THE INTEGRATED PROCESS OF DEVELOPING THE INFORMATION CULTURE OF UNIVERSITY STUDENTS

O PROCESSO INTEGRADO DE DESENVOLVIMENTO DA CULTURA DA INFORMAÇÃO DE ESTUDANTES UNIVERSITÁRIOS

EL PROCESO INTEGRADO DE DESARROLLO DE LA CULTURA DE LA INFORMACIÓN DE ESTUDIANTES UNIVERSITARIOS

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ABSTRACT: The topicality of this research is caused by a necessity to provide a level of educational quality of graduates that matches modern requirements of labor market, information technologies and society in general. The methodological basis of the research is a polysubjective paradigm of educational systems management, and the main technology of its realization is functional management as a classical, widely recognized and standardized method of IT-sphere. The functional model of competency cluster "Information culture" allowing to spot effective solutions in management of integrated process of developing information culture among humanists through the example of organizing educational process in the "51.03.06 Library and Information Resources" training program has been developed and incorporated. The implementation of the functional model for managing the educational process of the Library and Information Resources chair allowed to spot mechanisms of polysubjective field correction.

KEYWORDS: Integration of education. Polysubjective management. Functional model. Cluster. Information culture.

RESUMO: A atualidade desta pesquisa é causada pela necessidade de proporcionar aos graduados um nível de qualidade educacional que corresponda às necessidades modernas do mercado de trabalho, das tecnologias de informação e da sociedade em geral. A base metodológica da pesquisa é um paradigma polissubjetivo de gestão de sistemas educacionais, e a principal tecnologia de sua realização é a gestão funcional como um método clássico, amplamente reconhecido e padronizado da esfera de TI. Soluções eficazes na gestão do processo integrado de desenvolvimento da cultura da informação entre os humanistas através do exemplo de organização do processo educacional no programa de treinamento "51.03.06 Bibliotecas e Recursos de Informação" foram desenvolvidas e incorporadas. A implementação do modelo funcional de gestão do processo educacional da cadeira de Biblioteca e Recursos de Informação permitiu detectar mecanismos de correção de campo polissubjetivo.

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PALAVRAS-CHAVE: *Integração da educação. Gestão polissubjetiva. Modelo funcional. Cluster. Cultura da informação.*

RESUMEN: *La actualidad de esta investigación se debe a la necesidad de brindar un nivel de calidad educativa a los graduados que se corresponda con los requisitos modernos del mercado laboral, las tecnologías de la información y la sociedad en general. La base metodológica de la investigación es un paradigma polisubjetivo de la gestión de sistemas educativos, y la principal tecnología de su realización es la gestión funcional como un método clásico, ampliamente reconocido y estandarizado de la esfera de las TI. Se han desarrollado e incorporado soluciones efectivas en la gestión del proceso integrado de desarrollo de la cultura de la información entre humanistas a través del ejemplo de organización del proceso educativo en el programa de capacitación "51.03.06 Biblioteca y Recursos de Información". La implementación del modelo funcional para la gestión del proceso educativo de la cátedra de Biblioteca y Recursos de Información permitió detectar mecanismos de corrección de campo polisubjetivo.*

PALABRAS CLAVE: *Integración de la educación. Gestión polisubjetiva. Modelo funcional. Clúster. Cultura de la información.*

Introduction

Revision of modern Russian education today is associated with the mainstreaming of information technologies. Today, Russian scientists observe the arrival of a digitalization era that has been characterizing a professional model of a specialist in any industry. Therefore, competence model of a specialist must comprehend digital competencies, as well as graduates of humanitarian universities must have these competences, which means that every educational program should comprise disciplines related to information technology. At the same time, the constantly changing federal state educational standards, the rapid growth of areas of knowledge related to the IT-sphere, the toughening of the competition between educational institutions lead to the fact that humanitarian university today can only exist in the context of intensive development.

This fact prioritizes the necessity of intensification of education in the humanities under condition of effective, innovative management based on the inclusion of all subjects of educational process in the management process and their creative fulfilment.

