

## **Pedagogical Strategies in Instructional Design**

**Mihaela-Gabriela Păun,**  
**Teacher, School no.1, Bals, Romania, European Union**  
**E-mail: [vobusu@yahoo.com](mailto:vobusu@yahoo.com)**

### **Abstract**

In postmodern society, the science of education can be found in the constructivist era and it imposes the change of paradigm by passing to the interpretative mode in the disadvantage of the normative one, from the teaching based on information transfer to the one focused on the student as active participant in his own process of developing.

In this article my purposes are:

- a) to reveal the place of didactical strategies (as characteristics and criteria of elaboration) in the universe of instructional design, and
- b) to identify the modality of adaptation of those strategies to the rapid evolution of instructional design.

Conclusion is that instructional design imposes a reconsideration of old competencies, and accumulation of new competencies. In the new perspective, every intervention on the educated student it is made through a constructive process of learning which takes into account encouraging and stimulating the active participation of the students in what concerns planning and handling their own scholar itinerary and also the differentiation of the didactic step related to the different teaching styles practiced by the students.

Keywords: teaching, learning, pedagogic strategy, instructional design, didactical communication

### **1. Standards in learning and education. Literature review**

The quality in education is assured by the modern society to which we tend to aspire by changing strategies and educational practices and optics according to which teachers “practice their power more than their authority”. The constructivist era in which The Science of Education found, imposes the change of paradigm by passing to the interpretative model in the disadvantage of the normative one. In the field of constructivist pedagogy, H. Siebert shows there is two paradigms: normative and interpretative paradigm. The normative paradigm consist of: the optimism of technological solutions, informational society (transmitter/receiver mode), the transmission of knowledge of guidance, absolute truths, reductionist conception of the world, answers supply, the consensus/ unity, perfect solutions, knowledge as representation. The interpretative paradigm includes: auto organization support, society of learning and communication, independent learning,

the pluralism of realities' constructions, holistic conception of the world, answers' stimulation, difference/ diversity, the probability of errors, knowledge as construction (Siebert, 2001; Vlăduțescu, 2002)

Being applicable in the Sciences of Education, the constructivist conception takes into account "changing the educational paradigm, from the transmission of behaviorist type of the knowledge to the approach of knowledge in a process of communication and cooperation, in which the student has an active role" (Păcurari, Târcă & Sarivan, 2003, p. 33). In this context a new vision of the curriculum is imposed. R. C. Richey (2000) shows that Robert M. Gagne „defines curriculum as a sequence of content units arranged in such a way that the learning of each unit may be accomplished as a single act, provided the capabilities described by specified prior units (in the sequence) have already been mastered by the learner. In „A learning design toolkit to create pedagogically effective learning activities”, G. Conole and K. Fill remark that the concept of learning design arrived in the literature of technology for education in the late nineties and early 2000s (Conole & Fill, 2005). Designers and instructors need to choose for themselves the best mixture of behaviorist and constructivist learning experiences for their online courses (Carr-Chellman A. and Duchastel P., 2000; Vlăduțescu, 2010). But R. Koper defines the concept of learning design as „the description of the teaching-learning process that takes place in a unit of learning (ex: a course, a lesson or any other designed learning event)” (Koper R., 2006) (also Smarandache & Vlăduțescu, 2012). Merrill, M. D., Drake, L., Lacy, M. J., Pratt, J., & ID2 Research Group name Instructional Systems Design (ISD) which creates: "instructional experiences which make the acquisition of knowledge and skill more efficient, effective, and appealing ”( Merrill, M. D., Drake, L., Lacy, M. J., Pratt, J., & ID2\_Research\_Group, 1996, pp. 5-7).

