

## Technology of Didactic System Development Management of the Teacher under Professional Activity Conditions

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**Abstract:** In study, the technology of didactic system development management of the teacher in the conditions of real student teaching is revealed. It is shown that development of the teacher didactic system is provided with realization of the management technology including six stages consistently replacing each other information and analytical, motivational and target, plan and predictive, organizational and performing, regulatory and correctional, control and diagnostic. It is established that realization of administrative didactic system development mechanisms of the teacher on the basis of reflexive management cycle inclusion in activity stages the school headmaster provides the change of subject interaction of educational institution corresponding to logic “management-co-managing-self-governing”.

**Key words:** Didactic system, teacher, development technology, management, professional activity

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### INTRODUCTION

**Problem Relevance:** Modern requirements to school education assume increasing professional competence of the teacher as readiness and ability of the teacher to carry out the activity on creative level (Md and SPRF, 2013; Ingvarson, 2015). From the teacher transfer of the activity to the new qualitative level which is characterized by creation of own didactic system on the basis of the developed pedagogical experience and individual style of work is required (Hargreaves and Dawe, 1990; Jarvis, 2004; Fautley and Savage, 2008). Reflecting professional outlook of the teacher, the didactic system serves as a link between didactic concepts and theories and realization of their ideas accepted by the teacher on practice. The analysis of pedagogical reality shows what attempts of teachers to create didactic system on the basis of the known training technologies modifications, mechanical transfer of technological elements on own practice without judgment and adaptation to the available experience, to conditions and opportunities of school, pupils and the teacher, leads to discrepancy of the teacher purposes and the used educational technologies, to decline in educational process quality does not allow the teacher to perceive own potential or become real creator of a pedagogical innovation.

Domination of the control system at school which is insufficiently considering the teacher’s potential, his individual experience, contradicts the self-governed development tendency of the educational process

subjects providing an opportunity for internal potential and the available experience of the teacher use. In this situation there is a need for solution of the Didactic System development management problem of the Teacher (DST) in the conditions of real student teaching.

So far there were theoretic-methodological prerequisites of the designated problem research: the separate directions of formation and development of professional activity of the teacher are studied (Huber and Mompoin-Gaillard, 2011; Morozova, 2013; Mezentseva, 2013); questions of teachers professional development in system of methodical work of educational institution are considered in the following researches: Shamova (2010). However, still there are practically no researches of a development management technology problem DST in the conditions of professional activity.

**Problem statement:** The analysis of a development management problem of DST allowed to allocate a number of contradictions, namely: between requirement of society and school for the teacher with the high level of professional competence and unavailability of teachers to development of the didactic system; between aspiration of the teacher to development of the individual experience and an orientation of intra school management on introduction by the teacher of “ready scenarios” in practice of activities for training school students between spontaneously developing DST in the course of its professional activity and need of educational practice for

its purposeful operated development between the outlined tendency in the theory and practice of intra school management of self-governed development of educational process subjects and insufficient readiness of the administrative mechanisms which are making active the internal potential of the teacher and development of the didactic system. The formulated contradictions formed a basis for research problem definition: what is the technology of DST development management in the conditions of professional activity.

## **MATERIALS AND METHODS**

**Definition and methods description:** The solution is provided with use of a complex of methods: theoretical analysis, modeling, poll, testing, assessment, questioning, interviewing, conversation, supervision, experiment, analysis of school documentation, studying and synthesis of experience, statistical data processing (statistical criteria Chi-square- $\chi^2$ ).

## **RESULTS AND DISCUSSION**

**Main part:** DST as a way and result of creative self-realization of the teacher in professional activity represents in our opinion, the professional and personal education acting as the mediating link between the didactic concept and its practical realization. DST is the dynamically developing multilevel integrity formed by interrelation of valuable and target, cognitive and operational and reflexive and estimated components realized in the course of joint activity of the teacher and pupils (Irkhina, 2013).

Development process of DST as the difficult, dynamically developing integrity is characterized by transition from one qualitative state to another: from creation of didactic system on the basis of exact reproduction of the known methods, ways and technologies of training, use and modification of separate technological elements before theoretical generalization and distribution in practice of researcher's didactic system.