Training a professional of a new, as they say, informational type, capable of using information and communication technologies in professional activities, adapting to new intensive technologies, integrating them with all the qualities of a creative personality remains

a daunting challenge for humanitarian universities, the main task of which is the formation of a creative personality.

These facts break new ground for approaching modernization of education, and at the highest strategic level. In this case, of course, it is necessary to rely on successful educational technologies applied in higher school.

One of these time-proven approaches, successfully implemented by many universities, is the integration of all components of educational system into a single management process, while relying on the principle of humanization of education. The modernization of educational paradigm under such conditions presupposes the centralization of a student's personality from the standpoint of the formation of culture-forming and personality-developing functions.

A polysubjective paradigm of management seems to be the most adequate for providing the required level of controllability of integrated educational systems. "Its management is identified as a specific process of communication of subjects, aimed not only at the achievement of system objectives, but also at the realization of personal meanings of the subjects of educational process, their self-development and self-fulfillment" (KOVALENKO, 2004). Polysubjective control assumes that the transformation of subjects into polysubjects is possible only with the formation of a common semantic field. The formation of such semantic field and identification of the mechanisms of polysubjective field correction became the goal of the authors of this study under conditions of uncertainty that arose in connection with the transition of higher library and information education to updated educational standards of third generation (FSES HE 3 ++).

Systemic issues that must be dealt with at the strategic level was the uncertainty. This is a rather hard-edged orientation towards professional standards, framework nature of the new educational standard, which provides leeway to make independent decisions. Therefore, the subject of our research was the category of general professional competencies "Information Culture" of the Federal State Educational Standard of Higher Education in the 51.03.06 "Library and Information Activity" program (Order of the Ministry of Education and Science of the Russian Federation № 1182 of 01.09.2018).

We have chosen functional modeling as a digital technology, for the staffers of the Department of Library and Information Activities of the Belgorod State Institute of Arts and Culture (hereinafter – BSIAC) have been developing since 2008 to introduce functional modeling into educational process. An accumulated positive experience shows the universality and effectiveness of this methodology in managing educational systems of humanitarian university, determines the applicability of modern CASE-tools for building educational

programs that ensure the implementation of a competence-based approach that conforms international standards. The use of the functional model of the competence-oriented educational cluster "Information culture" allowed the management and staff of the department to respond quickly and adequately to the permanently changing federal state educational standards and maintain a sufficiently high quality of education in the 51.03.06 "Library and Information Activities" program (DORONINA, 2017; DORONINA, 2016).

Review of Literature

Speaking at a conference at the Higher School of Economics (April 2017), Director of Education and Skills Authority at the OECD, developer of the PISA International Student Assessment Program Andreas Schleicher in his report "Global Trends in the Transformation of National Education Systems: What Education Will Look Like in 2035?", referred information literacy as an obligatory element, an integral part of the competence of people in the digital era to the first and main factor ensuring success in educational systems (SCHLEICHER, 2017).

The heads of administrative structures of reputable universities in the country confirm this fact in the actual number of the "Rector of University" journal (№ 8 2019), which fully covers this issue, and at all levels of education. International Forum of Universities (2019) VII began with a panel discussion "Digitalization is Our Everything", the main conclusion of which was the need to form and develop an information culture of graduates of higher education, suggesting an information vector for the development (modernization) of higher education in Russia.

This course of changes in the higher education system meets the challenge of a new round of development of the information society. The up-to-date document, adopted by the decree of the President of the Russian Federation on 9 May 2017, "On the Strategy for the Development of the Information Society in the Russian Federation for 2017-2030", defines the information society at a new qualitative level as a society "in which information and the level of its application and accessibility shape economic and socio-cultural living conditions of citizens"[3]. That is, it is necessary for members of society not only to carry out information processes, but to have the desired level of information and communication technology background. Moreover, the problem of forming the information space of knowledge, being solved through the development of science, the implementation of educational and educational

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[3] More info at: http://www.garant.ru. Access: 10 Jan. 2021.

projects, the creation for citizens of a publicly accessible system of interconnected knowledge and ideas, the provision of a safe information environment for children, the promotion of the Russian language in the world and support of traditional forms of disseminating knowledge (excellent from the available ones using the Internet) has been raised (RUSSIA, 2017). The educational system of Russia is a contributor to the implementation of this most important global civilizational task.

