

CZU: 124.5+371.4

DOI: 10.36120/2587-3636.v17i3.69-78

## **FORMATION OF VALUES IN THE EDUCATION SYSTEM: CONSTRUCTIVIST PARADIGM**

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**Abstract.** This article examines the scientific research regarding the formation of value orientation from the perspective of the constructivist paradigm. This study has allowed to point out various views of the constructivism representatives in order to promote significant value orientations for the contemporary society through the principles, conditions, and strategies which are milestones for the development of the value orientation in educable persons. The given content determines the topicality of this study and outlines some strategic investigative directions.

**Key-words:** value, value orientation, constructivism, education system.

## **FORMAREA VALORILOR ÎN SISTEMUL DE EDUCAȚIE: PARADIGMA CONSTRUCTIVISTĂ**

**Rezumat.** În articolul dat sunt examinate cercetări științifice privind formarea orientării valorice din perspectiva paradigmei constructiviste. Studiul desfășurat a permis evidențierea variilor poziții reprezentanților constructivismului în vederea promovării orientărilor valorice semnificative pentru societatea contemporană prin intermediul principiilor, condițiilor, strategiilor ce constituie puncte de reper pentru dezvoltarea orientării valorice la educabili. Conținutul expus determină actualitatea studiului întreprins și conturează direcțiile investigaționale de perspectivă.

**Cuvinte cheie:** valoare, orientare valorică, constructivism, sistem de învățământ.

### **1. Introduction**

The study of values is not a novelty in the field of pedagogy, psychology, sociology and it is not the least discussed topic in philosophy. The immediacy of values is maintained in the given fields due to permanent changes in social, economic, political, and educational environments. Therefore, in the educational system, the value formation of young generation remains a critical issue.

In order to settle the problem of value formation, it is necessary to identify the mechanism of value building and creation and based on it to elaborate a pedagogical model of formation of value orientation applicable for the educational system. Various trends and orientations within pedagogy suggest multiple paradigms trying to explain the process of value formation. In this context the constructivist paradigm has a significant role.

The constructivist paradigm offers a change in the mindset, as well as pedagogical and psychological attitude meeting the demands of the postmodern, democratic and multicultural society.

## 2. The analysis of scientific opinions

The process of value formation is in close relation with the process of child's personality development, in particular, the formation of psychic functions, including, their cognitive development.

L. Vygotsky, as one of the representatives of constructivist paradigm, considers that according to the general genetic law of cultural development, any psychic function (in the cultural development of the child) appears twice: first at the social level and then at the individual level; first between people (inter-psychologically) and later in the thinking of the child (intra-psychologically) [apud 11, pp.115].

Higher psychic functions, which include cognitive ones, originate in various human interactions among colleagues, friends, parents, etc. The way of thinking is learned by a child through active involvement in external and social activities. Therefore, L. Vygotsky considers that learning constitutes an indispensable condition of development. Based on imitation and guided by an adult, the child achieves more than they can do on their own [apud 11, pp.115-116]. Consequently, we can say that the final shaping of a value, based especially on cognition, requires the child's involvement in educational process.

P.Andrei, supporting the fundamentality of value concept for philosophy, points out its educational core, because philosophy does not only explain the world through logical values, but also transforms it in accordance with human ethical ideals. According to this author, the value "is neither an attribute of the subject and nor of the object, but rather a functional relation of both ..., there being two essential elements in the phenomenon of value: the subject and the object. The subject of value is the person, and the object is the thing "[1]. "The value is the result of acquiring knowledge process" [1].

Another perspective is offered by S.Cristea who mentions that *value education* can be identified at the level of interaction between *finalities and content* of permanent *formation and development* activity of personality. *Finalities* are the value orientations of the education at the level of the system and process as an expression of the *subjective* dimension of human activities, being projected in the *formative* sense in the long, medium and short term. *The content*, developing according to the aims, concentrates the general values, reflecting the pedagogical, bio-psycho-socio-cultural needs, specific to any personality: *Good - Truth - Utility - Beautiful - Health*. *The Education* is fulfilled in any context by these *values* of maximum generality, being specially designed to achieve these *values* through the *finalities* that ensure the teleological and axiological dimension of education [3].

