

EEIA-2018
**2018 International Conference "Education Environment for
the Information Age"**

**GENETIC APPROACH TO THE SCHOOL DIDACTICS
ANALYSIS: THE EXPERIENCE OF APPLICATIONS**

Olga N. Machekhina (a)*
*Corresponding author

(a) PhD (Education), Moscow center of personnel potential development in education. Professor of Interactive Technologies in Education Department. 127422, Timiryazevskaya str., 36, Moscow, Russia, helga_mon@mail.ru *

Abstract

The author states that the current approaches to the analysis of pedagogical systems of school education and their didactic component cannot meet all the challenges and trends of the modern development stage, i.e. of globalization. In such conditions, it is suggested to use the relative-genetic approach as a method of research in pedagogy. The author proves its effectiveness for modeling and forecasting the national schools' development. Highlighting the English-American, continental, traditional (Hindu, Far Eastern, African) and religious (Muslim, Jewish, canonical) educational families, the author presents specific characteristics of their didactics, also taking into account the socio-historical background of their genesis and evolution. In the course of consideration of these families, their characteristics and features are revealed, as well as prospects for their development in the future. Describing the ways and forms of didactics development in the future, the author sees its formation in the conditions of struggle of two tendencies – the traditional one, focused on teaching the students freedom and formation of the educational process in accordance with social needs, and the innovation one, which, due to the globalization of education, cross-border cooperation and a sharp increase in social mobility, involves the implementation of individual training and self-education, as well as a targeted development of thinking, intelligence, teaching students independence in the ways of learning and practice.

© 2018 Published by Future Academy www.FutureAcademy.org.UK

Keywords: Education, didactics, educational family, educational system.



1. Introduction

In modern conditions, when education all around the world is on the threshold of globalization, there are acute questions about the ways of its flow, about the features of educational systems that will become the leading ones and that will guide the development of secondary schools all around the world, that will determine their future. Already today, the Western educational systems – English-American and continental — have come to the fore. It is they, reproduced all over the world, that claim to define prospects for development.

However, the superiority of the western schools is seriously disputed by eastern traditional and religious educational paradigms, the number of participants in which, according to most conservative estimates, steadily aims for 1 billion people.

2. Problem Statement

Considering the genetic approach to the didactics analysis in the secondary school, it should be noted that it primarily allows to present the results of the national schools study, and also to consider them in the context of forming an integrated picture.

Grouping the national educational systems for the purpose of their classifications and for understanding of tendencies of school didactics further development is an actual problem in the conditions of globalization.

3. Research Questions

Here, the following research issues come to the fore:

1. What author's approaches can be suggested for the study of school didactics on a global scale?
2. What classification of the world educational systems can be offered, in relation to school didactics?
3. What are the characteristics and the most common features of school didactics in the groups of educational systems suggested by the author?
4. What are the possible prospects for the development of school didactics in the context of globalization?

4. Purpose of the Study

These issues determine the following task: by forming a comprehensive general characteristics of school didactics in national educational systems, grouped on the basis of the author's approach, to draw a conclusion about the global trends in the school education development in general and about the globalization of its didactics.

5. Research Methods

The indicated problems are intensively studied within the limits of comparative pedagogy. Research is conducted using the latest achievements of humanities. Most notable among the foreign works are those of V. Mallinson, J. Schriewer, and B. Holmes (Phillips & Schweisfurth 2014; Schriewer & Holmes 2011).

In Russian pedagogy, such prominent experts as I. M. Osmolovskaya, M. V. Klarin, V. M. Polonskij, V. V. Serikov work in this field (Osmolovskaya, 2015; Klarin, 2016; Serikov, 2016)

At the same time, there is no more or less universal method in the complex vision of the modern school state and education on a global scale, to make conclusions about the characteristics and features of didactics in national schools or about the prospects of its evolution in the global educational environment.

We suggest using the interpretation of the genetic approach modified in relation to research in pedagogics. There are no barriers in its use to analyze and generalize the history of education development in different countries, to identify its characteristics at the stage of modernity and to determine the vectors and directions of modernization and reformation in the context of globalization.

Referring to the author's concept of educational systems taxonomy, it should be noted that its expression is a system of educational families that are grouped into the national educational systems, being similar both in the form and in the content. The following educational families can be named here:

- English -American;
- continental;
- traditional (Hindu, Far Eastern, African);
- religious (Muslim, Jewish, canonical).

6. Findings

Revealing the didactic characteristics of educational families, the author would like to note that in this part of the work the aim is to form a comprehensive view of the didactic features and characteristics shared by all national educational systems included into a particular family.

