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Pedagogical Design of Creative Strategies for Students' Self-Development in the Digital Era

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Abstract

The article reveals an original approach to the method of designing educational activities factored in modern conditions: long-term informational stress, namely, discrete immersion into the global information flow, severe time constraints, new behavioral strategies and patterns occurring (multifaceted search, time-urgent decision making), increasing the value of "I-virtual", emergence of new cognitive approaches to understanding, memorizing information.

The style of teacher-student interaction is changing in the world of new digital technologies and emergence of new analog features such as sound interfaces, informational bots, and algorithms, technologies of control and attention analytics. The article provides an overview of the experiment, performed in 2017-2019 and participated by 3 groups of undergraduate and Master students of major "Television" of the Higher School of Journalism and Media Communications, Kazan Federal University (35 participants), and 2 groups of Master students of major "Pedagogy of high education" of the Institute of Psychology and Education Kazan Federal University (26 participants); 61 students in total. In the course of the study, group and individual strategies of students' creative self-development with the features of "digital thinking" were designed. It is revealed that the highest results in the development of self-processes are shown by the students who are aimed at specific (realistic, competitive) digital projects that can reveal their unique potential within the framework of hybrid and group creativity, who develop a step-by-step structure of group actions and combine technological effectiveness and original style.

Keywords: creative self-development; education in the digital world; pedagogical design; personality.

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Introduction

"The main task of education during the super-industrial revolution is to expand human adaptive capabilities," Toffler (2004, p. 83) wrote in his prognostic philosophical treatise in the 70s of the last century. Indeed, it is education that should help to adapt a person to new, digital realities. For successful implementation of complex, crucial tasks, teachers need to understand the social demand, and have a clear trend forecast of professions development and educational goals formation.

In the meantime, technologies are changing faster than educational standards. At the present stage, the boundaries of professional identities have become vague; many professions have received the status of hybrid due to their interaction with the IT environment, and with virtual reality. In media, the change of professional paradigms, which were stable for centuries, occurs at a speed of several months. For 400 years, the newspaper lived as an independent media, for 75 years television existed without a modern digital alternative, the Internet took over the world in less than 10 years (and after just 30 years of the global network invention, every third has become an active user), Instagram is a digital phenomenon soared in consumption ratings for 2 years (by 2018, every tenth Russian has become an active user) (Rusability, 2018). General analytics of media consumption shows the predominance of the use of digital resources over traditional information carriers (Deloitte, 2018). Spot broadcasts are reported by bots or VIAR-journalists; the news feed is updated during the deployment of the event. Could one predict such changes five years ago?

The new world information system – digitalization – is a factor that has had a powerful influence on the work of all societies and spheres of civilization in the 21st century. Information has changed the world. But what is behind this concept? If we look at official, scientific and legal interpretations of this concept, there are hundreds of them. This is how the "information" is defined by the law of the Russian Federation: "Information is all findings (messages, data) regardless of the form in which they are presented" (Federal Law, 2006). In other sources, "information" is defined through "knowledge": "information is knowledge about objects, facts, ideas, etc., which people can exchange within a specific context" (ISO/IEC, 1996). "Information-knowledge", and the way of its transmission is the subject area of an educational process. Structure, storage method, transmission, decryption, representation, understanding, structuring, and generalization of information change, thus forms and methods of information flow management change too. Therefore, pedagogical strategies are transformed: strategies of transmission and perception, acquisition of "information-knowledge" and "information-skill". Hence, it is becoming the most important and urgent pedagogical and prognostic task to identify, model, create, apply, describe, update and improve new effective pedagogical strategies at the level of self-development of teacher's and student's professional personality. In Russia, the first stage of a digital society formation began, the audience's media activity (not only consumption, but also information content creation) in 2018 exceeded 53%. James Martin, one of the researchers of the "digital society" characteristics, emphasized that communication is a "key element of the information society" and characterized the information society by the criteria:

1)   Technological (information technologies are used in production, establishments, system of education, in everyday life).

2)   Social ("informational consciousness" is affirmed with wide access to information).

3)   Economic (information is a key factor in the economy as a resource, source of value added and employment).

4)   Political (freedom of information is a political process, growth of data exchange between the social strata of the population).

5)   Cultural (recognition of information values).