The educational process is seen as promoting and developing only positively significant values for the society. Each educational system promotes a wide range of values. The education requires approaching, explaining the positive and negative values, in order to understand them, to compare them, and to determine the significant ones, most important for the personality, supporting the positive, consecutive individual and social

change. Identifying and developing positive values of the person remains the responsibility of the educational system and focuses on the purpose, paradigms, conditions, and strategies respected by the “actors” (participants) of education.

The process of value formation encompasses various elements of the personality system and extends throughout adolescence. It is only possible to build up values in a social environment, the most important element being the family and the educational institutions, which offer education and develop the personality of the child from different perspectives. Behaviors learned, attitudes formed, knowledge acquired, and convictions outlined constitute the value foundation which, being placed at the top of the pyramid, guides the constituent components of this pyramid from its height and through the integrity of the given assembly constitutes the *value orientation*.

According to Clifford Geertz, both values and beliefs are only individual perceptions of the collective values and beliefs specific to each culture and internalized by socialization [apud 12]. Value orientations and values are of major importance in the personality system having an impact on their life penetrate social, economic, and political levels. In the process of functioning, constituent components of the value orientation integrate/access the broad spectrum of the psychic processes of the personality: cognitive, affective, volitional, motivational, etc.

M.G.Rogov supports the idea of the presence of contradictory, incompatible opinions in psychology and philosophy concerning value interpretation and definition [apud 14]. Moreover, there are numerous approaches to explaining values and value orientation in the field of pedagogy, and sociology. The present study focuses mostly on the scientific opinions interpreting the values from the perspective of constructivist paradigm for contemporary educational system.

M.Momanu has conducted a study related to the ambiguity of the interpretations of education in the “new” and traditionalist pedagogy. The researcher found that the constructivist paradigm offers an opportunity to deal with diversities and changes by giving up the mechanistic-reproductive attitude in favor of practicing reflection, critical thinking and acting as a “knowledge creator” [9].

M.Momanu indicates that constructivist or cognitivist educational theories (focused on the idea of building knowledge of a child) are founded on J. Piaget's researches of genetic psychology and epistemology and the conception of French epistemologist G. Bachelard, who proposed a pedagogical model with the central idea – building knowledge in the child. The authors of constructivist educational theories, Giordan, Larochelle, Desautels, A. de Garanderie et al., were particularly interested in the meaning of the “prior culture” or the “spontaneous conceptions” of the pupils, the “epistemological obstacles” of learning and the manner of construction of the “pedagogical profile” of the child, developing a model of learning that is based on the idea of cognitive conflict [apud 9, pp.42-44].

J.Piaget presented a functional model of intelligence development underlying the constructivist educational theories; the impact of this model on educational theory and practice has been considerable [apud 4].

S. Cristea notes that the Piagetian solution involves the leap from knowledge-copying, practiced within the limits of “associationist empiricism”, to the “reality assimilation” through action and transformation. Basically, “to know means to assimilate the ‘real’ of the structures of transformations, the structures that intelligence elaborates since it is a direct extension of the action” [2].

The function of the cognitive structures consists in “organizing the real in the act or thinking and not in simply copying it” [2, p.365]. Their evolution ensures “the construction of action schemes that will serve as substructures of subsequent operational and notional structures” which can be used in the educational process [2, p.365].

Piagetian *constructivism* is also valuable at political level of education - post modern school systems promote a general education, compulsory up to the age of 16, before which foreseen school selection is irrelevant from the psychological and social point of view [2, p.365].

The pedagogical interpretation of the Piagetian model outlines two types of response: one type is aimed at *building knowledge* in a global and stage-based process of self-regulation and adaptation of the individual to the environment (materialized in a set of concepts / theories of intellectual formation); and the other type that aims at *building child's morality* in an interactional process, at each stage of their moral evolution (concretized in a set of conceptions / theories of moral formation).

