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THE APPLICATION OF THE INTELLECTUAL TRAINING SYSTEMS
(FOR THE AUTOMATED ESTIMATION OF THE LEVEL OF RESIDUAL KNOWLEDGE
IN THE SUBJECTS OF TRAINING AND THE DIAGNOSTICS OF THE CONVERGENT AND THE DIVERGENT
INTELLECTUAL ABILITIES
OF THE COGNITIVE MODEL OF THE SUBJECTS OF THE INFORMATION ENVIRONMENT
OF THE ADAPTIVE AUTOMATED TRAINING)

The modern situation in the market of educational services is due (partially) by the dynamically changing needs of professionally differentiated representatives of the various layers of population, which act influence on the educational standards, politics, strategy, the setting of purposes and tasks of training, the organizational and methodical activity of HEI, the ergonomic compatibility of communicative interaction between the involved subjects (both deficient and surplus on the relation to pools of accumulated knowledge) and the instrumental support of acceptable forms, methods of training based on the novations in the area of information and communication technologies, so the process of informatization of the educational environment must be understood as the structurally difficult and continuous.

The modern educational establishment is based on the high-technological adaptive information-educational means and environments, is not limited to the introduction of standard, for example, the software means (modules) of diagnostics of the level of meta-cognitive subject awareness of pupils in a row of subject areas (disciplines), and additively actualizes the need of conducting of the subject-oriented researches with the purpose of the analysis of the efficiency of cognitive sorption of the educational material, on the one side,- the synthesis of a set of parameterized cognitive models (it becomes possible the individual orientation on the physiological, psychological and linguistic features of the cognizant subject and the adaptation of the means of information-educational environment at the development of educational influences), on the other side,- the need of development of the software tools for the automation of process of the parametric identification of portraits of the cognitive models for each involved subject (it is reached the significant routine operational unloading of personnel and the reduction of labor-costs on the organization, execution and processing of the results of research).

The cognitive model is obtained with the using of specially synthesized cognitive modeling technology (the iterative cycle is presented in the section 2.3 of the collective monography "The factors of success in the educational activity of modern HEI" edited by the member-corr. of "IHEAS" Zakharov I.N.), structurally layered on the physiological (the features of sensory perception of the information by the visual and acoustical analyzers), the psychological (includes the convergent and divergent intellectual abilities, the cognitive styles and learning-ability) and the linguistic (the naturally linguistic aspects of virtual communication) portraits,- is intended directly for the analysis of efficiency of the cognitive sorption of knowledge, coming from the information flows generated by the means of the information-educational environment and adsorbed by the psychophysiological construct of the head brain of cognizant subject in the process of information interaction.

The vector of divergent intellectual abilities is the structural component of the psychological portrait of the synthesized cognitive model, acting as one from the manifestations of the psychophysiological construct of the head brain of the cognizant subject, determines the individual productivity of inductive thinking, characterizes the creative potential of the personality.

As the basis of the research were used the several author's techniques for the various age groups of examinees (the so-called adolescent and adult variants): the verbal creativity – the technique of Mednik S.A. ("RAT" – Remote Associations Test – the research of distant associations); the figurative creativity – the technique of Torrens E.P. The adaptations of Alekseeva L.G. and Galkina T.V. were used.

The intelligent training systems are the new means of computer support of the learning process.

The realization of the software product was carried out in "RAD" (Rapid Application Development)-the environment of programming "Borland C++ Builder", the techniques of research were structured and encapsulated into the basis of the knowledge base of the toolkit, the algorithm of mechanism of output provides the calculating and documenting into the database the following parameters: the quantity of matches, the index of originality, the index of associativity, the index of selectivity of the process of divergent thinking.

The interface of software product was designed in such a way, as to maximally simplify the work of user is a non specialist in the area of information technologies (both at the filling of knowledge base and during diagnostics).

After starting and downloading of the software diagnostic means the user is asked to take 3 steps (each step is illustrated by the flickering banners): to choose the kind of research and the name of test; to go the procedure of authentication (if necessary, then to register in the database of system); To select the mode of operation (administrating, diagnostics and analysis).

In the mode of administrating provides the constructing of a sequence of question-answer dialog structures (including the setting of all parameters of diagnostic in accordance with the technique of research), the editing of the list of groups and users, the viewing of date, time of attempts and the results of research.

The mode of diagnostic is designed for the identification and calculation of parameters in the process of interactive interaction of the examinee and the system, as also the documenting into the database of the results of research for the further analysis.

In the mode of analysis it is the technically possibility to compare the variants of the reference answers of expert (formed on the basis of statistical analysis of a posteriori results of research, obtained in the previous periods) with the associations, introduced by the particular examinee.

The software product is supposed to be used as part of the unique information-computational complex of parametric identification of the portraits of the cognitive model, and the results obtained on its basis are supposed to be used in the further scientific-methodological and practical researches of the adaptive information-educational environments.