

Online Interaction Skills: The Essence and Ways of its Formation in Junior Schoolchildren

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Abstract—The article reveals the essence of the concept of ‘online interaction skills’ as a complex new formation of junior schoolchildren’s personality, which includes the ability to carry out online activities safely and ethically. Its main components are defined: motivational, content, procedural and control. The importance of developing students’ values, knowledge, practical skills and self-esteem in the field of ethical and safe behaviour on the Internet is emphasised. Effective ways of forming these skills in primary school settings are outlined, including the use of flash mobs, didactic games, work with video content and thematic stories. Particular attention is paid to the potential of Ukrainian educational online resources (Dignity Online, Child Safety on the Internet, All-Ukrainian School Online, Diia. Education, etc.) that promote the development of digital ethics and safe interaction skills among younger students.

Keywords—online interaction skills, safe online behaviour, netiquette skills, structure of online interaction skills, Ukrainian educational online resources, primary school students, primary school

I. INTRODUCTION

Modern children are actively immersed in the digital environment from an early age, often without realising its risks. Lack of appropriate knowledge and skills can lead to cyberbullying, online fraud, exposure to harmful content or unacceptable behaviour. Therefore, it is extremely important to teach younger students how to interact online, as this not only helps to protect the child’s psychological and physical well-being, but also to raise a responsible digital personality who respects others and acts ethically. This is also in line with the goal of the New Ukrainian School, which emphasises the development of key competencies - critical thinking, communication, self-regulation - and helps prevent the formation of undesirable digital habits [1].

According to the State Standard of Primary Education (2018), primary school children need to develop information and communication competence, which is understood as ‘mastering the basics of digital literacy for development and communication, the ability to use information and communication competence tools safely and ethically in learning and other life situations’ [2]. Taking into account the content of the definition, we can state that it is necessary to promote the development of children aged 6-10 years in the structure of the defined key competence of safe and ethical behaviour on the Internet.

Thus, the development of online interaction skills at primary school age is not only a pedagogical task, but also a socially important step towards the safe and conscious participation of primary school students in the modern digital world. Therefore, the above justifies the relevance of the research topic.

The purpose of the article is to determine the essence, structure and ways of forming online interaction skills in primary school students, as well as to explore the potential of Ukrainian online educational resources for the development of this new formation in primary school students.

II. THE ESSENCE AND STRUCTURE OF PRIMARY SCHOOL STUDENTS’ ONLINE INTERACTION SKILLS

We meaningfully combine the ability to behave safely and ethically on the Internet into a group of online interaction skills. This is due to the fact that, in general, user behaviour on the Internet is based on their interaction with other people on the global network or with a digital device or resource itself, and it can be ethical/unethical and safe/unsafe.

Safe online behaviour is the ability to carry out online activities without harm to oneself, other people and financial situation, based on knowledge and experience [3]. Younger students should learn to recognise and avoid threats related to physical and mental health (advertising of bad habits, destructive content), personal safety (contacts with strangers, use of foul language), safety of others (insults, complaints, fakes) and personal data leakage (disclosure of information, viruses) [4, p. 88-89].

The ability to behave ethically on the Internet (also called netiquette skills) is the ability of a primary school student to adhere to ethical standards of behaviour on the Internet, covering both public (chats, blogs, social networks) and private (e-mail, messengers) communication [5]. Netiquette is a set of ‘rules of behaviour on the Internet’ [6, p. 22] that provide for compliance with ethical standards of online communication on a par with offline communication. The main components of netiquette for younger students include: respect for the time of others, literacy and compliance of writing with the norms of the network, politeness and tolerance, respect for privacy [6].

In carrying out any activity, including learning, it is important to take into account students’ attitudes to it, their value orientations, acquired and new knowledge, skills and

abilities that are the object of study, as well as ways of performing tasks at different levels of complexity. No less important are the ability to carry out self-checking, self-control, self-assessment of the results of their own activities, the ability to self-analysis, awareness of what has been achieved and making the necessary adjustments [7, p. 37]. In view of this, we believe that primary school students' ability to interact online as a complex formation reflects the structure of such activity and consists of four components:

- motivational, which includes the primary school student's goals and motives to behave ethically and safely on the global network;
- content, which includes a system of knowledge about online activities without harming oneself, other people and financial situation and about ethical norms of behaviour on the Internet;
- procedural, which covers specific actions and operations, the implementation of which actually allows for ethical and safe behaviour on the Internet;
- control, which includes the results achieved by a student of the first level school regarding ethical and safe time spent on the global network, their self-analysis, self-control, self-correction and self-assessment.