The concept of cognitive conflict was proposed by B. Inhelder, a collaborator of J.Piaget [apud 10], to emphasize that the progress in knowledge is not made linear and cumulative, but implies the involvement of a child in situations of cognitive imbalance, confrontation with situations that generate internal conflicts, which can lead to awareness of their own acquisitions. The critics of the Piagetian model focused on the lack of the social dimension in conceptualizing the cognitive conflict; from this point of view, the socio-cognitivist theories, based on the results of the researches of the genetic social psychology, tried to “correct” the Piagetian model, placing the concept of socio-cognitive conflict in the center of the explanation of the construction of knowledge [apud 10].

M.Momanu mentions that after assessing Piagetian model and the results of the social psychology researches initiated by A. Bandura, researchers Doise, Mugny, Perret-Clermont et al. considered the socio-cognitive conflict to be a source of learning, the construction of knowledge being necessarily social. The conflict, whether cognitive or socio-cognitive, becomes a source of learning and a vital element in building knowledge [10, p.42].

The socio-constructivist theories relate to the socio-cultural dimension of learning and the importance of social interactions in the process of knowledge building. The

notions of *culture* and *context* take priority in the socio-constructivist explanation of the educational process. A. Bandura's researches in the field of social learning and L. Vygotsky's conception of the relation between learning and development have led to the elaboration of socio-cognitive theories of education, which combine the constructivist view on the knowledge with the social dimension of learning [apud 10].

M. Momanu concludes that in the process of conflictual confrontation between an individual and the environment, knowledge is built; confrontation generates adaptive imbalances that "force" the individual to put into play all the resources of accommodation to reach a more stable form of balance. Thus, a situation of cognitive imbalance in relation to a new problem, which cannot be solved using previously acquired processes and knowledge, becomes a potential factor of cognitive progress. The confrontation allows for the implementation of a democratic conception upon the acquiring knowledge in which each candidate for the cognitive process expresses their opinions and confronts them with those of the other participants. Therefore, the subject understands the importance of diversity of ideas and learns to defend/support their own opinions. In this context, the pupil's prior "conception" changes its status: it goes from the simple affirmation stage into the hypothesis one, which will be verified in various ways according to the specificity of the cognitive act: coherence with reality, logical coherence, etc. [10, pp.45-46].

*The theory of cognitive structures of learning* has been developed by J.S. Bruner and reflected in the following papers: *The process of Education* (1960); *Toward a theory of Instruction* (1966). The main pedagogical ideas, promoted by J.S. Bruner, aim at 1) understanding the *specific* difference between *learning theory* and *training theory*, 2) designing cognitive structures as specific didactic models, 3) assessing the specific relationships between the innate structures and those acquired through learning; 4) identifying specific structures of the theory of training [apud 2, pp.381-382].

S. Cristea emphasizes the specific difference between the theory of learning and the theory of training constitutes in the descriptive character of the first and normative of the second. The learning theory highlights the psychological phenomena; the theory of training guides the pedagogical use of psychological phenomena (engaged in learning), at the level of educational process.

The cognitive structures involved in learning have a psychological content. Their transformation into pedagogical structures implies the construction of effective training models through the specific form adopted, depending on psychological resources and accumulated socio-cultural experiences.

*The quality of the pedagogical structures of the training* depends on the optimization of the relations between the innate components, usable in the learning activity (perception of space, time, the cause-effect relationship) and those acquired in

different environments and communities as cultural values integrated in social and individual practice (language, traditions, mentalities, conceptions, habits, attitudes, etc.).

The theory of education, built at the level of education science, implies the transformation of psychological structures into pedagogical models capable of: 1) making use of the pupils' mood to learn (education finalities); 2) indicating the level and the form of knowledge organization in order to be assimilated as well as possible (the content of education); 3) establishing succession of didactic sequences (the teaching methodology); 4) highlighting the way of rewarding (evaluation of education) [2, pp.381-382].

