Teachers’ Training for Prevention of Pupils’ Deviant Behaviour in ICT

Chernova Elena Vladimirovna
Power Engineering and Automated Systems Institute
NMSTU
Magnitogorsk, Russia
hellenachernova@mail.ru

Bobrova Inna Igorevna
Power Engineering and Automated Systems Institute
NMSTU
Magnitogorsk, Russia
friend_bi@mail.ru

Movchan Irina Nikolaevna
Power Engineering and Automated Systems Institute
NMSTU
Magnitogorsk, Russia
inmovchan@mail.ru

Zerkina Natalya Nikolaevna
History, Philology and Foreign Languages Institute
NMSTU
Magnitogorsk, Russia
agatik01@mail.ru

Trofimov Evgeny Gennad’evich
Power Engineering and Automated Systems Institute
NMSTU
Magnitogorsk, Russia
mgn1520@yandex.ru

Chusavitina Galina Nikolaevna
Power Engineering and Automated Systems Institute
NMSTU
Magnitogorsk, Russia
gala_m27@mail.ru

Abstract. Globalization of information processes, the widespread penetration of information technology, the mass use of network services and their availability, are the cause of a new problem - the information security of a person and society. Availability of immoral, illegal content; the use of technology to promote unlawful acts, incitement to racial and other hatred, involvement of the new adherents to various political, sectarian, anti-social doctrines and trends; general culture decrease is influenced by the specificity of virtual communication and imaginary permissiveness - these and many other phenomena often bring irreparable harm to both an adult mature personality and a young, developing and unripe psyche of a teenager. Computerization and information, in particular, the introduction of information and communication technologies in the educational process have created a new kind of school behavioral problems - deviant behaviour in the field of information and communication technologies. The article is devoted to teacher training aspects of the deviant behaviour prevention in the field of ICT. The work represents the model of teacher competence on the aforesaid problem, its structure includes: key areas, sections, elements, performance criteria, necessary knowledge. The present work clarifies the concepts of "deviant behaviour in the field of information and communication technologies", "prevention of deviant behaviour in the field of information and communication technologies", the typology of deviations of behaviour in the field of ICT along with the viewing the main phenomena. There determined the main propositions of methods on realization of the complex of pedagogical conditions conducive to the efficiency of students education at pedagogical specialties of high school to the prevention of deviant behaviour of pupils in information and communication technologies. Materials research can be used to improve existing curricula and training programs for teachers to be training.

Keywords: information technology, deviant behaviour, ICT, competence, competence approach, diagnosis, prevention, education, teacher, student, pupil.

I. INTRODUCTION.

Scientific progress, the development of information and communication technologies, their mass availability expanded greatly the possibilities of a man, and marked the beginning of a new evolutionary process - the formation of information society. For a full life in such a society, a modern man must be able to receive, store, process and use the information by means of information and communication technologies (ICT). However, the development process of informatization of all spheres of human activity, including education, causes a new problem - the information security of the person and the society. Obviously, the various types of information and communication technologies influence behaviour, the formation of moral standards, the psyche and the lives of future generations. Teachers, psychologists, sociologists specializing in the field of informatization of education, stress the importance of overcoming the negative impact of (mental, moral and physical health), which occurs when using information and communication technologies. In the field of information there observed many negative phenomena that require attention of teachers and parents, including: access to inappropriate content (pornography, hate propaganda, drugs, terrorism, offences, crime), hooliganism and criminal actions mediated by the use of information and...
communication technologies. For example, there is lots extensive easily accessible threatening and indecent information content in the Internet, including advocacy of violence, nationalism, fascism; it is available to get free recipes on drugs and explosives production; besides there proposed pornography (including children’s), implanted sectarian preaching, mystical and esoteric teachings and practices, magic, shamanism. Computer games of chance, games with elements of violence, cruelty, "runaway" in the virtual world are very popular among children’s and adolescents’ leisure time. Popular integral life parts of modern teenagers and young people are "virtual dialogues", online communities, online dating, and «cybersex". According to the testimony of researchers in this field, students’ uncontrolled access to global computer networks unwittingly contributes to further social stratification, as well as the growth of brutality and violence in the school environment. There is also an acute problem of information security it means to protect individuals from access to personal information resources, withdrawal from a real life into the virtual (replace a real life for a virtual one).