In this context, the document proposes ways of forming the information space of knowledge that are best matched to the education setting. The substance lies in the integration of educational and high-tech organizations on the issue of improving educational programs through applying various information-based educational technologies[4].

Thus, it can be said that labor resources are unambiguously redistributed from the material sphere of production to the informational one, therefore, the primary concern of Russian higher education is to form the information culture of a future specialist in the broadest term. The process of modernization of education must be carried out with a focus on the formation of information knowledge space.

To solve this problem, the principle of integrating all components of the learning system into a shared managerial process has been successfully used for a long time. In the context of our study, highly topical in this sense are the works by Doctor of Pedagogical Sciences A. Y. Danilyuk (Rostov-on-the Don) and educators of the Institute of Art Education and Cultural Studies of the Russian Academy of Education (DANILYUK, 2019; DANILYUK, 2004; SAVENKOVA, 2011; SMIRNOV, 2010; STUKALOVA, 2010).

These works escalate metalevel categories of culture to their value, which corresponds to the goals of liberal arts education. A. Y. Danilyuk, exploring integration processes in the historical aspect, notes their successful application in education and, among the three basic principles, defines "the principle of cultural congruence, which characterizes the attitude of education to its cultural environment" (DANILYUK, 2019).

A. Y. Danilyuk states that

> the integration of education is the implementation by a student under the guidance of a teacher of consecutive translation of messages from one teaching language to another, in the process of which the assimilation of knowledge, regulation of concepts, and birth of personal and cultural meanings take place (DANILYUK, 2004).

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[4] See more at: http://www.garant.ru. Access: 10 Jan. 2021.

At the same time, A.Y. Danilyuk is of the view that the main implication coinciding with the studies of the Russian Academy of Education is

> one of the main questions of modern pedagogy, a constructive answer to which is the educational space per se, the question of the relationship between education and culture. A cultural dominant is not characteristic of traditional education. It is organized in a system that is in full agreement with modern science (academic subjects), based on the principle of education and life relationship, mainly in its real socio-economic manifestation (labor school), as well as through various combinations of the principles of scientific character and vitality (interdisciplinary relationships, integrated courses) (DANILYUK, 2004).

Doctor of Pedagogical Sciences E. N. Puzankova (Orel) gives a more generalized notion, of the semantic scope of which is congruent with previous studies.

> pedagogical integration is a process and result of the development, becoming and formation of multidimensional human integrity in the context of integrative pedagogical activity. At the same time, development is a process of progressive change in the physical, mental and spiritual properties of a person, that is, of his/her progress to a whole new level of integrity. Becoming is the emergence of physical, mental and spiritual new formations in a person. Formation is the acquisition by physical, mental and spiritual new formations of relative stability, certainty and completeness (PUZANKOVA, 2009).

The studies reviewed bring us to the conclusion that integration processes in liberal education as well as in science education must be implemented based on the principle of humanization of education, which is a system-forming element of the entire cultural sector, which fully corresponds to the implementation of the principle of cultural conformity. At the same time, in our opinion, one of the prerequisites for its implementation is the integration of information and communication competencies which form the basis of its information culture into the structure of the personality.

The role of professional information culture is becoming dominant today, because in the age of industrial Internet the importance of information and communication technologies is the main thing, indeed. The requirements for a modern qualified humanistician are changing amid "mass production and consumption of information, its permanent actualization. He/she must have not only professional knowledge and skills, but more broadly, be well found in a special information culture – the culture of knowledge, thinking, learning and self-learning" (KIREEVA; DORONINA, 2018). Our conclusions have initiated an extreme immediacy of the problem of managing integration processes in educational systems.

