

Psychological Features of Children in the Digital Age

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Abstract

This article describes the psychological patterns of preschool children, who actively use digital technologies. The child is considered in the context of culture subject, and digital technologies are its unchanging element. The tendencies of modern society, concerning digital technologies, are revealed in the work: the quantity of children, using mobile devices, grows every year; age range is decreased; preschoolers use mobile devices already connected to the Internet and, accordingly, have free access to the Internet. The study was carried out using such methods as the study of psychological and pedagogical literature, documents and results of activities of domestic and foreign scientists, comparison and analysis, oral interview, examination of preschool children. As a result, it was established, that active interaction with technology led to changes in the cognitive sphere, operative memory, attention, reaction rate, motor skills. At the same time, digital children are characterized by emotional coldness, because they live in a virtual world and are not taught of non-verbal contact. Thus, the intergenerational contact gets broken. The primary connection between people does not give the opportunity to achieve attachment and does not bring satisfaction. It is concluded, that digital technologies are the new cultural tool for children, which mediates the formation of higher mental functions.

Key words: Psychological features, Digital technologies, Preschool age, Digital children

INTRODUCTION

The modern world is characterized by variability, dynamism and rapid development of technology. The most progressive of them are digital technologies. The use of digital technologies is becoming a part of culture and the norm in the process of interaction with the outside world. The child, in turn, being a subject of culture [1], actively uses the opportunities of society, in which digital technologies are actively developing. In this context, it is important to study the psychological characteristics of children, using digital devices (smartphones, tablet PCs, etc.).

This problem has been actively studied since the early 2000s by foreign scientists (D. Barone, D. Brady, D.A. Christakis, L.

Green, D. Holloway, J. Kaufman, J. McPake, A. Plowman, G.L. Rückriem, R. Zevenbergen and others). They pay great attention to the external behavioral and emotional reactions of a person, interacting with technology (body position, gestures, body language, facial expressions, exclamations, etc.), that is, demonstrable phenomena [2].

In domestic psychology (A.E. Voiskunsky, E.P. Belinskaya, E.S. Zotova, G.G. Pocheptsov, E. Rasskazova, O. V. Rubtsova, G. V. Soldatova, O. V. Smyslova, N.S. Ulanova and others), the influence of digital technologies on the development of higher mental functions (attention, memory and speech) is studied; the features of children's interaction in the new information environment are investigated.

Statistically, the UK scientists, in conjunction with the National Society for the Prevention of Cruelty to Children (NSPCC, 2014), established [3], that one of three junior schoolchildren has a tablet PC. The number of children, who have a smartphone, also increases, and is 65%.

According to the works of G. Soldatova (2017) and the All-Russian study of the digital competence of adolescents

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and parents, the Foundation for Internet Development (2013), it was found, that 89% of adolescents use the Internet daily. 56% of teenagers use mobile devices (phones, smartphones, tablet PCs) to enter the network and as a result feel more independent and sociable 65% of respondents [4].

Practically, there is no research on the use of digital technologies by pre-school children. However, in recent years, the number of pre-school children, using the mobile devices is also increasing. This is proved by our research. We conducted a survey (2017), in which preschool children (5-6 years old) took part. It was established, that 38% of preschool children had mobile phone free available and 15% of them used a tablet PC.

The trends of modern society, related to the digital technologies, are as follows: every year the number of children grows, and the age range in the use of mobile devices decreases; preschoolers use mobile devices already connected to the Internet and, accordingly, have free access to the Internet [5].

Thus, digital technologies are becoming a life environment for the children. There is a new social situation of development [6]. These children communicate, engage in creativity, play, socialize, get involved in activities, grow in a different manner. In adulthood, they can be more successful, than the generation of digital immigrants (people, born before the digital age), they have developed visual attention and mental processing. However, they have difficulties in communication, they adapt in society for a longer time. Such children are called “digital children” or “digital native” [7].

The formation of digital children falls to preschool age - this is the period of rapid growth and development of the child, the period of mastering the social space of human relations through communication with close adults, and through playing and real relationships with peers. B. Blum found, that 80% of the child’s mental abilities are formed in pre-school childhood. 20% of them the child acquires up to 1 year, another 30% of abilities - up to 4 years and 30% - from 4 to 8 years [8].

In addition, children of this age are characterized by sensitivity to external influences. Exogenous factors (external environmental conditions) have a great influence on them. Increasing of time, spent with digital devices, the lack of “yard culture”, where children learn the skills of interaction with adults and peers, leads to a change in the behavior of the child and the transformation of the relationship with parents and peers. New psychological patterns arise, such as a person’s inability to foresee the

consequences of his actions, to show flexibility and to transfer well-developed behavioral mechanisms to a new situation, to feel responsible for his actions. Manifestations of such behavior are the result of negligence, moral immaturity, indifference, lack of interest.