"Communication" becomes another conceptual structure, which is important in the digital world and close to the tasks of any educational action. It has also been given many definitions. Among them is the position of Peter Winterhoff-Shpurk (2007), the founder of media psychology: "Communication is all the ways one worldview influences another" is, indeed, the focus of the educational process is always a transfer of not only "objective" knowledge (skills and abilities), but also certain subject models: image of a teacher, his personal, competent, successful strategies, both professional and personal. In the process of pedagogical communication, a situation of the influence one worldview another may arise (to a greater or lesser degree). This phenomenon was described by Andreev (2010, p. 112). Among the other laws of guaranteed quality of education, he reveals the "law of pedagogical resonance, which ad hoc leads to the achievement of the highest efficiency of educational (pedagogical) activity". The conditions for achieving the effect of "pedagogical resonance" are: respect (trust) for a teacher as a master; a high level of preparedness of an audience; balance of cognitive models (understanding), motivations, and ethical norms; psycho-emotional compatibility (speed and style of thinking, etc.); mutual value-semantic meanings and their rating of significance, etc. In a situation of "pedagogical resonance", communication takes place targeted, "without interference", leads to positive changes, enriches and develops both teacher's (informer's) and student's (recipient's) personalities. Pedagogical resonance is a universal effective pedagogical strategy.

In the "law of interdisciplinary creative transfer" of V.I. Andreev it is said: "the most promising new scientific ideas, laws, theories, principles, methods borrowed from other sciences should be adapted and transformed into pedagogical knowledge based on categories, basic concepts, principles of pedagogy, especially in the process of developing new pedagogical theories" (Andreev, 2010, p.114). Indeed, reflecting on the pedagogical conditions in which moderation and accumulation of new professional strategies take place, it is also necessary to decide on the general understanding of the scientific and philosophical concept of the "digital world". The digital world (information society) is understood by most researchers as a society of new communication style, when the majority of citizens actively use digital technologies in their professional activities and personal spheres. The first attempts to use the term "information society" appeared in the first half of the 20th century, before the World War II, together with the cybernetics initiation. Such theorists of the informational impact on society as K. Shannon, N. Wiener, D. von Neumann, A. Turing, A. Kolmogorov, P. Lazarfeld, W. Lippmann, G. Comstock, T. Chernigovskaya argued the need to study the phenomenology of the digital world from different scientific positions and approaches. The authors of the current publication devote their articles to the studies of mentioned researches (Andreeva & Sibgatullina, 2018).

Purpose and objectives of the study

The purpose of the study is to identify the forms and methods of pedagogical design of creative strategies for students' self-development in the digital era. The objectives to achieve the study purpose are:

1)   Identification of new, situational features of professions development, broadly in the

digital society – that is identifying new conditions for the development of professions and self-development of students as future professionals.

2)　　　Search for new strategies of professional interaction between a teacher and a student, taking into account the identified, new pedagogical conditions.

3)　　　Identification pedagogical methods that will allow a modern teacher to most effectively develop and design strategies for student's self-development.

Research questions are: Scientific problem of the research define a number of applied, substantive issues. In particular, what conditions influence to a greater extent the choice of professional behavior strategies and success of a young specialist at the current stage? Is it possible to predict the development of professions, transformation of the "ideal professional models" and the goals of educational activities? What professional self-development strategies are applicable and most successful in the modern world? How to improve the strategy of knowledge (skills, competencies) transfer to modern students? What pedagogical methods could allow a modern teacher to most effectively develop and design student's self-development strategies?

Literature review

Due to the changes in the global information paradigm, new conditions for the professional development of the young generation have emerged; we will introduce a few of them.

Conditions of professional self-development in the digital world:

1)　　　Overrunning time and space (diachronic and diatopic abilities) of the digital world. Human received the digital immortality of the "I-virtual". The effect of flow continuity. Development of new cognitive approaches to understanding, memorizing information.

2)　　　Overcoming new information speed limits. Feasibility and predictability of "VIAR-technologies".

3)　　　Controllability of processes (digital "paranoia"). Consumption analytics (attention, loyalty, etc.).

4)　　　The need for self-presentation and news making. Information creativity as a platform for competition of "Virtual I" representations.

5)　　　New forms of emotional intelligence manifestation, new ways of "feedback".

6)　　　Generation gap. Discrepancy of learning: teachers 35+ have become "students" and "digital guests" of the millennials.

7)　　　Limiting the demand for "I-real", transition to analog forms of activity. Freelance. Expanding the boundaries of professional identities.