## **2. Action: in the core of instructional design**

The term "instruction" from the etymologic point of view, comes from the Latin word "instruo", meaning arrangement, arranging, construction, foundation, the instruction becoming thus, the construction of cognitive and operational structures, a construction of the intellect and spirit. The instructional design, being centered on the needs, interests and aspirations and subjectivity of the educated one, imposes a reconsideration of the competencies because it is necessary for every student to benefit by the intervention of the educator into a constructivist learning process. This organizes and implements his didactic step taking into account the development of the main ideas by "insisting upon the teaching and learning activity, centered on the student, reconsidering the role of the teacher as organizer and facilitator of the learning process in which his students are involved; becoming aware of the students in what concerns the necessity of their involvement in the process of their own formation; encouraging and stimulating the active participation of the students in planning and managing their own scholar path; the differentiation of the didactic steps in relation to the different teaching styles practiced by the students" (Draghicescu, Petrescu & Stancescu, 2008, p. 94). In this context, the teacher establishes the objectives of the didactic step, organizes and mediates the teaching activities, not being a simple information transmitter anymore. The learning and developing of the competencies is in this way facilitated, through the designing of the activities

according to the particularities and needs of those involved in the acquisition of information. In this context, the students are given the chance to involve in their own formation through free expression of the ideas and opinions, exposed in front of their colleagues and sustained by arguments, which leads to the developing of the met cognitive competencies. They allow the students to memorize on long term the information and usage in different activities, assuring them the social success.

### **3. Didactical strategies: characteristics and criteria**

In one of the most important studies in the history of pedagogy, A. W. Chickering and Z. F. Gamson formulate the following seven principle of education and instructional design: “1. Encourages contact between students and faculty; 2. Develops reciprocity and cooperation among students; 3. Encourages active learning; 4. Gives prompt feedback; 5. Emphasizes time on task; 6. Communicates high expectations; 7. Respects diverse talents and ways of learning” (Chickering & Gamson, 1987).

In the activity of instruction, the didactic strategies have a determinant role, being materialized in modes of approaching the teaching and learning, full combination and organization of the methods, means and grouping forms of the participants (Cerghit & Vlăsceanu, 1988; Bogdan & Biklen, 1998; Cohen, Manion & Morrison, 2011). Because the elements of interdependence and guidance combine in different proportions, we can distinguish the mix character of the strategies, and then they are “a group of two or more methods and devices integrated into an operational structure, carried on at the level of the teaching-learning-evaluation activity, for the realization of the general, specific and concrete pedagogical objectives, in high quality parameters” (Cristea, 1998, p. 422).

In 2003, I. Nicola launches the concept of “assembly of devices through which the co-operation between teacher-student to teach and learn a volume of information, forming acquirements, developing human personality, is realized” (Nicola, 2003, p. 441). On the other hand, M. Manolescu remarks “the dynamic, active aspect through which the teacher guides the learning process” (Manolescu, 2008, p. 193). Strategies are means through which the education process becomes efficient, that’s why they assume the creations of programs which coincide with the need of interrelation and differentiate answer to the students reactions, taking into account the challenging and sustaining the active learning in which, the one who learns functions upon the information to transform it into one new, personal, stimulating the participation of the subjects to the action, socializing and developing their cognitive, complex, processes, their individual experiences and their capacities of understanding and auto evaluation of the values and situations by using the active methods (Oprea, 2006; Veletsianos & Russell, 2013; Seidel, Blomberg & Renkl, 2013). In order to have a positive feedback, each designer of a didactic activity uses the most efficient methods, resources of instruction and means according to the aimed contents, objectives and the capacity of information assimilation by the groups of students with whom they work, which offers uniqueness to the didactic step (Dima & Vlăduțescu, 2012a). Being the possessor of various work techniques which involve creativity, he has an important role in selecting the information, in presenting the new in an original manner and of the existent elements in different combinations, to facilitate the assimilation of knowledge. That’s why didactic strategies which base upon action,

research, experiment and the application of the knowledge are built. Through them, the affective, cognitive resources are valorized and become in this way, motivated to be active and interested in forming the specific competencies which generate an original learning style through the assimilation of information, handling and organizing them according to their own personality, and these contents generate new knowledge which can be applied in different situations.