The formation of primary school pupils' ability to interact online is evidenced by their compliance with the following indicators: assignment of values of ethical and safe behaviour on the Internet, knowledge of the norms of ethical and safe behaviour on the Internet, mastery of ethical and safe interaction on the Internet, self-assessment of ethical and safe actions during online interaction.

Feeling the values of ethical and safe behaviour on the Internet, a primary school student understands the need to follow the rules of netiquette and safe behaviour on the global network; is aware of the values of time, literacy, politeness, respect, constructive communication, privacy, safety (personal and others), life, health, etc. These values are the guidelines for primary school children's activities both online and offline.

With knowledge of ethical and safe online behaviour, a student in grades 1-4 is aware of the rules that govern ethical and safe online relationships between people. They know how to communicate appropriately on the global network, what language clichés exist and how to use them, how to be polite, non-confrontational and respectful of privacy, what violations of the requirements for virtual communication exist and what should be done to avoid them; they have information about threats and risks on the Internet, how to avoid them and overcome negative online influences on their own health, personal safety, the safety of others and the leakage of personal information [9].

By interacting ethically and safely on the Internet, a pupil of the general secondary school adheres to the standards of user behaviour on the global network: ethical (disseminates specific and brief information within a single message; does not send text, photo, video and audio spam; does not share files that are too large in size and take a long time to read; writes competently, politely and in accordance with the requirements of a particular social network; avoids conflicts when communicating with other Internet users) and safe

interaction (implements counteraction to risks on the Internet: avoids negative influences of information about different forms of addictions and advertising of bad habits, does not use profanity, reduces contacts with dangerous people, does not offend other Internet users, does not disclose personal or confidential data, avoids threats of computer viruses) [10].

When self-assessing the ethics and safety of actions during online interaction, a primary school student identifies the strengths and weaknesses of his/her own actions in terms of compliance with the rules of netiquette: how well he/she knows the norms of virtual communication when using public and private means of communication, whether he/she writes competently and in accordance with the requirements of the network, whether he/she observes the necessary norms of politeness and privacy, etc. He or she is aware of the sufficiency or insufficiency of personal abilities of safe behaviour in the global network to avoid harm to their own health and safety, the health and safety of others and their practical implementation [11].

Therefore, by ensuring the implementation of all components and meeting all indicators, we can conclude that primary school students have the ability to interact online.

III. WAYS TO DEVELOP ONLINE COMMUNICATION SKILLS IN PRIMARY SCHOOL STUDENTS

Ways to develop junior pupils' online interaction skills should reflect the need to take into account the content of the phenomenon, its components and indicators of manifestation. Therefore, in accordance with this, it is necessary to present structural steps to its formation (fig. 1).

In order to form positive motivation and learn the values of ethical and safe behaviour on the Internet, it is advisable to hold flash mobs - short mass events during which participants perform an agreed task [12]. Such activities can include learning thematic poetry texts with movements and discussing them with a focus on key online rules. The poems can reflect the inadmissibility of disclosing private information, the dangers of openly publishing personal data, the threats associated with malicious files, and the need to verify the accuracy of information before it is shared.

It is advisable to form primary school students' knowledge of ethical and safe behaviour on the Internet both within the framework of educational and cognitive activities and through the creation of an appropriate educational and developmental environment. Working with video materials and stories is effective, provided that questions and tasks for viewing or discussion are formulated in advance. For example, the video 'Rules of Communication on Social Media' [13] introduces students to the rules of communication on social media, emphasises the importance of showing respect for interlocutors, observing the rules of politeness, ethical discussion and responsible attitude to digital interaction. The video "Network etiquette. Communication in the network. Netiquette" [14] presents the basic principles of netiquette: responsibility for the digital image, respect for the privacy of other users, the expediency of business and competent communication, as well as the peculiarities of etiquette in online communication.