Strategies of pedagogical interaction in response to the challenges of the era have also changed. A teacher no longer collects, synthesizes, analyzes and transmits knowledge, but on the contrary, eliminates unnecessary streams of information noise. He acts as an information navigator, an expert analyst, an author of independent, original scientific and educational content. Student and teacher collaboration makes it possible to moderate, create competitive (and profitable) information resources in the digital world, and manage information flows. But most importantly, mutual activities facilitate student's creative self-development strategies. As for a student, he learns to model his own training, to realize the goals, stages of professional self-development, relying on personal competences, creative abilities and individual value models. Today there is a need to create unique courses for professional inquiries of student groups. As shown in an inquiry survey conducted among 4th year undergraduate students (Higher School of

Journalism and Media Communications, major "Television", 23 students participated), graduates express concerns about the applicability of professional knowledge obtained at the university (58%). 67% of respondents are already working in other areas or predicting their professional future in a different professional field. Analyzing the received education, students showed that they would like to receive scientifically grounded knowledge with a system of verifiable evidence (72%), 63% of respondents are in a situation of independent search for original answers to paradoxical, problematic questions, 85% want to predict the development of the procession as well as adjust and design a structure and a content of courses with a teacher.

Discussion of the topic and preparation of an essay on the topic "Effective professional strategies" showed that an important problem that students solve for themselves is the search for the boundaries of identity, both professional (due to rapid professional transformation) and personal (due to expansion of self-concept in a digital way - "I am virtual".) As the world of professions is changing dynamically, modern students would like to gain knowledge of successful professional strategies for working in situations of uncertainty – new, unusual professional situations.

Another major problem of the digital society and effective learning in it is the development of protective strategies against information stress. The phenomenon itself is known as "information overload" (infobesity, intoxication, information anxiety, information stress), first introduced in the 60s of the last century by B. Gross. Later A. Toffler actualized this phenomenon and, analyzing successful strategies for adapting a person in the digital world, wrote: "Personal tactics will become less and less effective with each passing day". A Russian sociologist Elyakov (2005) wrote: "The main point of information overload is that the number of the incoming information payload exceeds objective possibilities of its perception by a human. Information payload is the one necessary for solving tasks that ensure the vital activity of an individual or a social organization". The problem of developing effective strategies for co-adaptation to the digital environment has already become the topic of publication (Andreeva, 2017).

Methodology

Pedagogical design today is impossible without conscious and rational forecasting of pedagogical activity. Andreev (2010, p. 112) believed that "pedagogical forecasting is a type of a scientific and research activity of a teacher-researcher, based on methods of extrapolation, modeling, expert assessment and other methods that are aimed at solving tasks and problems in forecasting of educational systems development, pedagogical theories development, as well as predicting other pedagogical phenomena and processes". From a large arsenal of pedagogical prognostics methods, used in Higher School of Journalism and Media Communications (HSJMC) while designing independent successful strategies by students, the most effective results were shown by the following methods:

The extrapolation method is the transfer of knowledge from one field of activity, where an evolutionary breakthrough is accomplished, to another, which is more classical, traditional. It allows managing the development process consciously and step by step. So, many "Space" technologies have been tested and are used today in a wide variety of fields: from medicine to agriculture.

The method of modeling is deciphering a successful strategy and its application. It is most often used when obtaining knowledge from a master teacher in applied professional and creative fields (painting, design, music, film industry). Search for the own original style is impossible without understanding the methods of creating the best examples.

Methods of expert assessment are used in the critical analysis of the situation, and forecasting

future professional requests.

Results and Discussions

The results of the experiment which involved 35 undergraduate and Master students of HSJMC, who designed models of self-development, showed that students who are able to work in a group and apply a resource approach achieved greater results. The effectiveness of using the strategy was assessed through the results of creative and research activities of students. The evaluative tools were indicators such as: increasing the audience – the number of visits, likes, positive feedback (comments), reposting, links, etc. Three projects received the greatest response: 1) A short film "Interview with a Lie Detector", filmed during one of the lessons in a classroom, and included 7 members of the group as participants. 2) Video "Creativity of the Neural Network" – a variant of hybrid creativity, where the author of the script is the neural network, and video sequence, installation, presentation was made by a student. 3) Documentary project (two authors) "What is your God?". It is based on the study of the comparative characteristics of the world view of children with digital thinking and children from Orthodox families raised in a situation of "informational ban".

It is revealed that the highest results in the development of self-processes are achieved by students focused on:

– specific (realistic, competitive) digital projects;

– revealing their unique potential within the framework of hybrid creativity ("collaboration", "co-learning" with digital technologies) as a part of group project creativity;

– developing a clear, step-by-step strategy for achievement (using the task approach);

– algorithmic (regular and under improvement) structure of group actions;

– combining technological effectiveness and unique style, novelty, originality of the idea and choosing the optimal form for presenting the idea in a balanced, harmonious form.