The strategy which is on the basis of the didactic step can be organized taking into account the systems of determinants which the human personality includes: general, individual and typical; they form a continuum and are on the basis of the three organization modes; frontal, individual and based on grouping. Frontal organization takes into account the aptitude found included in the general dimension of the personality. The individual one, valorizes the psychological fundament of the individual dimension and imposes to the teacher the knowledge of the characteristics of each participant which can be valorized in the activities of instruction. The organization based on groups targets the particular personality of the students by creating homogenous groups, but pedagogically efficient through the leaders involvement, creating socio affective ambient and through the initiation of the individual reports, facilitated by the positive evolution of the typologies.. Thus, the organization of the didactic step according to the three modes permit the designing, realization and developing of the differentiate instruction (Vlăduțescu, 2006a; Vlăduțescu, 2006b).

In the instructive-educational activity, the didactic strategies presented in every stage, have a determinant role in the following way: in designing the didactic strategy is conceived through reference to objectives, contents, time, organizing forms etc.; the development of the activity takes into account the realization of objectives using the didactic strategy which becomes the concrete instrument of realization; auto evaluation takes into account the results obtained, the quality of the didactic strategy, its correspondence with the purposes, content and the organizational forms of the educational process, the strategy being an object of the evaluation. These have in the process of instruction formative valences and limits (Spalding, Wilson & Mewborn, 2002; Vlăduțescu, 2012). In what concerns the formative valences it is to be noticed: “the forming and developing of functional competencies, in the type of adaptation, restructuring of the abilities and using the knowledge in practice, capacity of co-operation, team work, communicational competences” (Draghicescu, 2011, p. 7). She also remarks the limits of these strategies: creating an educational climate characterized through an apparent disorder, time consumer, assimilation of wrong information, absence of the monitoring of the teacher; encouraging passivity if the tasks are not clear and in the absence of the group monitoring; developing a possible group dependence in solving the tasks, conflicts between students if the teacher doesn't intervene as mediator, generating a “group thinking”; superficial approach of the tasks, difficulties in identification and evaluation of the individual progresses etc.

M. Ionescu and I. Radu establish the following characteristics of the didactic strategies:

-“they have a normative character without having rigid rules”, through the dynamic component which assures the flexibility and elasticity of the strategies of instruction, and the whole didactic step adapts to the situations of instructions and the ambient environment. We can say that the didactic activity carries the mark of didactic creativity and the personality of the leader, imprinted in his own teaching style.

- “they have the function of structuring and modeling the learning situations” initiating psychological organizations of the learning.

- “component elements of the strategy (methods, means organization forms of the activity) create a system” because connections, inter relations and interdependencies are established. Valorizing the information acquired in the previous stage of the didactic learning sequence decision are taken to pass from the next didactic sequence mentioning a logic succession of all the operations, stages and rules which form the didactic strategy.

- although it bears in mind a main strategic method and methodological system, the didactic strategy doesn't aim an only instructional sequence but “the process of instruction in its assembly.”

- they have “probabilistic character”, because the success of the process can be affected by the intervention of many variables, even if the didactic strategy is adequate to the psychological particularities of the targeted group and scientifically built.

- the learners are involved in “ specific situations of learning through rationalization of the content” of learning according to the particularities of their personality.

- it creates an optimal circumstance “for interaction of all the components of the instruction process” (Ionescu & Radu, 2001, pp.184-185) (also Dima & Vladutescu, 2012b).

To elaborate efficient and rational didactic strategies in approaching the instruction certain criteria are imposed; they are meant to combine and valorize the methodological, material and human resources actively involved in the teaching, learning and evaluating sequences. I. Cerghit and L. Vlăsceanu emphasize “the pedagogical, didactic and general concept and the personal concept of the leader of the didactic activity”, which comes from his own modern, didactic experience or traditional. Favoring the active participation to act of learning, modern conceptions impose the usage of active-participative methods and adequate didactic means, for example: group organization; while the traditional concepts valorize the adequate means of transmitting and receiving (Cerghit & Vlăsceanu, 1998; Vladutescu, 2007; Cross, 1999; Ryan, 2013).