We adhere to the cultural-historical approach of L.S. Vygotsky to the description of the mechanism of communication formation between the child and digital technologies. The child “. gets hold of himself as one of the nature forces, from the outside - through the use of special cultural techniques of signs” [9]. The sign acts as a mental tool, which unlike the tools of labor, changes not the physical world, but the awareness of the person, operating by it [10].

Digital devices act as a tool, used for transferring the information (sending text message), or a sign, mediating various mental functions and processes (participation in a computer game, etc.) [11]. The mental development and perception of the world are changed.

METHODS

The study was carried out using theoretical and empirical methods. At the initial stage, information was collected; the psychological and pedagogical literature, documents and results of activities of domestic and foreign scientists on the changes, occurring in the cognitive sphere of preschool children, when using mobile devices, were studied. The laws of the studied phenomena were established and formulated.

At the next stage, the oral interview of parents was carried out in order to establish objectively, which of them uses mobile devices (a sample of 50 people). Further, the communicative development of children in the group was monitored, in order to determine the features of interpersonal relationships between them, using the methodology “Monitoring the interpersonal relations of preschool children” [12]. Observed indicators of children’s behavior were the following: initiativity, sensitivity and the prevailing emotional background. The protocol for each test person was created, where the presence of these indicators and the degree of their manifestation were recorded.

RESULTS

In the process of survey, conducted to find out the statistical situation, it has been discovered, that 38% of preschool children have a mobile phone freely available, and 15% use a tablet PC, 53% of children have direct contact

with digital technologies, and this figure is steadily growing. The time, spent by a child in the digital world, ranges from 30 minutes - 20% of children, and up to 1 hour and more during the day - 60% of children.

The results of the observation showed the following: digital children often tried to take the initiative, but they were insecure. These children gladly responded to the initiative of their peers, actively picking up their ideas and actions. At the same time, there was a neutral-business emotional background. These data suggest, that digital children become so because they are often bored, uninteresting in real life. Perhaps parents are not always interested in interacting with them - they are lazy, constantly busy and can not realize themselves as the parents [13]. As a result, children find entertainment in the form of a mobile device, that does not require specific efforts.

DISCUSSIONS

Focusing on mobile devices, digital children receive fewer sensory signals from the outside world. The sensation of the world becomes less sensual. Perception of smells, sounds of reality is dulled. The child may be afraid of touching. This leads to difficulties in the perception of one's own body, its capabilities, difficulties in perceiving oneself as a separate physical entity, that is important for the formation of identity. In addition, people's perception and evaluation is often based on non-verbal information. The child does not learn to read these signals, if he is on the Internet all the time. In this regard, the researchers note a decline in the ability to compassion and empathy [14].

Frequent and systematic fascination with digital technologies leads to changes not only in interpersonal, but also in other spheres.

Changes, occurring in the cognitive sphere are characterized by a decrease in the memory function and the formation of new qualities: memory becomes transactional [15], that is, not the information itself is memorized, but the way to get to it. Frequent contact with mobile devices leads to a decrease in concentration. Preschool children suffer from information overload, it manifests on the physical level and, as a consequence, the state of health worsens.

The use of digital technologies by children in preschool age leads to violations of their motor abilities [16]. Digital children 3-7 year-old spend many hours playing with a tablet PC or smartphone, this affects the development of finger devolution and memory.

Thinking becomes clipping. The child begins to perceive the world through short bright images and messages. The

surrounding world appears before a child as a kaleidoscope of disparate facts and images, he has a need to receive new portions of information all the time, but he does not penetrate into its essence, language behavior becomes fumbling [17]. The child quickly moves from one topic to another, quickly forgets what he has seen and heard [18]. At the same time, the clipping thinking develops the rate of reaction and the ability to solve several problems simultaneously.

CONCLUSIONS

Thus, digital technologies are the important source of the formation of cultural environment of the child [19]. Active interaction with technology, not only negatively affects him, but develops the cognitive sphere of children, his operative memory, attention, reaction rate, motor skills. At the same time, digital children are characterized by emotional coldness, as they live in a virtual world, and are not taught of non-verbal contact [20]. The intergenerational contact gets broken. The primary connection between people does not give the opportunity to achieve attachment and does not bring satisfaction. Digital technologies are the new cultural tool for children, which mediates the formation of higher mental functions.

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