The technology of DST development management is carried out in logic of transition from the operated development through co-management type of interaction of school subjects in self-government on the basis of inclusion in cycle of reflexive management of information and analytical, motivational and target, planned and predictive, organizational and performing, regulatory and correctional, control and diagnostic stages.

In experiment on approbation of DST management development technologies which took place in three regions of the Russian Federation (Altai region, Belgorod

and Tambov areas), <5 thousand school Heads took part. Total number of teachers of the schools involved on various stages of skilled and experimental work made 2600 people.

The motivational and target stage of technology was directed to forming valuable purposes of DST also consisted in creating conditions during the reflexive analysis for judgment by the teacher of the developed system, independent detection by the teacher of professional difficulties and "problem points". Development of valuable and target component for DST was carried out during theoretical seminars, business games, round tables, individual and group consultations.

Information and analytical stage activities of the school headmaster for development of DST were aimed at studying of an actual state and objective assessment of teacher work results, development of the regulating mechanisms on transition of DST to a new qualitative state. At this stage of administrative cycle there was an accumulation of information on professional and pedagogical activity of the teacher on educational occupation, meeting of methodical association in creative group, on pedagogical and methodical councils of school, etc., During supervision, testing, questioning, conversation, expert assessment, rating and self-assessment, studying of school documentation information on valuable purposes of the teacher, contents and ways of interaction of the teacher with pupils in the course of training, results of study were gathered and analyzed. The revealed "problem field" formed the basis for development of an individual trajectory of DST development.

Realization of planned and predictive function assumed creation of the complex and target development DST program and pedagogical collective in general. The most important condition of DST development was theory and practical training of the teacher for development of own didactic system. Substantial training of teachers included updating of didactic, methodical, psychological, physiological and hygienic knowledge, development of special didactic abilities, acquaintance of teachers with modern educational technologies taking into account the didactic difficulties and valuable and semantic views making professional outlook of the teacher.

The organizational and performing stage represented practical activities of the school headmaster on formation and regulation of a certain structure of the organizational interactions promoting transition to self-governed development of DST. At this stage temporary groups of teachers-the creative and problem groups uniting teachers of different specialties on the basis of similar didactic

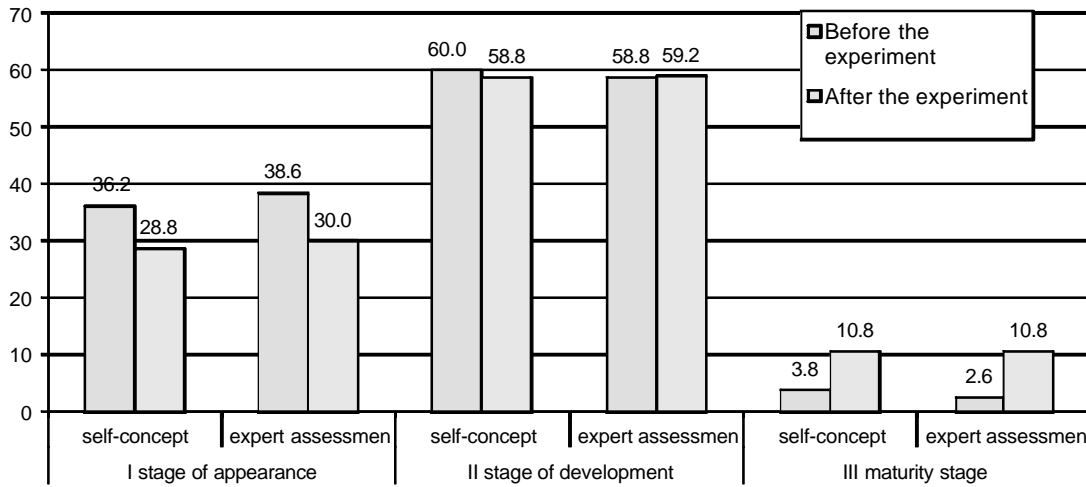


Fig. 1: Dynamics of the teacher didactic system development (by stages)

problems, psychological compatibility, teamwork, group differentiation, distinction of life and professional experience, personal and professional expectations, interests, readiness level etc. were created. Conditions for disclosure of teacher creative potential were created during organizational and activity games, social and psychological trainings oriented on the accounting of individual and typological features of teachers.

