

Vasily Yagupov, Doctor of Pedagogical Sciences, Professor,
Leading Research Fellow of the Distance Education Laboratory,
Institute of Professional Technical Education,
National Academy of the Pedagogical Sciences of Ukraine
Valentina Svistun, Doctor of Pedagogical Sciences,
Professor, Chief Researcher at the Research Laboratory
of Technologies of Vocational Training, Institute of Professional
Technical Education,
National Academy of the Pedagogical Sciences of Ukraine

Informational and analytical activity of administrators of vocational training institutions

Comprehensive informatization is presently an objective factor in international development, particularly in its socio-economic, scientific, technical, technological and educational spheres. Comprehensive informatization stimulates professional development and multitasking, as well as the emergence of new universal integrated professions, such as information business, information administration, and information security.

The problem of informatization of education, particularly when applied to administration of vocational training institutions (also known as PTUs in Ukraine), presents a substantial scientific interest. Some aspects of information-analytical activity of vocational schools administrators were examined by Petrenko [2] and Yagupov [3, 4, 5], while the development of their information culture was studied by Gumenny [1].

The research demonstrates that in the scientific literature currently there is no clear, universally accepted definition of "information-analytical activity" when applied to vocational institution administration. For example, Petrenko defines it as "...a specific kind of managerial professional activity, which is characterized by a targeted search, collection, qualitative and meaningful transformation of information and its productive use to solve practical problems of managing vocational schools" [Petrenko, 2014, p. 101].

Thus, "information-analytical activity" can neither be reduced to the mechanisms of brain function nor to a comprehensive description of the phenomena in any language, nor to a strict logical relationship of different concepts and categories, nor to the imagination and intuition, nor to the formulation of complex abstract laws. It is the unity of the above constituents, in harmonic synergy with analytical capacity, professionalism and managerial

expertise of vocational school administrators, which results in an efficient information-analytical activity.

Any professional activity can be analyzed in genetic, structural and functional, and dynamic aspects. This study mostly concentrated the last two approaches when analyzing information-analytical activity of vocational school administrators. During structural and functional analysis, information and analytical activity of administrators is deconstructed into theoretical and empirical units, both conscious and unconscious. Dynamic aspects include mental mechanisms, such as motivation, theoretical and practical intelligence, creativity, reflection and self-reflection, and other psychiatric manifestations of information-analytical activity.

It is shown that informational and analytical activity is a kind of administration, which aims to optimize administration decision-making by qualitative and meaningful information processing. The process includes assessment and analytical processing of primary information, and then its results are presented to target audiences.

Informational and analytical activity, as any kind of human activity, consists of certain components. It includes goals, subjects, objects, means, methods, and results. The goal of informational and analytical activity is the creation of a system for information and analytical support for all phases of professional and pedagogical activities in a vocational school. The subject of information and analytical activity is the entire teaching staff, while its object is a "document-consumer" system, or "document information consumer" system. The means include various technical, electronic, and/or information (information and communication) tools to work with information. Finally, the result is the informational and analytical outcome developed for specific information consumers in a vocational school.

Thus, the information-analytical activity as a process consists of a set of systematic activities carried out with the purpose of collecting, storing, processing and distributing information in vocational schools to develop information and analytical documents for information consumers.

Minimum components of information and analytical activity as a process include:

- Collection and search for information (main element);
- Preliminary research, information-analytical processing, formulation of conclusions and accounting;
- Preparation of informational and analytical documents for consumers.

The outcome of information and analytical activities are secondary documents that model problems under investigations. Such secondary documents contain so-called inferential knowledge in a form of conclusions, recommendations, or forecasts, which are communicated to consumers in the form of surveys, annual reports, policy briefs, etc.

Thus, the elements of information-analytical activity for vocational school administrators should be understood as:

1. An extract from the information about the object (process), which is presented as a certain sign system and its further conversion to form that is comprehensible for the target audience.

2. Further interpretation of the content of the information through the use of semi-formal and formal languages for building static and dynamic information models.

3. Their further substantive analysis in the context of potential application in managerial activity.

This involves the following procedures:

– Development of new concepts, knowledge and mental models (heuristics linearity, rationality heuristics, representativeness heuristic, availability heuristic, heuristic format heuristics, probability heuristics comparability and transitivity additive heuristics, heuristics immediate response, heuristics binary) and their application by vocational school administration;

– Formation of a knowledge system that relates to the activities of vocational school administrators as subjects of professional administration activity;

– Interpretation of the results of practical – professional and managerial – thinking, converting them to a certain model, which can be implemented in professional and managerial activities (such as transformation and refinement of existing mental models, or formalization of mental models of vocational school administrators);

– Application of mental models for solving professional and managerial problems in vocational schools;

– Formation of professional and managerial impacts on education systems and their subjects.

Thus, information and analytical activity is the unity of analysis and synthesis of complexity when exploring complex pedagogical system or problems. Importantly, analysis and synthesis occur simultaneously, i.e., analysis of the system as a selection of constituent elements occurs at the same time as synthesis of the system derived elements.

Thus, information and analytical activity of vocational school administrators should, on the one hand be seen as the implementation of information and analytical functions of their professional and managerial activities, and on the other – as the interaction, mutual influence and interdependence of their motivation, intellectual abilities and skills – practical and theoretical intelligence, creativity, reflection and self-reflection in the process of working with certain information. Due to creativity and self-reflection, thought processes have to be seen as the self-development and self-expansion of mental experience as a set of mental models that interact with each

other. Self-reflection in this case is defined as the awareness and perception of the information and analytical activities as a whole, and its techniques and approaches in the analysis and synthesis process.

Conclusions.

1. Information and analytical activity of vocational school administrators is a part of their professional activity, which is characterized by a targeted search, collection, expert evaluation, analysis, synthesis, and processing of a variety of information. It is related to the recognition of their managerial competence, and productive use of relevant information to solve administration problems under conditions of uncertainty and limited information.

2. Information-analytical activity of vocational school administration has a common technology design (e.g. goal setting, analysis) as well as set of professional managerial activities (e.g. planning, organization, coordination, control). However, it does demonstrate substantial differences on an individual level.

3. There is a need for an information and analytical support system for information-analytical activity of vocational school administrators. This system should perform the following tasks:

- Ensure the flow of information to the relevant areas of vocational school administration.
- Identify the minimum and maximum boundaries of information flows in the implementation of information and analytical activity for administrators;
- Determine the range of information for the intended purpose for the information and analytical activities as the subject of professional and managerial activities.

4. For the successful implementation of the information-analytical function of professional managerial activity, it is necessary to implement modern approaches to information technology and administration.

This allows:

- Technologizing of information and analytical activities, for example application of naturally optimal algorithms;
- Informatization of information and analytical activity, which involves extensive use of information and communication tools for working with managerial information;
- Unification of information and analytical activities, which implies uniformity of work with information in vocational educational systems.

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Abstract

The article defined the nature and content of information and analytical activity for administrators of vocational training institutions, summarized its

required elements, and discussed the role of modern information technologies for the successful implementation of information and analytical activities in vocational school administration. The article focuses on the problem of informational and analytical support for the professional technical educational establishments (PTEEs) management and necessity of its speedy solution in the informational society. It defines the “PTEE management” as a combination of organizational, methodical, informational and intellectual types of activity concerning collection, analysis, generalization, storing, use and dissemination of information about different aspects of PTEEs functioning as educational system and actors of educational activity.

Key words: informational and analytical support; informational and analytical activity; informational and analytical function; informational and analytical actors; aims; objectives.