L.Ciolan, after investigation of epistemological, social and, partially, pedagogical bases of integrated approach of curriculum, mentions the need to clarify integration process itself [6]. The scientist has tried to identify the integration of the disciplines with the integration of the curriculum, even if, in his vision, to a certain extent, the latter is said to be the result or the consequence of the first.

L. Ciolan examined the meanings of the integration concept which refers to educational context. Consequently, he found that, generally, the integration means the action of fostering the interrelation of various elements to build a higher level harmonious whole; the integration of the parts leads to a product / result exceeding the sum of the parts. To integrate means to coordinate, to combine, to bring together separate parts into a functional whole, unitary and harmonious [6].

In a restricted sense, by integration we mean a process and the process result by which a new element becomes an integral part of an existing assembly [6]. Thus, a new scientific discovery, validated in the field of research, can be integrated into the frame of a school discipline.

A new discipline, which is configured and "mature" may be integrated in the training programs. A new piece of knowledge or competence can be integrated in the mental and behavioral structures of a person.

From a didactic perspective, the integration is deemed to be „the action of associating different objects of study, from the same field or from different fields, in one and the same planning of learning”. Fusion, harmonization, incorporation, unification and cohesion are synonyms of integration [6].

At the curriculum level, integration means establishing clear convergence relationships between knowledge, skills, competencies, attitudes and values belonging to different school disciplines. Teaching and learning are viewed from a holistic perspective, reflecting the real world, which is interactive [6].

Holism is a theory emphasizing the structural and / or functional relationships between the parties and the whole, giving up the exclusive focus on the separate elements of a system. The working procedure of holism involves the *reconstruction* „from the bottom up”, trying to capitalize on the information that is lost by breaking the whole into component parts (procedure specific to reductionism). Holism means the irreducibility of

the whole to the component parts, the superiority (not necessarily quantitative) of the whole to the sum of the parts and the integral and integrated vision on the studied objects, phenomena or processes.

E. Dumitriu-Tiron explains contemporary education as the education that responds to the demands of the contemporary society, rather than anticipates the transformations of the future society, designs, organizes, coordinates the actions and the factors responsible for these transformations. The dimensions of the contemporary society are identified by a cyclical process of evaluation, reevaluation and restructuring of education, currently determined by the chronological phenomenon of passage into the third millennium which has led to radical political, economic, social, educational changes. The dimensions of contemporary education are understood by E. Dumitriu-Tiron from the following perspectives: 1. holistic-structural; 2. cybernetics; 3. axiological; 4. democratic; 5. intercultural; 6. managerial; 7. focused on the educational topic; 8. constructivist-pragmatic; 9. inter- and transdisciplinary [9, p.9].

The holistic-structural dimension refers to the process of shaping the whole human personality by education. The education in the future necessarily concerns: the left hemisphere and the right hemisphere of the brain (the interaction between algorithmic and heuristic); the conscious (learning), subconscious (automatic), unconscious (pulsing) levels of the psychic; cognitive subsystems (ideas), affective (feelings), volitional (decisions), characteristic (traits), inter-relational (relationships with peers).

From the axiological perspective, E. Dumitriu-Tiron considers that education must be coordinated by the authentic value, the attention of the educational action directed towards attitudes formation adequate for competences development, acquiring knowledge, and the development of skills and abilities [9].

“If we want to conceive education as a process of formation of fundamental, intellectual and emotional attitudes towards nature and towards others, philosophy could be defined as a general theory of education. If philosophy does not intend to remain a verbal or sentimental symbolic instrument of the chosen few or a purely arbitrary dogma, the balance of past experience and its values program must be reflected in attitudes” [8].

The intercultural dimension is seen by E. Dumitriu-Tiron as the communication between different cultures, cultural orientations, mutual acceptance, and mature tolerance, communication reflected in curricula, in analytical programs, but also in attitudes and behavior of educational partners [9].