I. Neacsu identifies other criteria of elaborating didactic strategies: “the system of general didactic strategies and the didactic strategies specific to the study contents, the objectives previously established and the nature of the content-specific” which is about to be fathomed (Neacsu, 1990). Some authors say that the strongest variable which influences the adopting of an instruction strategy is the result of the objectives-content-methods/means relation. That's why a series of guided variants have been created, associated to some contents (principles, laws, concepts, knowledge, activities, actions), certain methods ( individual study, case study, debate) to certain objectives (acquirements, opinions, knowledge, attitudes) (Vlăduțescu, 2011). Not being exclusivist and restrictive, these variants remain open. The efficiency of the didactic activity depends on: the capacity of the teacher to fathom the content, to elaborate operational objectives, using methods and means integrated in the didactic step and correctly evaluated. All these form the didactic field in which the interactions follow some rules. In this line we are talking today about “strategic teaching”, a concept which emphasizes the role of the teacher, who appreciates, “what”, “how”, “when” it is a good time to teach and learn. That's why the essence of the strategic teaching consists in fixing the content and using the most appropriate instructional strategies. From this point of view, the act of teaching relies on the role of mediator and model of the teacher, accepting at the same

time the role of leader and manager of the instructional process. But, the success of the didactic act depends upon: affection, understanding, friendship, responsibility, methodic spirit systematic actions, power of stimulation, imagination and the enthusiasm of the teachers (a study realized by Ryans, Ausubel & Robinson, 1981) (also Nicola, 2004).

Another criterion is represented by “the group of participants with its particularities” to that certain activity. Equally, it matters the capacity and grade of homogeneity of the group, medium level intellectual developing, and their capacity of learning, their motivational level, age particularities, professional experience etc.; also, “the learning experience the participants have” to the activities of instruction adequate for the learning type; the nature of the evaluation samples, the type of evaluation, the time available. All these influence learning. The first quantitative analysis is realized in 1983 by Thorndike, who emitted the law of effect: “Any behavior which leads to obtaining a pleasant effect in a certain circumstance must repeat. The greater the satisfaction is, the stronger the connection. The notion of “learning by trying and success” is preferable to the one of “trying and failure” (Herseni, 1983; Frunză, 2003; Jinga & Istrate, 2006).

There are many models of instructional design, but most of them rely on four steps: analysis, design, development, implementation, and evaluation. It is not our purpose to fathom, but we remind selectively some didactic and instructional models (from the perspective of the analysis realized by Abascal, Fortes and Gervilla, 1998, apud. L. Jipa, pp. 392-395): the model of activism specific to the “active school”, valorizes the student, his personal efforts, motivation and the democratic climate of interaction; models of transition to flexible and open paradigms (the model of H. E. Mitzel; the model of M. J. Dunkin and J. Biddle): considers that the process of instruction is the result of the interaction of four types of variables, defined through sources, factors, components and criteria of success or effectiveness (contextual variables, variables of the process, productive variables); the models of cognitive mediation (the model of D. P. Ausubel and Mayer; the model of M. A. Merrill): centered on the scheme of vertical, cognitive transfer mediated by the cognitive and anticipative organizers of progress; models oriented towards the design of instruction (the model of Reigeluth; the model of Winnie and Marx): it suggests the necessity of designing the instruction taking into account three categories of variables: pre instructive (the planning of the teacher, the aptitude of the student); instructive (the behavior of the teacher and of the student); post instructive (the learning of the student); the model centered on psychic: centered on the student, with an adequate methodology to the evolution and dynamism of the learning; the model is met under different forms: theory of the formal steps of the intellectual knowledge (J. F. Herbart, T. Ziller, W. Rein); the model of the instruction units (H. Parhurst, C. Washburne, D. P. Morris); the model of the centers of interest (O. Decroix); the models of the instruction centered on the solving of problems/projects (W. H. Kilpatrick, J. Dewey), “mastery learning” (J. P. Carroll, B. S. Bloom); the model of the sequences based on the levels of learning (R. M. Gagné).

Valorizing the student, the postmodern teaching determines a new type of dialogue between the theory of learning and the models of instruction.

#### 4. Conclusion

In postmodern society, the quality in education is assured by the changing of the didactic steps through the modification of the teachers' optics, of the strategies and educational practices. That's why, the instructional design imposes a constructive process of learning through the differentiate education related with the learning styles of the students and, through the stimulation of the active participation of them to their own scholar path.

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