Working with author's stories and comics allows us to model typical situations and project safe behaviour in the face of online challenges, such as the following stories:

- ‘Captured by Online Entertainment’ - about a boy who became addicted to computer games and started spending money on them;
- ‘Beware of Viruses’ - about a girl who infected her computer with a virus by following dangerous links;
- ‘Dangerous Game’ - about a child following dangerous instructions from an online acquaintance;
- ‘Dating on the Internet’ - about a boy who agreed to meet a stranger who posed as a peer on a social network [3, pp. 340-343].

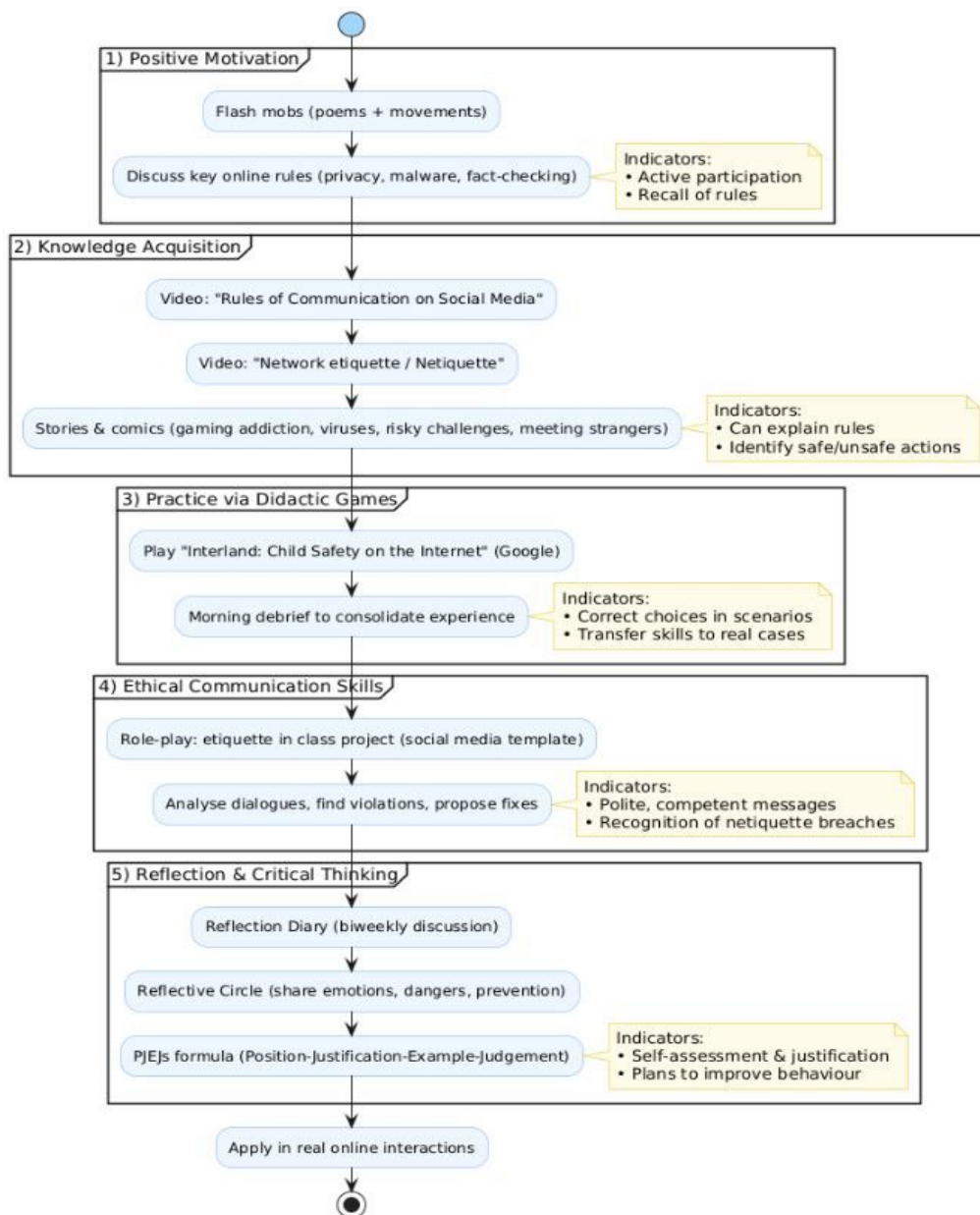


Fig. 1. Development of Junior Pupils' Online Interaction Skills

To stimulate ethical and safe behaviour on the Internet among primary school students, it is advisable to use didactic games and specially designed exercises within the learning activities and educational environment of GSEIs.