II ANALYSIS OF THE PROBLEM OF PREVENTION OF DEVIANT BEHAVIOR STUDENTS IN THE FIELD OF INFORMATION AND COMMUNICATION TECHNOLOGIES

The process of education informatization involves the utilization of information and communication technologies (ICT), methods and IT means to implement the ideas of developmental education and the intensification of all levels of the educational process, improving its quality and efficiency. Currently, the informatization of education refers to supplying the education area with the methodology and practice of development and optimal use of advanced automation technologies, focused on the implementation of psycho-pedagogical objectives of education [10]. The increasing use of ICT, the use of which is becoming the norm in all areas of human activity, involves a change of subject content at all levels of education, and the emergence of Internet technology has opened up access to any user to the world information space.

Community development has always been based on the development of human societies, the operation of which has always been based on a set of rules and regulations. "Right to set standards, the perpetrators have demonstrated deviations from this norm". [4] This behaviour is in violation of existing rules is called deviant. Deviant behaviour - is a system of actions, which are contrary to public legal and moral norms. It can be stated that in the modern world, the role of education in the implementation of effective early detection and prevention of the negative deviant behaviour within the younger generation in the information society and to inform students and parents about the possible negative impact of ICTs.

However, as our analysis shows, graduates of pedagogical specialties of high schools, school teachers (including IT teachers), teachers of additional education for children and adolescents are not sufficiently competent in the field of training the younger generation for life in the information society, slightly familiar with features of information security for the person (behaviour culture in the information environment; intensification of educational work in order to create intolerance to illegal actions in the field of information technology, prevention of computer crimes among young people and neutralization the negative impact of information threats on the schoolchildren psyche and others). Besides the teachers are not willing to use in their work methods to identify and prevent the emergence of deviant behaviour in the student information and communication environment. The ICT educational environment, the teacher, who should be prepared to identify emerging variations in the student behaviour in the ICT field, as well as to prevent such deviations. Thus, there comes the issue related to the pedagogical aspects of ensuring the prevention of students’ deviant behaviour in the activities mediated by the use of ICT. Consequently, the actual problem is the training of highly qualified teachers with a high level of competence in the field of prevention of deviant pupil’s behaviour of in information and communication technologies.

III TYPES OF DEVIANT BEHAVIOR OF PUPILS IN INFORMATION AND COMMUNICATION TECHNOLOGIES.

Under deviant behaviour in the field of ICT we mean a type of deviant behaviour of the individual (group of individuals), representing the system behaviour (or individual actions), mediated by using ICT (or directed at ICT) which causes damage (moral, physical, economic and other) to a community, organizations, individuals, or the person [6].

Deviant behaviour of ICT can be differentiated into: antisocial, delinquent (antisocial), addictive and deviant behaviour on the basis of super skills.

Antisocial behaviour in the field of ICT is the conduct contrary to public norms and principles that takes the form of immoral or illegal acts committed with the use of ICT [6]. Antisocial behaviour includes such things as the script-kidding, cybersex, trolling, flooding, flaming.

Delinquent (antisocial) behaviour in the field of ICT is deviant behaviour, which is a misdemeanor or a criminal act committed in ICT area, and entailing receiving benefits or the application of physical, psychological, informational harm to the victim. [6] Among the types of anti-social behaviour there should be noted carding, freaking, spamming, fishing cyber bulling.
Addictive behaviour in ICT is a form of deviant behaviour with the formation of the desire to escape from reality by means of constant attention fixed on certain activities mediated by ICT [6]. This is an Internet addiction of gaming.

Deviant behaviour on the basis of ICT super skills is expressed in such phenomena as hacking.

Modern information technologies, give a person the opportunity to meet lots of needs without leaving the house, at the same time lead to a de-socialization, which appears in the form of neglecting the society.

Activities for the prevention of deviant behaviour are expressed in the early detection, study, evaluation of the initial signs of deviant behaviour and their environment; estimations of negative trends in the person formation; educational and preventive effect. Prevention of deviant behaviour in ICT includes:

- diagnosis of deviant behaviour in the field of ICT, which will identify individual characteristics and potential of a student, establish particular features within groups, and thus manage the educational process scientifically;
- pedagogical prevention is aimed at the development of measures to prevent students’ deviant behaviour in ICT.

