to the analyzed paradigm, which may well be called the "classical Paradigm of science", from a conception of the Marxist school, during the last century from the 1930s the Critical Theory of the Society of the School of Franckfurt, especially with Max Horkheimer, one of the most important directors of the School, and with him, Theodor W Adorno, Herbert Marcuse, Erich Fromm and Jürgen Habermas, among the best known.

The following text by Horkheimer in his Critical Theory (1998), summarizes what was the horizon of the Franckfurt School and the critical theory of society: On earth there are more raw materials, more machines, more educated manpower, and better methods of production than before, but all this does not, as it should be, do to the benefit of men. (...) Scientific knowledge shares the destiny of forces and other productive means: they are used far below what would allow their high level of development and what the real needs of men would
require. As the course of previous crises has shown, economic equilibrium is restored only on the basis of a vast annihilation of human values and practical values (p.16).

Theodor W Adorno, in Epistemology and social sciences (2001), poses problems related to the object, the method of the social sciences; The notions of objectivity, experience and value neutrality; The relations between natural sciences and social sciences, and philosophy and social sciences.

In short, the most well-known aspect of the Frankfurt School is the critique of scientific positivism which defined it in the general sense as "an amalgam of diverse traditions, including the work of Saint-Simon and Comte, the logical positivism of the Circle of Vienna, the first Wittgenstein, and the more recent forms of logical empiricism and pragmatism that dominate the social sciences in the West "(Giroux, 2003: 68). The Critical Theory tries to show how in the same process of knowledge is the genesis of the alienation. The starting point of his reflection is to be able to unmask the ideological character of what in the development of modernity has come to understand itself as "positive science." Faced with this epistemological and methodological problematic of the sciences, the role of the social and human sciences remains to be defined in this context. Immanuel Wallesrtein, in The uncertainties of knowledge (2004), addresses the social science problem in the twenty-first century in three temporal frameworks: historical construction, current challenges and possible future alternatives. Historically and until the seventeenth century science was unique and unified in the concept of philosophy.

From this moment a divorce took place and at the same time a power struggle between philosophy and science, managing to impose the science on the philosophy and the humanities. Thus the sciences, especially the natural sciences, are inclined to a nomothetic epistemology, that is, trying to look for universal laws whose truth must remain intact through time and space; While the social sciences and the humanities sought to be ideographic in the sense that they placed particular emphasis on social phenomena and did not claim to be universal. However, many of the social sciences and by the influence of the positivism of the twentieth century, tried to locate in the model proposed by this current; For example, economics, psychology, sociology, and even pedagogy, especially in the 1970s with the rise of educational technology and psychological behaviorism.

Today the social sciences continue to struggle to find their place in the concert of science, as a way or way of knowing, and hence are emerging new epistemologies that are still called emerging, such as the hermeneutic epistemologies that, from Dilthey , In the Introduction to the Sciences of the Spirit (1978), claims a Critique of historical reason for the sciences of the spirit or social and human sciences, in the way Kant had found a Critique of Pure Reason for the Natural Sciences and physics. Dilthey makes a distinction between the sciences of nature, which have as their object the explanation (Erklären) and the sciences of the spirit, whose object is the understanding (Verstehen). From the end of the nineteenth century and the beginning of the twentieth century, there is an enormous development of hermeneutics,
especially with Gadamer, Recoeur, Appel, Heiddeger and others, trying to find an epistemic foundation for the social and human sciences.

In addition, from the proposals of theories of complexity and theories of life development, neuroscience and evolution, epistemological proposals are also emerging to support the social and human sciences, such as those of Edgar Morin; Frijot Capra, Ilya Progogine, Hubert Maturana and Francisco Varela, David Hull, Donald Campbell.

From the neocolonialist positions appears the Epistemology of the South, especially with Boaventura de Sousa Santos, that is having force in Latin America and the Caribbean, as well as epistemologies of social and constructivist approaches.

2. Theoretical framework

Science is the result of two essential human activities: first, a specific practice consisting of direct contact with the real world, whether natural or social and human (heuristic), and secondly, a particular mode or way of knowing that tries to give explanations or interpretations of that same world (episteme). Even if a practice is carried out correctly, it is not sufficient in itself to produce knowledge that is valid in the field of science. Science, therefore, only takes place with the participation of two real poles, which converge in the production of knowledge: on the one hand, the cognoscent subject and, on the other, a possible object of knowledge. Both the subject and the object have their own characteristics and qualities that facilitate establishing a reciprocal relationship. The object has qualities that the philosophers, from Democritus, Galileo, Descartes and English empiricists, particularly Locke, called properties, primary or objective qualities, such as movement, impenetrability, density, weight, measure, quantity, extension, shape, figure. While the secondary qualities depend especially on the subject, such as smell, color, taste, sound.