The teachers of the Higher School of Economics (V. Grekul, G. Denischenko, N. Korovkina), describing in detail the structure of integration management, refer it to the

integration management itself as a field of knowledge, positioning it from the project point of view as processes that provide a continuous and integrated approach to project management. The purpose of integration is to achieve effective interaction of project management processes to ensure the achievement of project objectives. Integration of project management requires that all project management processes be built and linked to other processes to facilitate their coordination (GREKUL *et al.*, 2019).

The managerial aspects of integration of educational systems have become objects and subjects of an array of thesis works (G. F. Ushamirskaya, A. R. Shagimullin, A. A. Shogenov, etc.). The authors, in particular, propose such strategic benchmarks in developing integration processes in Russia, expansion of the network of academic organizations, development of "project integration", development and priority support of a network of leading research universities, pooling of resources of research and educational complexes[5], while the principle of cultural conformity, unfortunately, is ignored. At the same time, most authors recognize that the dominant component of educational activity is the formation of a creative personality. Thus, to introduce the principle of cultural conformity into management aspects of the integration of educational systems is one of issues which we address by means of modern digital technologies.

One cannot but agree with S. I. Malitskaya's judgment (V. N. Tatishchev Volga University) that "to ensure a high level of manageability, an integrated institution requires new methods, strategies and tools that can take into account the peculiarities of changes in the external environment and coordinate the goals, needs and actions of the internal environment", which suggests the use of a system approach "in integration with the process, situational, project and competence approaches" (MALITSKAYA, 2011). These conclusions seem attractive to us because this approach is the basis of the quality management system of universities, and this, in our opinion, is one of the primary requirements for effective university development.

Quality in education has become a central issue for foreign colleagues. In the journals *Quality Assurance in Education* and *Quality in Higher Education*, Professor of the University of Thessaly Vassilis Gerogiannis and his colleagues argue that the "survival" of university directly depends on service quality (TSINIDOU *et al.*, 2010). Swedish scholars from the University of Oslo H. Pratasavitskaya and B. Stensaker write that the development of a quality management system is a national requirement and a key condition for improving teaching and learning (PRATASAVITSKAYA; STENSAKER, 2010). Moreover, in order to develop the process of improving quality, they develop the concept of a "culture of quality" designed to

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[5] More on this subject at: http://fgosvo.ru/fgosvo/. Access: 10 Jan. 2021.

support the processes of development and improvement of higher education (HARVEY; STENSAKER). In other words, the principle of cultural conformity also applies to quality in educational process.

Formalizing the conclusions of our theoretical inquiries, we have built the following graphical model of a modern universal educational system (Fig.1).

Figure 1 – The Model of a Modern Universal Educational System
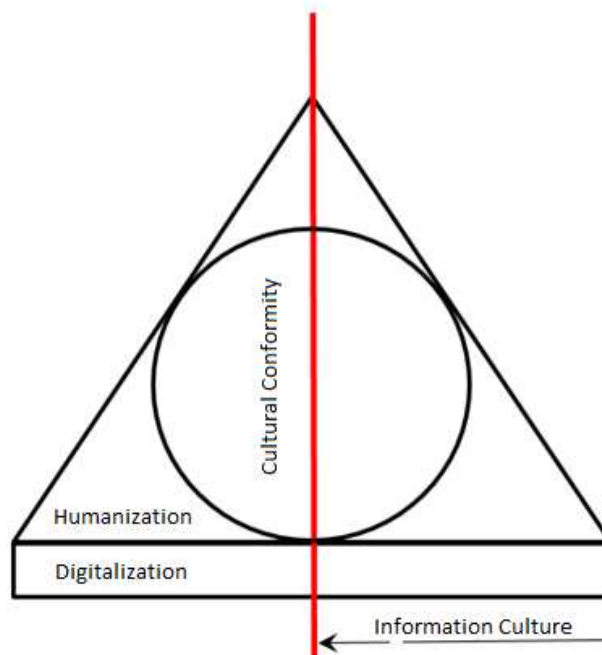
Source: Devised by the authors