The foundation of modern English - American school education didactics is the combination of two coexisting systems — classical and general education, each of which is specific. Being a long-term project, the classical English education acquired its final form in Locke's era in the XVIII century (Androne, 2014). In the center of the classical education paradigm there is the question of development, formation of personality in the fold of the Greco-Roman, Christian culture. Being culturally-religious, it brings to the fore the issue of educating a real Christian who believes in the Love of God. The second, but not the least, is to instill the expression of this love in patriotism, commitment to moral values, interest in people, nature and art, which is the main motivator for training and education.

Considering the content of classical education, it should be noted that it is integrative. All the knowledge is a single whole, and its distribution is a convention for the sake of convenience. Interdisciplinary interrelation is obvious and is becoming an everyday reality. The principal didactic characteristic of this is the order, which is dictated by the ideological paradigm about the existence of some certain indisputable truth, retold by students in the classroom or found by themselves in the course of self-education. No less important is the naturalness, stating that the methodology of teaching subjects is explained by the nature of the subject and by the student's individuality. Another feature is the gradualism, as a way of teaching the truth, goodness and beauty to everyone. The classical education doesn't finish with graduating from school, but extends far beyond, since everyone receives it at the speed he is capable of.

Considering the didactic characteristic of general English education, it is obvious that its genesis refers to the XVIII century and is determined by the objective social transformations, which required a large

number of people who were at least basically trained in the exact sciences, not in the field of classical disciplines. Progress has become the central paradigm of education. The latest achievements of scientific branches and disciplines that were absolutely required for a successful career in the rapidly developing sectors of the economy were put at the forefront.

Describing the target setting of general education in England of the 19-20th centuries, it can be called utilitarian. Self-discipline and self-control, which presupposed the independent organization of the educational process by the students themselves, due to the social and career goal of future professional success and well-being, were brought to the fore. The main characteristic of the educational process is its sharp intensification. Within a certain period of time (3-10 years) it was necessary to prepare students for a successful life in the society and for the successful development of their own careers. Therefore, students and teachers meet several times a week or every day, and the interaction between them takes place constantly, not from time to time.

Here we can state the formation of didactics in a form almost familiar to us. This process was dual. On the one hand, then, the ideas of continental pedagogics began to penetrate actively into the UK. They certainly contained the components of Jan Amos Komensky's teachings, and, in colonial territories, the career doors opened for the masses of young people of simple rank, at least initially technically and commercially educated. In such conditions, a universal didactic triad was formed in all common English schools. It included:

Explanation => Repetition => Test

There was also a transition from the classical text in the language of the original or a collection of excerpts as a textbook, to an illustrated textbook containing some text, diagrams and illustrations. That allowed to form a clear and comprehensive view of the subject taught. Essentially, the breadth of teaching and intersubject links were replaced by in-depth study of key topics and skills that prepare students for further learning or career realization.

In the content of education, the category of harmonious development of the individual has come to the fore. Non-classical schools, perceiving some collectivizing forms, focused on high-quality individual training in the field of subjects. This training was activated through individual competitions with an emphasis on military sports training (fencing, boxing, racing, archery, etc.). The educational component was also built following the Lock's tradition, where during the course and according to the results of training, the graduate had to have a certain set of moral and ethical qualities: patriotism, sense of duty, noble attitudes in business, manners and courtesousness in communication, willpower, hardening, self-government and self-control.

In their turn, the American didactics was formed under the slogan: "Traditional values—innovative knowledge!", which can be deciphered as: "Despite the amount of knowledge gained, a person should ALWAYS remain a person!" that is, honor, courage, decency, noble attitude in business, etc. In contrast to traditionalism and certain idealism of the English school, the American didactics was based on the advanced ideas of philosophy of the time, where the leading place was occupied by naturalism, materialism, reductionism, positivism, scientism, and moderate socialism. It seeks to convey a set of immutable truths to its students – what is good and what is bad, what is true and what is false, and certainly the idea that "American means is the best!" In its content, the American didactics combines compulsory courses in

sciences and academic disciplines with those developing ones - drawing, weaving, research and projects, sports, etc. All in all, it is designed not only to give students the amount of knowledge, but also to teach them how to think and how to live.