The subject, on the one hand, has a complex system, composed of sensory organs, nervous system and intellectual capacities with which he perceives both the primary qualities of things and the secondary qualities, because there is no doubt that they do not depend exclusively on the Subject, since they are primarily found in things and perceived through sensations. In this way, the subject has three types of means or instruments to apprehend and to know that universe of things that, generally, is outside its consciousness: 1) the organs of the senses that put us in contact with the real world; (2) the complex neurophysiological system that transforms the world into images, memories, concepts and ideas into the intellect and which, according to Kant, is responsible for organizing the rhapsody of perceptions and converts them into knowledge; 3) man also has the technical and technological means and resources created by himself to make knowledge more effective and efficient, such as technological devices, research methods, mathematical and
language tools, which become in the extension of the capacities and physiological and intellectual qualities.

All this complex process allows us and makes us competent to produce knowledge; in this case, scientific knowledge, which has been the subject of study and analysis of various sciences, such as neurology, psychology, philosophy, among others. Perhaps it has been, from the problems that the philosophy detects in the procedures and the results of the scientific investigation that has arisen a new discipline called today with the name of epistemology, notwithstanding the discussions that, on the name, still persist.

The word derives from the Greek episteme, which means knowledge; it is not about anything or any knowledge, but, in its most explicit meaning, refers to the problems of scientific knowledge, in the way Platon understood it to counterpose it to the doxa, as mere opinion.

We understand, therefore, by epistemology a theory of science or knowledge about the problems of science; Therefore, it is possible to affirm that epistemology is not a science, but a theoretical discipline that assumes a reflexive and critical position against the results and the methodological and heuristic processes, in order to determine the characteristics of certainty and validity of a Scientific knowledge; that epistemology is, in essence, a meta-knowledge of scientific knowledge, in addition to becoming a propaedeutics that supports the processes and results of scientific research. However, epistemology, although derived from philosophy in general, especially the theory of knowledge or gnoseology, is not, strictly speaking, a philosophy of science. In this way, the problems of knowledge of the sciences constitute the essence of epistemology.

This project proposes, from this theoretical conception of knowledge, to reconstruct the different currents of epistemology under three perspectives in its development, as a contribution for postgraduate students, especially for the Doctorate in Education, in the sense of providing them with theoretical support and a practical tool that will help them to support research work and doctoral theses. The three views of these different epistemological currents are those of natural sciences and physics, those of the life sciences and those of the social and human sciences, considered as the three paradigmatic fields or fields of science.

METHODOLOGICAL DESIGN

Scientific knowledge is a constructive process that relies on certain tools and techniques for its development and for obtaining the expected results. It is for this reason that the methodological design within an investigation occupies an important place because it is through him that the way of the how and the direction of the investigation is indicated. Therefore, this research is located in the qualitative paradigm, taking into account that the
main sources of information will be documents, such as texts, books, journal articles, internet information, databases and other documents. Since the research is qualitative and from the perspective of the social and human sciences that by their nature are complex, in the sense that they are inter and transdisciplinary, it is not easy to determine the limits of the relation of one with another; Therefore, they need a philosophical and epistemological approach that places them in a certain context for their greater understanding and precision. The focus for this research is historical, since it will be necessary to consider epistemology as a process that has had its development and evolution since the middle of the last century until today.

However, it is necessary to clarify that history can be used as a method, but also as an approach, since it is not intended to reconstruct the relevant events that forged epistemology as a science or as a discipline, but only to observe it as a continuous becoming, As something that is constructed and reconstructed by supporting, justifying and validating the investigative processes. According to Dilthey (1978), "historical objects appear as systems of signs through which the past can be comprehensively re-constructed" (cited by Marín, 2012, p. 136). For this reason, as an investigative approach and considering that science is a constructive process for the human being, it is considered that epistemology has had a development process in time and space and that can be elucidated through this approach. But the process will not end with the only one in the tracing and historical description, but will assume a critical and analytical position of the various epistemological currents, to determine, according to Piaget (1970), how they have had their genesis in the same sciences and How they have been possessed in them, and from there, how they have influenced their development, taking into account those same elements of justification and validation.