The control and diagnostic stage provided studying and generalization of DST as a result of the teacher implementation of the estimated activity based on reflection and reflecting readiness of the teacher for introspection, self-checking and self-assessment. Correlation of the studied DST with the established requirements allowed to introduce amendments in development of DST, staticizing thereby, at the final stage of cycle regulatory and correctional function of the school headmaster.

As the experiment showed, effective ways of the purpose achievement on transition to self-governed development of DST in the conditions of professional activity is use the corresponding dialogical strategy management at each stage of the intensifying influence at the motivational, information and operational levels. Compliance of the intensifying administrative influence to the internal nature of DST was expressed in the direction of the school headmaster efforts to the translation of educational values to the internal motivational sphere of the personality, their “description” in a professional image of the teacher’s world; the organization of teacher activity in the conditions of school assimilation and creative realization of knowledge complex and abilities necessary for development of DST; the organization of multi-subject dialog interaction of teachers at the different levels in the

form of reflexive processes allowing to transfer development of DST to the self-development mode; formation and development of pedagogical activity individual style.

As a result of technology introduction the extent of the purpose achievement on developing the identity of pupils raised; there was a growth of motivational and valuable, cognitive and technological readiness of teachers for development of DST; progressive changes in components, orientation, speed, stage and level of system development etc. were recorded. Synthesis of the obtained data on criterion of level of teachers professional competence was carried out on the basis of statistical criterion Chi-square ( $\chi^2$ ). Experimental value  $\chi^2$  made a Chi-square: between self-assessment “before” and “after” experiment 339.8; between expert assessment “before” and “after” experiment 372.5. Experimental value made a Chi-square: between self-assessment of teachers and expert assessment “before” experiment 5.94; between self-assessment of teachers and expert assessment after experiment 5.02. Since  $\chi^2_{crit} > \chi^2_{exp}$ , that the hypothesis finds the experimental confirmation with probability of an error of 5%. Lack of statistically significant distinctions between self-assessment indicators of teachers knowledge and abilities and expert assessment in both cases allows to judge objectivity of the received results.

The chart represented in Fig. 1 shows positive dynamics of the teacher didactic system development in experimental schools. According to the expert assessment, after experiment at a maturity stage there were 10.8% of total number of teachers that is 8.2% more than were recorded before carrying out skilled and experimental work. Considerable changes happened at

Table 1: Level dynamics of the teacher didactic system development (percentage of total number of the teachers participating in experiment)

Level of the teacher didactic system development	Before experiment		After experiment	
	Self-esteem	Expert assessment	Self-esteem	Expert assessment
Optimal	3.8	2.6	7.2	7.2
Acceptable	48.0	48.8	64.0	62.8
Critical	42.0	42.4	25.2	26.4
Inadmissible	6.2	6.2	3.6	3.6

stages of emergence and formation of DST. The 30.2% of teachers passed from a stage of emergence of DST to the new stage of development which is characterized by high-quality changes in valuable and target, cognitive and operational and reflexive and estimated system components. It is proved that the created administrative technology allows to carry out transition of teachers from inadmissible and critical levels of the teacher didactic system development to admissible and optimum levels (Table 1).

In general, the obtained data confirm positive influence of experimental technology of management on result and development of the teacher didactic system in the conditions of professional activity.

### CONCLUSION

Relevance of DST development management problem is defined by nature of the changes happening in society in the light of which requirements to pedagogical activity, DST value as conditions, process and result of achievement of professionalism by the teacher increase more and more. The technology of DST development management promotes fuller achievement of its purpose, creative self-realization of the teacher in professional activity, allows the teacher to comprehend the importance of the experience in the general concept of school development. The experimental technology in professional activity on the basis of purposeful interaction of management, co-managing and self-governed development, use of the administrative mechanisms focused on processes of self-development of educational institution subjects provides possibility of DST transition to new qualitative level due to updating of its internal potential and the available experience of the teacher.

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