The primary basis for the formation of didactics in the continental family was consistent and long-term studies of the learning process, which were conducted in Europe since the Enlightenment epoch. The central questions were: how does a student learn (acquires knowledge)? what does he/she need to be taught? and how can this be done most effectively? The main attention is paid to the purposes of teaching, the subject, methods and organizational structure of teaching and learning. Given this, it should be stated that the "teacher-oriented" approach was the main one. Therefore, the goals of education on the continent have always had a philosophical basis, understood as a process of emancipation, where people could become themselves. At the heart is the Kantian concept of transcendental pedagogy, which seeks a reasonable answer to the question of how to "cultivate" freedom minding the "needs of the organism" that restrict pupils and teachers at the same time (Kant, 2016)

The subject of teaching is to develop a clear understanding of what needs to be taught. The continental pedagogics and didactics were dealing with this question from the very beginning of systematic teaching and formation of the theory of education, in philosophical theories of antiquity (Compayré, 2016; Korsgaard, Kristensen, Jensen 2017). Over the past centuries, the problem of choice has come to the fore – what is the guide for the organization of education in schools. It is believed that the concept of so-called "competencies" has been found as a way out, but it is also quite controversial. We still set this goal of education — to teach everything, but at the same time to exclude the material that is not suitable for everyone (Meyer, 2007)

The methodological basis of didactics in a continental educational family can be called a normative-procedural approach, where education is holistic, contributing to the development of the students' independent activity. It seems to normalize the results of educational actions that are defined in relation to the teacher and the student, where cognitive and practical components achieve a better balance.

The last component of the continental didactics, in its traditional form, is the question of the organizational structure of education and training. It follows from an aphorism, long-held in Europe: "Students do not need schools to learn, but teachers need schools to teach!" At the same time, it is admitted that students, without teachers, do not have a chance to implement the requirements imposed by the society, or rather, a public order. That is why the organizational structure of teaching and learning has always been a part of the didactics' subject.

Nevertheless, despite the traditional commitment of the continental educational systems to the class-lesson model, first of all, on the part of the society, over the past 50-60 years it has been traditionally disappointed with. Here, for the last 15-20 years, preparation for participation in global testing of students, such as TIMSS, PISA, DESI is considered to be the leading paradigm of the organization.

The didactics of traditional family countries in the foreign theory and history of pedagogics is reduced to religious education. It is not quite true. Describing it, it should be noted that it remained in the relevant countries (India, China, etc.) almost up to 70ies of XX century when the majority of the population lived in the village and didn't participate in process of urbanization which had schooling as an integral part (Boulata, 2000).

The main teaching area was a large family community which could unite three or more generations of relatives and two or more circles of kinship. The basis of the concept of training was the idea of preparing a proper and effective member of the family community, which determined the goals, objectives, the concept of training, criteria for its success and the methodology of teaching individual disciplines.

The socio-economic factor played a great role in the formation of traditional didactic systems. Hiring a teacher to teach the younger generation of the family required much money, so the family sought to optimize the allocation, where the teacher was hired for several generations of children and adolescents of the same family. Another model of the education organization in traditional systems was the training of one of the family members (clan) as a teacher, which could take several years, be quite costly, but at the same time it facilitated the subsequent general training of the younger generation (Badri, 1997).

The main objective of traditional education is to transfer the skills, assessments and moral and professional behavior standards that adults consider necessary for the material and social success of the younger generation. As the beneficiaries of this scheme, students should obediently receive the ready-made answers and have no doubt about their faith. Teachers in this system are the tools by which this knowledge is transmitted and standards of conduct are observed (Dewey, 2017).

Considering the technological component, it should be noted that the basic and leading technique of teaching in traditional education was a simple oral story (Beck, 2009). The main activity of the teacher was to issue tasks and to control by listening. Students were doing the tasks and learned the material at home or in their free time. The new material was actively absorbed by oral repetition after the teacher, including the collective form (the choir).

In turn, in the content of traditional education, over time, students began to study significantly and more intensively in mathematics, languages and the basics of sciences instead of primitive and initial knowledge in the field of reading, writing, arithmetic and etiquette.

The final form of the student's assessment remained the teacher's responsibility or was based on tradition. As a rule, the test were oral answers to questions before the "commission", which included the teacher himself, representatives of the family community (clan) leaders and other invited persons. The exam revealed several parameters of training of the younger generation representative, among them:

- the personal conduct's compliance with the adopted ritual and etiquette;
- the quality of mastering the methods and techniques of mental and intellectual activity: memorization, reproduction, understanding;
- the overall positive impression the "graduate" made on the commission.

Looking at a religious educational family, we can say that its deep foundation is such a kind of "homiletic" activity, where each preacher seeks to get the audience's answer to three consecutive questions:

1. Do you hear me?!
2. Do you understand what I'm telling you?!
3. Will you accept the divine truth that I bring you?!

Here, for the religious education implementation, regardless of the creed, it was necessary to create a model of education — a didactic system that would ensure the assimilation of faith dogmas and the formation of a specific ethical and motivational complex of behavior by the widest contingents of

neophytes, provided that their differences in intellectual and moral level were leveled. That is, the educational system that claimed to be universal, was formed.