Materials and Methods

To develop a functional model of the "Information Culture" competence cluster, functional modeling (SADT - Structured Analysis and Design Technique) was defined as the main method. This choice is determined by several reasons:

1. Historically, the methodology of SADT has become the most successful and therefore the most popular evolutionary development of the systems approach. The author of the methodology is an American scientist, pioneer of computer technologies Douglas Taylor Ross (12.21.1929–31.01.2007) who singled out theories related to the methodology and language of systems description as a separate part and called them SADT in 1969. It was at that time when he predicted the widespread use of methodology, including in domains pertaining to the humanities. Very soon, the core of SADT became the basis of the federal standard (IDEF0 - Integration definition for function modeling), which successfully standardized the activities of

the US Department of Defense, and after that, various manufacturing industries. In Russia in 2000, a guiding document "Methodology of Functional Modeling IDEF0" was adopted, which standardized the application of functional modeling in various fields (NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, 1993; METHODOLOGY…, 2000).

2. The SADT (IDEF0) methodology has already become a classic method of the process approach to management. It defines the description of processes in the standards of the ISO 9000 (9001) family (quality management systems). This methodology has become a kind of ideology of international and domestic standards that determine the requirements for quality management system. Since the 1980s the SADT methodology has been used abroad to model quality management systems at universities, and it has been proven that the standardization of educational systems has a significant positive impact on the organization of educational process and the successful improvement of curricula. Foreign scholars, in particular, Doctor of Philosophy of Arab Academy for Science Khaled S. El-Kilani and co-authors, after analyzing publications on quality in education, have arrived at the conclusion that today the introduction of the ISO 9000 (9001) quality standard in educational institutions has become an international trend in the field of improving education (EL-SHAREF; EL-KILANY, 2011).

3. The SADT methodology is the most proven and popular technology in the IT sphere; it is a safe and proven method for uncertainty removal, search of a way out of a problem situation by identifying elements of the system and their functional connection.

4. IDEF0 notation is graphical, very simple and easy, which allows it to be effectively used in humanitarian subject areas. It is intuitively comprehensible and allows you to quickly visualize and clearly represent all processes, display all parameters. Implementation of the idea of reengineering, building AS-IS and TO-BE models makes it possible to monitor the quality of processes and track problem areas and lacunas. In addition, the software tools for supporting this methodology are quite diverse and belong to the category of modern CASE tools. This variety allows you to choose easy-to-learn, but functional computer programs for modeling.

Today, there is an extensive use of functional modeling in the study of Russian educational systems. We have identified such key areas of effective use of this methodology as: education strategic planning; management of current processes in the field of education; design of "information and educational environment; design of pedagogical objects essential for the education system – academic disciplines; modeling for solving specific problems in education" (DORONINA, 2017; DORONINA, 2016). Such explorations are expanding, publications on the application of functional modeling using the "1C: University system" are appearing (POLUBOYAROV, 2015).

The updated educational standard highlights a separate category of general professional competencies "Information Culture" (GPC-3) (USHAMIRSKAYA, 2004), on which administerial attention of the department has been focused and the goal has been set – to design a functional model of the competence cluster "Information Culture". The project gained support within the framework of the BSIAC's intra-university competition for research and creative project grants in 2020. The following objectives were identified in the bachelor's degree course: analysis and decomposition of GPC-3: categories of general professional competencies "Information Culture" of the Federal State Educational Standard of Higher Education by specialty 51.03.06 "Library and Information Activity", implemented at the BSIAC; aggregation of cluster components based on the principle of continuity; optimization of educational trajectories.

In accordance with the tasks, a course schedule was established (NOVIKOV; NOVIKOV). At the first stage an analysis of major professional competencies was carried out and two competencies were identified: PC-4 Readiness for the implementation of technological processes of library and information activities; PC-5 Readiness for mastery of advanced methods of library and information activities based on information and communication technologies. The cluster was formed based on a degree course scheme, covering the entire learning process. The purpose of the cluster is to manage not one competence, but a set of competences, carrying out interdisciplinary interaction.