VI METHODOLOGY OF COMPETENCE FORMATION AT FUTURE TEACHERS IN THE FIELD OF PREVENTION THE PUPILS’ DEVIANT BEHAVIOUR IN INFORMATION AND COMMUNICATION TECHNOLOGIES

In order to solve the problem of future teacher training successfully within the activities on prevention the students’ deviant behaviour in the field of ICT, so, first of all it is necessary to be clear about the ultimate goals of this training. In general terms, effective operation in the field of information security in ICT-rich environment can be seen as a way to solve urgent problems in professional areas such as: orientation of purposeful activity; pedagogic prevention of negative influence of ICT. It means a certain level of competence of the future teacher in propaedeutic and prevention the information security in ICT-rich environment. Under consideration the competence of each selected field and define the structure of the knowledge.

Propaedeutic:

- Knowledge about the impact of ICT on the mental and emotional health: types, sources, methods, and especially information and psychological impacts of virtual reality; information on a variety of social institutions, political, religious and pseudo-religious organizations, informal youth groups (especially related to the use of ICTs).

- Knowledge about the negative impact of ICT on physical health: physical impacts on health when working on a PC, ergonomic and hygienic requirements for the organization of the safe operation of the computer;

- Knowledge of regulatory, legal, ethical, moral, legal norms work in the field of ICT: mechanisms governing ICT (state standards, laws, regulations, ethical norms), the rules of ethics and the right to information;

- Knowledge of the main types of information threats and mechanisms for information security (IS) infrastructure types of threats IB, modalities, mechanisms, methods and ways of preventing and neutralizing the negative impact of information threats to people, information and infrastructure.

Prevention:

- The creation of a negative public opinion toward deviant behaviour in the field of ICT: how to shape public opinion, methods of work with youth subculture, family, social group, individual.

- Information on the negative aspects of the impact of ICT: the negative aspects of the use of ICT; especially supply information on various characteristics of differentiation.

- Formation of students’ safety skills activities using ICT: methods of formation of the necessary skills, the basics of information security mechanisms to ensure the safe use of network resources (your browser options, filtering software, Family Filter, imitation Internet, etc...) And the time limit interaction with the computer (specialized programs).

- Formation of information outlook of the person: the basic tendencies of IT process, way of life in the information society, the problem of the negative impact of information on the mental, emotional and physical health of the individual.

- The formation of computer literacy: knowledge of ICT tools, their possibilities and limits of use for various tasks, knowledge and practical skills to work with a PC, Internet-literate.

Conclusion

The relevance of a future teacher training for prevention of pupils’ deviant behaviour in information and communication technologies due to a number of problems, which are caused by the formation process of an information society. Computerization and information, in particular, the introduction of information and communication technologies in the educational process have created a new kind of school behavioural problems - deviant behaviour in the field of information and communication technologies. Analysis of the psychological and pedagogical literature has shown that in modern science there is a fairly wide range of studies devoted to various aspects of the manifestations of such behaviour of students.
However, there is no holistic approach to the understanding of the characteristics of such behaviour, his ability to detect and prevent the forces of educational institutions, in particular teachers.

Thus, the scientific novelty of this work is to develop a competency model of the future teacher in the field of prevention of students' deviant behaviour in the field of ICT and its content. The theoretical significance of the work - refinement of the concepts of "deviant behaviour in the field of information and communication technologies", "prevention of deviant behaviour in the field of information and communication technologies." The practical significance is to develop scientific and methodological support of the process of preparing future teachers for the prevention of deviant behaviour of pupils in information and communication technologies.

We believe that the study did not cover all aspects of the identified problem. Further work could continue in the direction of studying the characteristics of various types of deviant behaviour in the field of ICT (antisocial, delinquent, addictive); determining the specifics of working with students with behavioural problems in the field of ICT; studies of the mechanisms of correction the deviant behaviour in the field of ICT; development of new methods of diagnosis and prevention of deviant behaviour in the field of ICT and related techniques.

Acknowledgements

The publication is made in the framework of the project "Preparation of teaching staff to prevent and counter the ideology of cyber extremism among young adults", supported by the Russian Humanitarian Science Foundation (project № 13-06-00156).

References:

[20.] 19.Chusavitina G.N., Chusavitin M.O. Analysis of Problems of Pedagogical Stuff Readiness for Preventing and Opposition to Cyber Extremism Ideology among Young Adults, Informational Security and Problems of Cyber Extremism Preventive Measures among Young Adults, Russia, 2013, pp153-161