The inter- and trans-disciplinary dimension, which especially refers to modular, integrated educational content, and the interaction between formal education, non-formal education and informal education. All these perspectives in which the dimensions of contemporary education are conceived constitute a new paradigm of education opposed to the old paradigm. Bruno Wurtz talks about a new paradigm and outlines its principles [apud 9].

Landsheere creates a picture of the contemporary philosophy of education, in which underlines its evolution from the essentialist philosophy (the traditional school) to the reconstructive philosophy (the current education). He shows that if in the traditional school the guarantee of value was given by tradition, the subject being seen as a recipient of knowledge, “new education” is oriented towards action, and contemporary education towards the development of the individual in harmony with the noble values of the society in which s/he lives [apud 9].

Thus, knowledge approach, in a constructivist sense, implies a process of individualization, which takes into account intentions and values of the knowing subject, motivation of participation in cognitive act and evaluations capable to fulfill.

A.N.Penet-Clermont appreciates that transformation of teacher-pupil relations and relations between pupils leads not only to the improvement of the socio-affective climate of the group, but also to the efficiency of learning [apud 10]; the direct pedagogical consequence of this finding is educational strategies elaboration based on team activity, cooperation.

According to M. Perraudeau, the most original element of the constructivist current and, paradoxically, he says, the least known is the conception of the environment of knowledge not only in a physical sense, but especially as a human environment [apud 10]; hence, importance given to cooperative activities.

M.Momanu mentions that in order to facilitate the transition from tutored learning to autonomous learning, the teacher or adult must select and adapt the contents of the training not to the child's present capabilities, but to his / her potential for progress, he / she must relate to the experiences and capabilities held by child, at the same time being in rupture with them [10].

L. Vygotsky states that the teacher should not focus on the past results of the child, but on possible and future ones (the “proximal development zone”); he must realize a prognosis of their development, triggering processes that although not specific for the current child’s level, which are located in the proximal zone of development [13].

The constructivist paradigm promotes the idea of pedagogical reevaluation of the role of error in knowledge. From the perspective of the traditional model of knowledge and training, the error represents an evil that must be eliminated and prevented, because it affects the coherence and unity of the conceptual system that the pupil must acquire. Knowledge assessment is transformed into an “error hunt” that produces barriers in knowledge and communication. The constructivist perspective fundamentally changes the epistemological status of error; D. Favre appreciates that the errors that appear in the learning process have an informative value essential for the achievement of cognitive progress [apud 10]. The evaluation is transformed from a “error hunt” into a permanent feed-back, which allows the child to recognize and identify the errors, explain them and eliminate them in the process of building knowledge [10].

### 3. Conclusions

The education specificity lies in its intentional, conscious, active character, and the pedagogy as an interdisciplinary and synthesis science of education is highlighted just by the selective, guided, valuable educational approach.

Personality training and development is an intentional purpose considering two types of results: anticipated and projected results; and results actually obtained.

Therefore, the question arises whether the anticipated and projected results always become de facto results. Is everything, intended by the educational project and planned as objectives and goals, obtained at the end of the educational endeavor? The answer is negative. But for the unity of the two types of educational outcomes to exist, J. Dewey establishes the following criteria of relevance of educational purposes: to reflect the intrinsic needs of the educated; be formulated in agreement with the resources, but also with the educational difficulties; it can be operationalized and embodied in actions and behaviors [8].

In order to meet the nominated conditions, it is necessary to identify the needs of the educated, to adapt the educational resources to these needs, to develop the most effective methodologies for achieving the educational products (knowledge, skills, and performances).

The promotion of values in the educational system is a complex and holistic process, which represents a main element connecting social and personality systems. The constructivist paradigm becomes an opportune and flexible one for the formation of values. Among the constructivist principles that can be the foundation of a pedagogical model of forming value orientation, we highlight the following principles: autonomy and personalization; inter-conditioning and integrity; efficiency by improving the socio-affective climate; cognitive confrontation through cooperation; reassessment and awareness; and learning through collaboration.

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