The Microsoft Office Visio 2010 application was chosen as the CASE software tool. This is an office licensed application for building business and technical diagrams, containing the ability to build diagrams of the IDEF0 notation.

Findings

According to the technology of functional modeling, the process of modeling in the IDEF0 notation begins with the construction of a context diagram, this is the most abstract level of describing the system as a whole, at which it is necessary to determine a subject of modeling, goals and points of view of the model.

The very system was defined by the subject. When formulating the goal of the model, we relied on V. I. Kovalenko's conclusions,

> Polysubjective management is the management that ensures the development of a special systemic quality in each subject of the educational process – polysubjectivity. In order for some community of subjects to turn into a polysubjective, mutual understanding between them is necessary, which is

> impossible without the formation of a common semantic field of activity, ...,
> an attitude towards cooperation and mutual understanding (KOVALENKO,
> 2004).

Constructing a general semantic field of activity for the formation of information culture of bachelors has become a **strategic target** of the functional model. The main **tactical target** of the functional model is polysubjective management of the interaction of disciplines for the formation of a complex of competencies, the presentation in a visual graphical form of educational trajectories to achieve the required level of competence formation by students. It is a point of view of head of department, head of educational and methodological management.

Following this line of reasoning, the input and output data, mechanism and control have been determined. Input stream is applicants with a certain set of basic knowledge skills abilities acquired at school (hereinafter – KSA). Output stream is bachelors of library and information activity with the formed set of competencies "Information Culture". As performers (according to mechanisms specification), we have identified: higher-education teaching personnel (hereinafter – HETP) of the department, librarians of training practice bases, as well as soft hardware (hereinafter – SHW) of the educational process. The model is managed on the basis of the three levels: Federal State Educational Standard of Higher Education, basic professional degree program of higher education (hereinafter – BPDP HE) and, including degree course scheme of the BSIAC. The resulting context diagram of the functional model is shown in Fig. 2.

Figure 2 – Context Diagram of the Functional Model
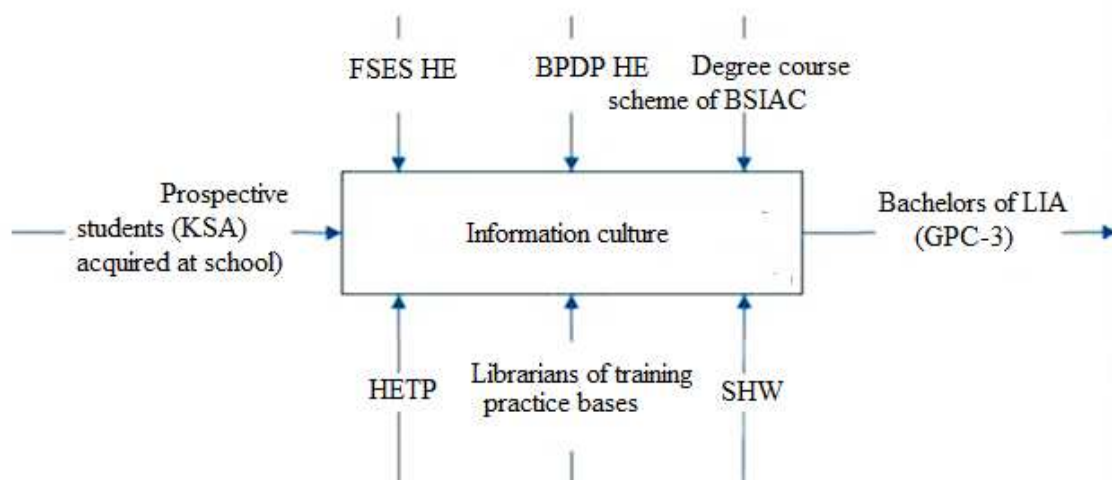
Source: Devised by the authors

A decomposition of Level 1 was further carried out. Academic disciplines with active targeting the formation of information culture was selected based on the course assessment. Such course assessment creates a certain system of interaction between the disciplines of this course. A holistic system for the formation of information culture, from the point of view of the implementation of the entire BPDP, will take place based on polysubjective management of the disciplines included in the cluster.