One of the recommended online activities is the interactive game ‘Interland: Child Safety on the Internet’ created by Google [15]. The game immerses the user in a fictional world where they complete didactic tasks related to such aspects of digital safety as: developing a culture of polite online communication; the ability to recognise fake information; critical attitude to data dissemination; and protection of personal information. Students are encouraged to play the game at home on their smartphones, after which a discussion

is held during the morning class meeting to analyse the knowledge and experience gained [15].

It is also advisable to use exercises that promote the development of ethical online communication skills. Their content may include modelling online communication with a classmate in compliance with the rules of etiquette regarding a school project using a social media template or analysing a ready-made dialogue about behaviour, identifying violations of etiquette and discussing ways to correct them.

To develop the ability of younger students to self-assess the ethics and safety of their own actions during online interaction, it is advisable to use the method of exercises as part of the educational process of primary school.

For example:

- the Reflection Diary activity [16] involves regular filling in of a diary form on days when students have interacted with the Internet. Once every two weeks, a joint discussion of the entries should be organised during a morning class meeting. Questions for discussion include: the nature of the online interaction, observance or violation of etiquette and safety rules, emotional reactions, ways to improve their own online behaviour;
- the Reflective Circle exercise [17] involves an oral discussion of experiences in the online environment with classmates. The teacher asks questions about dangerous situations, emotions, causes, actions of students and possible ways to avoid threats. This form of work is appropriate for morning meetings or lessons of the course 'I Explore the World';
- the exercise 'PJEJs formula' (Position, Justification, Example, Judgement) [17] is an effective tool for developing critical thinking. For example, when answering the question 'Is your behaviour on the Internet ethical?', students structure their answer according to the formula: P: 'I believe that...'; J: 'Because...'; E: 'I can prove this by the example of...'; J: 'In view of this, I conclude that...' [17].

IV. POTENTIAL OF UKRAINIAN ONLINE EDUCATIONAL RESOURCES FOR DEVELOPING ONLINE COMMUNICATION SKILLS IN YOUNGER STUDENTS

Among the Ukrainian online resources that have significant potential for developing children's ability to behave safely on the Internet is the Dignity Online platform [18]. It has been operating since 2018 to protect Ukrainian children from online sexual abuse and was previously known as #stop_sexting. The platform contains a lot of information materials on the topic of safe behaviour on the global network. Dignity Online informs visitors about the risks facing younger students and other Internet users in the following categories: sexting, online grooming, sextortion, harmful content, time on the Internet, cyberbullying, pornographic content, online quests, extremism, life risks, disinformation, online reputation, the war in Ukraine and online dangers, and legal liability for online crimes. Among the materials offered are guides for parents on registering and maintaining social networks, establishing parental control, identifying fakes, threats to online games, etc. Manuals, reference books and booklets have also been developed. For primary school children, games and exercises are offered to develop the ability to behave safely on the Internet, including: the game 'Save Google', the question and answer session "Internet", the exercise 'Billboard Test', the game 'Safe Internet for Kids', the game 'True or False', the exercise 'Collage 'Safe Internet' [18].

Another platform whose materials contribute to the development of safe online behaviour among younger students is the Children's Internet Safety, which aims to provide children, parents and teachers with useful tools to improve online safety [19]. The resource includes a guide to digital citizenship and safety, which includes the sections: 'Online prudence: share with prudence', 'Online vigilance: don't be fooled', 'Online protection: keep your secrets safe', 'Online friendliness: it's cool to be friendly', 'Be brave online:

in doubt? ask!'. The website also contains a media literacy guide for teenagers, as well as the content of family commitments on online etiquette and safety. The game Interland: Children's Safety on the Internet is also available on this resource. And to increase the motivation of younger students to learn about the rules of ethical and safe behaviour on the Internet, this platform has origami templates from the Interland game, which allows them to bring the game's characters to life [19].

