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Fractal approach to the education content and structure determination (for example, the education branch "Technology") V.V. Yurzhenko

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The content of the article reveals the fractal nature of pattern constructing of knowledge-method approach in formation of the content and structure of the educational branch "Technology" in elementary school through the meaningful (semantic) elements – constructs.

Formation of the universal matrix of activities in each individual pupil of the primary school is the most important task of the educational branch "Technology" in the elementary school. This matrix is a system of elements (constructs) that carries a field of general and equal signs, by which, using this uniformity and equivalence (by the criterion of significance for understanding the nature of things), knowledge-method base of activities of any subject is structured. Fractalization of such matrix forms the nature of almost every activity in the modern world.

For this theory the fractal studies with different scales of the same phenomenon, reflection, etc. have no precise quantitative characteristics (size), but having a relatively constant ratio and proportionality, explain the essence of the construction nature of the content and structure of the educational branch "Technology" for elementary school. That is possible due to a combination of equivalent substantive content elements for the formation of technical and technological culture.

Construct, also known as fractal of knowledge-method structure of the educational branch "Technology" content, being the product of a universal matrix of activity, is the micro-reflection and epitome of the so-called Absolute, as a possible physical interpretation of the theory of vacuum, as the ground state of quantum fields of different nature, of God, representing human as part of a whole, as an element of nature similar to other elements.

This knowledge-method part of a human is relatively independent from social dynamics, but it functions as its underlying factor. Constructs are so many, as many kinds of action exist in each specific technological situation multiplied by all carriers of embodied action.

Technical and technological component of individual culture, formed as determined of quality and range of opportunities of each individual, is formed and stored as integrity and allows to rely on it in further life in spite of possible fundamental changes in the technical and technological environment of the present and future world.

The ground of technical and technological fractal reflection of personality is based and developed on the basis of knowledge-method constructs. At the same time, a specific construct provides the reproduction of a certain kind of action or activity, without which human is not able to recreate the acceptable environment for his life.

Any educational, teaching structure is opened for information flows, which it constantly transforms, responds to them and works with them. That is the dynamic, synergistic process that combines patterns and structure into one that affects on result of the activity of the training system structure in its object-subject and subject-subject interaction.

Constructs, psychological and pedagogical fractals, being separated superstructure formations, namely network fragments with other conceptual systems, other sciences, their laws, etc., appear in the form of "knowledge-method of action or activity" and represent the relationship of physical-material and procedural. They can be implemented in the pedagogical process during study of meaningful lines of the educational branch "Technology" in the elementary school.