We have defined the following disciplines: Informatics, Information Technology, Information and Bibliographic Culture of Individuals, Information Technology in the Library, Automated Library Information Systems, Organization and Technology of Automated Library Information Systems (hereinafter – ALIS), Information Security in the Library. The blocks of Practice and Research have been also added. The interaction between the blocks and arrows (vectors) of the formation of competencies is illustrated in Figure 3.

Figure 3 – Functional Model of the Competency Cluster "Information Culture"
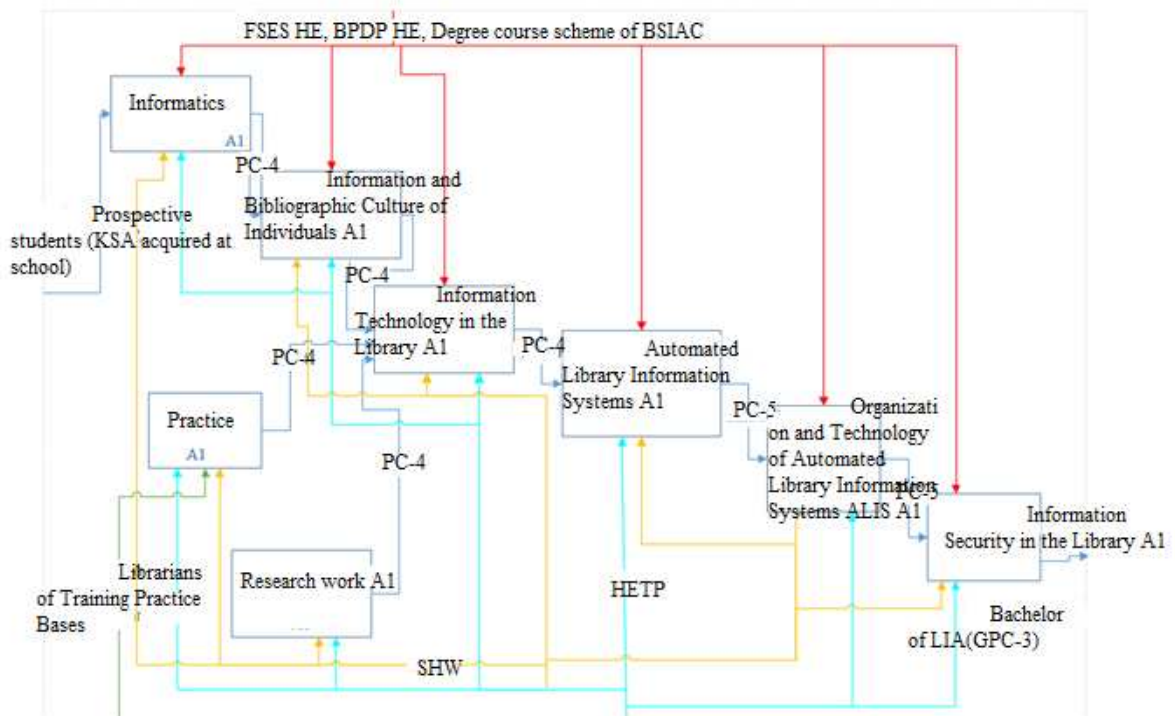
Source: Devised by the authors

As can be seen from Fig. 3 the output stream of one discipline becomes input for another, which makes it possible to track the dynamics of the formation of competencies, see and manage educational trajectories.

Discussion and Conclusions

Today, the functional model of the "Information Culture" competence cluster is presented to the teaching staff of the department and is used in the development of work programs for disciplines.

Thus, the developed functional model of the "Information Culture" competence cluster has all the essential features for the implementation of polysubjective management and contributes to the transition from a monosubjective nature of management to a polysubjective one.