Ukraine also has a platform for distance and blended learning for students and methodological support for teachers, All-Ukrainian School Online, which was created and gained popularity since the beginning of the Covid-19 quarantine [20]. Students could use the platform both to study during the quarantine and to study topics missed at school due to illness or other circumstances. For teachers, the website provides recommendations on how to organise blended and distance learning using the platform's materials. The resource contains teaching materials for teachers on the topic of infomedia literacy. 'Study and Distinguish: Infomedia Literacy' is an educational project that helps teach Ukrainian educators to critically perceive information and recognise fakes. It is being implemented by IREX with the support of the US and UK embassies in cooperation with the Ministry of Education and Science and the Academy of Ukrainian Press. The website also offers free downloadable methodological materials on distance and blended learning [20].

In Ukraine, there is Diia. Education, a national educational platform for up-to-date knowledge and skills [21]. Educational series on Internet safety and netiquette are available for users of the website ('Children's Internet Safety for Parents', "Cybernanny", 'Media Literacy in a Pandemic', 'Basic Digital Skills', "Beware! Cyber Fraudsters, How to Protect Yourself from Fakes and Disinformation, etc.), guides ('Online Safety for Parents', 'Cyber Hygiene for Children: Rules of Behaviour on the Internet', "Online Content about War: What Children See and How to Talk About It, Practical Tips to Make Online Learning Effective, etc.), simulations ('Online Safety for Educators,' 'Personal Cyber Hygiene,' 'Online Safety for Teenagers,' etc.), bytes "How to Explain the Basic Rules of Online Safety? Digital hygiene: basic safety rules for children on the Internet" [21].

The website of the Institute for the Modernisation of the Content of Education of Ukraine contains materials and resources that help younger students develop their online communication skills directly or indirectly by increasing the level of knowledge in this area among adults around the student [22]. For example, there is a manual "Click-Clack Clan. Raising Children in the Digital Age", which includes lesson plans for primary school students on the basic principles of online etiquette and safety. The materials are divided into five thematic blocks: caution, mindfulness, protection, friendliness and confidence in the digital environment. The manual provides materials that help parents in the digital age to fulfil six important roles: to be a protector against online dangers; an example of conscious use of technology; a seeker of truth, teaching critical thinking; a mentor of values, forming a moral foundation; a referee, setting boundaries and rules; a visionary, preparing a child for the future, supporting his or her development in the modern world [23].

The institute's platform also contains a manual for teachers 'The Web We Want' and methodological recommendations

for its use in the educational process of general secondary education institutions, a guide to social and pedagogical support for the formation of safe behaviour of adolescents on the Internet, a manual on combating hate speech “Bookmarks”, an online course ‘Human Rights in the Educational Space’, and others [23].

Given this, Ukrainian online educational resources, in cooperation with foreign partners, have significant potential for developing online communication skills in primary school students.

V. CONCLUSIONS

Thus, the ability to interact online is a set of skills of primary school students to behave safely and ethically on the Internet. It includes the ability of an individual to carry out online activities without harming themselves, other people or their financial situation, and to adhere to ethical standards of behaviour on the Internet in public and private communication, based on knowledge and experience. As a complex new formation, the ability to interact online consists of motivational, content, procedural and control components. Its formation in a primary school student is evidenced by the existing values of ethical and safe behaviour on the Internet, knowledge of the norms of ethical and safe behaviour on the Internet, mastery of ethical and safe interaction on the Internet, self-assessment of ethical and safe actions during online interaction.

The ways to develop online interaction skills in primary school children are to use special forms, methods, techniques and teaching aids in the educational process of primary school. Thus, flash mobs, work with video materials and stories, didactic games and specially designed exercises are useful for this purpose. Ukrainian online educational resources also have significant potential for developing younger students' skills in netiquette and safe online behaviour: the Dignity Online, Children's Safety on the Internet, All-Ukrainian School Online, Diia. Education, the website of the Institute for the Modernisation of Education Content of Ukraine, which contains thematically useful materials in the form of recommended exercises, manuals, guides, educational series, games, simulations, bytes, etc. The use of the proposed resources allows for the qualitative development of younger students' online interaction skills.

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