Its interpretation in the mid 70-ies of XX century was proposed by K. Nipkow, who chose the everyday routine teaching of religious subjects as the foundation. He abandoned the vulgar notion of the elementarization process essence as a simple simplification of forms and methods of teaching students religious texts, defining it as a spontaneous or purposeful process that forms the following essential aspects of religious didactics:

1. Elementary structures — elementarization as a process and the result of scientific simplification in the actual and textual component of the learning process.
2. Elementary truths — the content of the discourse on truth, which gives certainty.
3. Elementary experience is a problem of significance in the sense of revelation about what is vital.
4. Elementary beginnings — the problem of definition and purposeful formation of the corresponding prerequisites of understanding caused by the society, the belief and life experience of the previous generations.

"Elementary structures" refer to the task of ensuring the appropriate concentration on facts and texts, which, for example, can be performed using the classical historical-critical method. "Elementary truths" represent the next step where the discovered elementary structures should be understood as something abstract that will become truly important. The category of elementary facts arose from the fact that there was a need to address the pupils elementarily, that is, at the simplest level. Receiving basic religious experiences means both understanding and perception, the highest revelation that touches people deeply within and allows them to be reborn, to improve, to advance on the path of cognition of the symbol of faith and deity.

Therefore, the main task of the teacher is to reveal the fundamental revelations in a simplified text structure, which reveal religious experiences of ancient times to the students, and help them understand their importance, getting a similar mental experience.

Based on one's own experience of the most general study of religious didactics, the author makes three conclusions about its key features:

1. Effective teaching requires a lot of preparatory work on the part of teachers to move away from dogma and drill to the area of effective modern teaching.
2. Teachers of religious disciplines are practicing integration into the fabric of everyday school life as much as possible today, because this is one of the main tasks— just to resolve the complex issues of their students.
3. Elementarization is still a valid point — though the teachers, making sure of its external observance, can't guarantee that everything is implemented internally as well.

7. Conclusion

Summing up, it can be stated that today didactic theory and practice all over the world is in the struggle of two trends – traditional and innovative. The traditional one is focused on forming the students' freedom and on the formation of the educational process in accordance with social needs. The innovative trend is based on the processes of globalization of education, cross-border cooperation and a sharp increase

of individuals' mobility; it involves the implementation of individual training and self-education, as well as the targeted development of thinking, intelligence, instilling in students independence in the ways of learning and practice. This allows us to identify three vectors of further development and improvement of didactics:

* School is the most important place for children and young people where they can learn about the world and themselves.

* Teachers and students develop each other's methodological competence, which defines teaching, learning and studying.

* Students determine their prospects on the basis of the notion of the best and the worst that they have learned from teachers.

Thus, building the world in which we live is a joint venture, although the next generation will interpret and transform their worldview and their development paths.

References

- Androne, M. (2014). Notes on John Locke's Views on Education. *Procedia - Social and Behavioral Sciences*. Volume 137, 9 July, pp. 74-79.
- Badri, A. (1997). *The internal efficiency of traditional educational system*. PhD dissertation, University of Exeter.
- Beck, R.H. (2009). *The Three R's Plus: What Today's Schools are Trying to Do and Why*. Duluth. Univ. of Minnesota Press. pp. 3–6.
- Boulata, I.J. (2000). *Trends and Issues in Contemporary Orthodox Thought*. 2nd ed. Albany: State University of New York Press.
- Compayré, G. (2016). *Histoire de la Pédagogie*. Liland Pub. Forgotten Books.
- Dewey, J. (2017). *Experience and education*. Kappa Delta Pi. pp. 1–5.
- Kant, I. (2016). *Groundwork of the Metaphysics of Morals*. Cambridge Texts in the History of Philosophy. 2nd ed. 130 p., p. 18.
- Klarin, M.V. (2016). Didactica (za rubezhom). *Bolshaya Rossiyskaya Encyclopedia*. [in Rus].
- Korsgaard, O., Kristensen, J.E., Jensen, H.S. (2017). *Pædagogikkens idehistorie*. Dansk Unipress.
- Meyer, M.A. (2007). Didactics, Sense Making, and Educational Experience. *European Educational Research Journal*, V. 6, N 2. pp. 161-173, p. 163.
- Osmolovskaya, I.M. (2015). *Didactica v sovremennikh sotcioculturnykh usloviyakh*. Moscow: Institute for Strategy of Education Development of the Russian Academy of Education. 314 p. [in Rus]
- Phillips, D., Schweisfurth, M. (2014). *Comparative and International Education: An Introduction to Theory, Method, and Practice*. 2nd Edition. Bloomsbury Academic. 240 p.
- Schriewer, J., Holmes, B. (2011). *Theories and methods in comparative education*. 5th Rev. ed. Berlin. Peter Lang AG. 278 p.
- Serikov, V.V. (2016). *Metodologiya nauchnogo issledovaniya v pedagogike*. Moscow: «Planeta». 208 p.