Since during the formation of a cluster the selection of disciplines is a set of indirect related elements, each element of the cluster exists in the "gravitational field" of its own management decisions, which provides it with an autonomous vital space. To make the most of the potential of the cluster, it is necessary to employ a unique toolbox that embraces all the elements and connections of the cluster in accordance with the logic of their interaction.

Field solutions for managing the "Information Culture" cluster as an integration process consist in creating a unified force field which is an ideological and motivational space that has tension due to subject fields. These fields, in turn, represent a collection of subjects (personalities) with varying degrees of intensity (tension). "Individual fields of the subjects are superimposed on each other, as a result of which the resulting field is formed" (KOVALENKO, 2004).

Integration of the subjective fields is referred by V. I. Kovalenko to the process of "selection and consolidation of the most optimal subjective functions carried out by the participants in educational process, their mutual complementarity and aggregation into a single functional integrity" (KOVALENKO, 2004). Integration processes in educational systems are regulated by virtue of the principle of integration of subjective fields. The author gives importance to the very subjective functions, and not to the activities of individual subjects. Moreover, one distinguishes the subjective functions that are performed most effectively and successfully and differ from the performance of the same functions by other subjects. Then there is intersubjective specialization enabling to select the best variations for the implementation of subjective functions. This means that the educational system becomes flexible, has a dynamic orientation to environmental differences, and management problems are solved efficiently in uncertain environment.

It is necessary to expressly indicate the possibility of implementing the principle of integration of subjective fields using the functional model of the "Information Culture"

competence cluster. In connection with permanently increasing intensity of pedagogical work in higher education, it becomes possible to solve the problems of educational system together, considering subjective fields of the participants in educational process. Building upon this, it becomes possible to coordinate subjective activity actively and adequately, to use the subjective fields integration mechanisms such as "additions" and "aggregation" for coordination.

The mechanism of polysubjective field correction of the subjects' action tendency proposed by V. I. Kovalenko is more efficiently implemented within the scope of research topic based on functional model of the "Information Culture" competence cluster. The essence of mechanism lies in the fact that the goals of the subjects of learning activity on developing educational system should be in conjunction with their own development tendencies, which is most often not considered in practice. V. I. Kovalenko considers "the correction of the subjects' orientation in educational process in accordance with educational development trends" to be the primary targets of polysubjective management (KOVALENKO, 2004).

Our conclusions are also borne out by studies of psychologists dealing with the subject to joint interactions who maintain that in order for a group of different individuals to become a polysubject, it is necessary to organize a subject to joint interaction between its participants, and that

> the following conditions are the most favorable for emerging a subject to joint interaction in professional environment: "how well the participants know each other", "qualifications of the participants", "time constraints", "significancy of the task". Ability to be included in the subject to joint interactions depends on personality characteristics. People who are self-confident, emotionally mature, who understand other people, embrace collective activities, share in the common cause, are more capable of successful joint interaction (MDIVANY *et al.*, 2019).

During this approach, as can be seen from the context diagram (Fig. 3), the mechanism of polysubjective field correction of the subjects' action tendency will include the following elements:

– specifying the scope of authority for activities of the subjects of management, which makes it possible to outline the guidelines for the systemic correction of the functioning of educational system as a whole;

– selecting personnel with basic professional education, who satisfy the principle of cultural conformity and ensure successful and effective implementation of their subjective functions;

– defining the parameters of the field of intersubjective interaction: shared sense of purpose, corporate culture and values, subject's competence regeneration.

The decomposition diagram enables to professionally organize intersubjective specialization, for example, it can be seen from Figure 3 that it is advisable to entrust the implementation of academic disciplines participating in the formation of PC-4 to the same employee.

Thus, the functional model of the "Information Culture" competence cluster makes it possible to identify the participants of subject to joint interaction in the professional environment, to implement the principle of integration of subject fields and become the basis for subsequent implementation of the mechanism of polysubjective field correction of the direction of subjects' actions. This enables to increase the level of efficiency of managerial decisions of the head of an educational program, creating subject fields based on subject functions.

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