The appropriate method for a qualitative paradigm and a historical-critical approach may well be a Grounded Theory, which, according to Taylor and Bogdan (1998, p. 155), quoted by Marín (2012), theory is "a method for discovering theories, concepts, hypotheses and propositions starting directly from the data and not from a priori assumptions, from other researches or existing theoretical frameworks." In other words, this research proposes to analyze and critique the epistemologies from the data provided by the direct authors who have developed the problems in the same paradigms of the sciences. Strauss and Corbin (2002), cited by Marín (2012), they point out that a researcher does not start a project with a preconceived theory, but with an area of study and theory emerges from the data that is being collected, which enables knowledge to be generated through them, increase understanding and Provide a guide for action (page 66). In this way and to build the theory based, three areas of study have been identified in this research, from which will develop the knowledge to build the theory. These areas have been identified in the various sections of the project: the epistemologies of the natural and physical sciences, the epistemologies of life sciences and emerging epistemologies emerging from the problems of the social and human sciences, and Seek to substantiate these same science.

The techniques and instruments of search are the same documents in which the data are found, collected and organized by means of an axial codification, a process that consists in relating the categories and subcategories systematically, in terms of the characteristics of
the concepts, their properties or their meanings and meanings, around a main axis, that can be the same three areas already described. With systematically organized categories, we will begin the construction of the Theory based not only on a level of descriptive analysis, but more than anything else trying to reach an interpretative analysis; that is, by searching for the meanings and meanings that underlie each statement in a critical way.

The research will be carried out in two phases: the first phase will consist of gathering information, organizing it and writing the document; The second phase will consist of presenting all products, taking into account that the publications of a book, articles in journals, the realization of a technological product, plus support for the creation of doctoral courses, will take at least one year.

Expected outputs (according to budget allocation) and product generation plan:

The time and stages required to make the product visible and the means to verify its existence must be described in detail.

**One (1) product resulting from activities of generation of new knowledge, expressed in products type:** Book research result and research article A1. If the project is designed for 18 months, that will be the time to be presenting the book and the article in an indexed World Class A1 magazine.

**A product result of social appropriation of knowledge, type of communication of knowledge:** Generation of virtual content. The importance of carrying a purely theoretical content such as the epistemology of sciences to the virtual realm of apps has been thought: in order that the result of the research may be available in multiple electronic devices, as well as Their download in digital media. In the market of the apps there are not many those that refer to the epistemological content, therefore will be a highly innovative product. One year.

**A technological development product type:** Registered technological product (Research reference database). It has been thought that the documentary and database tracking of the first phase, can generate a reference database on the subject of the epistemology of the sciences, registered and available in the app that will be designed in the project. One year.

**One (1) product of activities related to the formation of human resources in CTel type:** Support for the creation of doctoral courses. Within the options of diffusion of the new knowledge, it has been thought that designing a course in the framework of the Doctorate in Education that includes the epistemology of the sciences and an app available for
download by the students can be an innovative element within the Academic processes of the program. One year.

BIBLIOGRAPHY


Experimental and quasi-experimental research

Types of quantitative research

How to design an experimental study

Advantages and disadvantages of experimental research in education

Summary Exercises

Further reading

3 Designing non-experimental studies

Survey research

Observational research

Analysing existing datasets

Summary Exercises

Appendix 3.1

Example of a descriptive form

Appendix 3.2

Rating the quality of interactions between teachers and pupils.


Â Cognitive research and the design of science instruction, Educational Psychologist, 17(1), 31â€“53. Google Scholar.


Clermont, C., Borko, H., and Krajcik, J. (1994). 11. What research spectrum can you propose effective in the case of language experiment? Among operational definitions some structural and interpersonal proposals may be taken into account: 1. Identifying the reasons for the use of a control group; 2. Matched- Pair Technique; 3. Matched â€“ Group Technique; 4. Using subjects as the studentsâ€™ own controls; 5. Appraising the success of the manipulation; 6. Competency test exercises.Â It is very important to create creative approach to realizing new projects and rational learning through missing not important aspects of gotten information.Â Such approach is very effective in organization of educational space for seeing a real world, overloaded with known and unknown things.