Pedagogical design of effective self-development strategies

It should be emphasized that professional work of a higher education teacher in the modern world is becoming increasingly technological, focused on the needs of the digital society. A teacher today acts as a mentor, tutor, able to assist students in designing effective strategies for their professional and personal self-development. In the course of the study there was developed a model of pedagogical design of effective strategies for self-development through the prism of technology of project-based learning using digital educational resources.

The choice of technology for project-based learning is determined by the fact that at the heart of any professional activity organization is its design, in other words definition of goals and values of this activity, determination of the object of activity, clarification of the final product parameters by means of preliminary study of the essence and structure of this subject, identification of relevant patterns and relationships between the structural elements of the object. Moreover, in designing the upcoming work, a subject solves the following tasks: choosing the necessary methods and means of professional activity, defining a plan of actions necessary to transform the subject (source product) into a final product in accordance with the objectives of the forthcoming activity, determining the list of competencies necessary for successful implementation of the plan, self-analysis of the level of own competencies development, determining self-development strategies for the most successful way of solving professional activities problems. Thus, the design of the future professional activity means construction of its indicative basis,

creation of a final product related to the solution of professional tasks, as well as selection of the most effective strategies for self-development in conditions close to the real ones in professional activity. When developing digital educational resources, on the basis of project learning, their foundation was laid down on the idea of students' practice-oriented activities on solving a specific professional task. Goals and content of this task are determined by students and implemented by them in the process of theoretical study and practical realization with tutor support of a teacher. Digital content provides systematization, interdisciplinary and availability of the material under study, thanks to which the principles of project learning are implemented. The result of training is the development of individual and group projects (short film, video, documentary video, video lesson based on the studied educational technologies using the hardware complex for video recording JalingaStudio (for pedagogical specialties)). For the implementation of a digital educational resource, there were used such information technologies as: CD technology; network, satellite television and cloud technologies; open educational resources (iTunes, YouTube); Web services (Prezi, VirtuLab, Writeabout); JalingaStudio hardware complex for video recording. Students develop a project during the semester and present it as a practice-oriented final work on the exam. This approach is seamlessly combined with a group (cooperative learning) approach to training. Thus, the project design activity as a specific form of creativity is an effective method of building an effective strategy for professional and personal development and self-development of a student.

The most effective are creative strategies of self-development at the modern stage of a digital society.

Metagaming

Students note that in the process of group virtual strategic games, the process of making the "best" decision is accelerated, the ability to manage virtual actions and communication in the virtual world is developed, coherence of collective actions is advanced, the image sensitivity of reality is being enriched (new language as a reflection of the virtual world), new value-semantic constructs appear, the tolerance of information stress increases, the digital "immunity" rises - a game adapts to new working conditions. Thus, the use and understanding of the game resource potential is important not only for a future representative of media professions, but also for a future teacher.

Content generation (individual and collective creativity, hybrid + IT) - develops image thinking, external interference, alignment to the collective mass perception of the "I" media text, searching and understanding popular "fashionable" presentation forms, emphasis on understanding the request of a mass audience.

Copying is an imitation, modeling successful images of self-realization, behavioral, communicative and other strategies. When copying (modeling), it is important to learn spontaneously, unconsciously, to master new technological skills. It is also important to try through the image of the ideal (significant) "other", to see the masterful style and understand someone else's success strategy. It works as a strategy of self-development in the transition to an independent level, that is creating own style, based on a different strategy, own secret of success.

Streaming – action under observation. A player passes a difficult "route" and an audience learns from his experience. It is a backward, mirror copying strategy. Here a master himself learns, perceiving feedback from students, and critically evaluating himself "on the third hand". A virtual, public demonstration of a skill and increased responsibility sharpen skills of the master.

Conclusion

In recent years, Russia has steadily entered the era of a digital society. Strategies for education and professional development of the future are directly related to the information environment. Digital results of professional activity are becoming more and more significant. Pedagogical strategies and strategies of self-development should be replenished with new, digital models. As one of the students of HSJMC (2019), wrote in her essay that due to digital technologies, the modern world is becoming faster, she has a constant fear to be late for "the train of modernity with all the new communications. Indeed, only the joint design of universal professional effective models will allow a modern teacher and a student to continuously develop, set and implement independent goals, manage their development, their lives in the digital world. Only then, education will make a confident step into the digital future and will have time to get on "the train of modernity".

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