



From Passive Recipients to Active Media-Creators: Small Children and ICT in the Light of Own Studies

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Small children show a lot of media activity: they are perfectly capable of handling new technologies as they have been using them since the first years of their life. The types of activities that they manifest depend on the family home and the behaviour they observe in their parents. With their support and with the provision of positive patterns, children may become not only passive media users, but also active media content creators who, in the course of time, will have a real impact on the reality in which they are growing up. In the paper, the author presents selected results of own research which verifies the role that the media play in the life of a child in an early school age. The author tries to determine if children only display passive and imitative media activities or whether there is also active media creation.

KEY WORDS: ICT, media, media literacy, coding, media content creator, children in early school age

Introduction

Mediatization of the contemporary world is a fact; it brings a lot of novelties not only in the sphere of communication (e.g. change of the type and the quality of human interactions), information and

education, but also in the sphere of our daily activities. The media that we choose depend on the level of their attraction for us, the degree of satisfaction of needs in the off-line world and the impact of the immediate environment. The situation is slightly different in the case of small children and activities undertaken by them: in this case, the significance of the family environment is greater, along with personal models delivered by parents and other adult persons (e.g. grandparents) from the immediate surroundings. A child learns how to use the media from them and they determine when and in which mode the child is going to use the ICT. In the initial period of the child's life, the parents (and in subsequent years also the school and the teachers) are liable for the broadly understood media education of the child, whereas the mode in which they use the media is reflected in the media competence of their children, along with media activities undertaken by them¹. Parents' high media competence usually translates to the same level of competence in children: through their behaviour, they not only initiate, but also facilitate learning the correct use of the ICT, offering them a positive example².

A small child is not capable of handling the reception of media communications: he/ she needs the support of adults in striving to become their conscious and critical recipient, so that the media become a useful tool for the child, which will be used in line with the pre-determined purposes. Only in effect of such activities can the child become an active media-creator - the creator of media content and not only a passive consumer of communications delivered by other users of new technologies. A media-active person possesses extensive competence that allows for full participation in the digital reality: such person consciously uses the media and is capable of making a critical evaluation of the media, is familiar with the mechanisms of media impact, chooses valuable communications, verifies their origin, inde-

¹ J. Juszczyk-Rygałło, *Wczesnoszkolna edukacja medialna jako wprowadzenie do edukacji całościowej*, Prace Naukowe Akademii im. Jana Długosza w Częstochowie. Pedagogika 2015, vol. XXIV, p. 90.

² J. Marsch et al., *Digital Beginnings: Young Children's Use of Popular Culture, Media and New Technology*, Sheffield, 2015, p. 12.

pendently creates materials that are subsequently posted, e.g., on the network for common use or are used for own needs (e.g. work, entertainment), is familiar with and knows how to use the available tools necessary for performing a given activity, is able to work in a group using new technologies. In the modern times, persons actively using the media in the broadly-understood process of creation (providers of media content: media-creators) are perceived as possessing the highest media competence and desired at the labour market.

Media activity of children in early school age seemed a sufficiently interesting subject matter to the author of this paper; it led to a decision to check whether such activity existed in this period of children's life and the nature that it acquired during the child's leisure time, in his/ her immediate family environment. The major results from the study are presented below.

Relation Between Child and Media

Early childhood is more and more related to the new media - in particular screen-type media (including, e.g., smartphones, tablets and computers with Internet access) are gaining popularity³. According to the most recent reports, children are the most frequent Internet users. UNICEF notes that 1 out of 3 Internet users is a child⁴, whereas the age of media initiation is significantly lowered. According to Batorski, as many as 21% of children use the Internet already at the age of 3; at the age of 4, the percentage spikes to 25%, whereas among first graders it reaches almost 70%. A definite majority of children who start school education are already familiar with the new technologies: being careful observers, they grow watching their parents and siblings use the media⁵. Therefore, it seems justified to consider the types of media

³ J. Juszczyk-Rygałło, *Wczesnoszkolna edukacja medialna jako wprowadzenie do edukacji całościowej*, p. 94.

⁴ Unicef, *The State of the World's Children 2017: Children in a Digital World*, https://www.unicef.org/publications/index_101992.html [access: 9.06.2018].

⁵ D. Batorski, *Technologie i media w domach i życiu Polaków*, [in:] *Diagnoza społeczna 2015: Warunki i jakość życia Polaków*, ed. J. Czapiński, T. Panek, Rada Monitoringu Społecznego, Warsaw 2015, pp. 373-395.

activities that children in early school age are engaged in. Which media do they use in their leisure time and what is the quality of such contact? Is it only passive and imitative or are children also the creators of media content? Such questions seemed sufficiently important for the author of the paper to make the subject matter of the study the presence of media in the life of a child in early school age. Verification of the type and the scope of media activities undertaken by the children was particularly interesting.

The studies carried out by the author – the results of which are only partially presented in this paper – had a diagnostic nature and constituted pilot studies. Their purpose was standardisation of the pre-determined research procedure, including the research tool, and they were aimed at determining a given state of affairs, without the intention of delving into the existing causal dependencies among them⁶. A diagnostic survey was used in the study along with the on-line questionnaire technique. The questionnaire contained 30 questions which had a closed form with categories to choose from, a scale, rankings and open elements. Persons participating in the study were parents of children in early school age (grades 1–3 of primary school). 192 persons took part in the survey, including as many as 185 women and only 7 men; the majority of them were residents of large cities (75%), above 30 years of age (70%) and had two or more children (69%). In all of the respondents' homes, there was at least one television set with access to satellite television and computer with Internet access (as many as 40% of households had two or more computers). All the respondents had telephones with Internet access, as many as 60% of parents declared that their children also had their own smartphones. This type of access to new technology translates to media skills of children – as shown by studies, over one-third of children can already use touch screens, smartphones or tablets before turning one⁷. The age of children's

⁶ M. Łobocki, *Wprowadzenie do metodologii badań pedagogicznych*, Oficyna Wydawnicza Impuls, Kraków 2004, p. 67.

⁷ cf. H. Kabali et al., *First Exposure and Use of Mobile Media in Young Children*, Pediatric Academic Societies' Annual Meeting, 25–28.04.2015, San Diego, Abstract:

media initiation is lowered year by year: in 2011, the percentage of one-year old children using the media was on the level of 10% only. Similarly, the scale of the diagnosed phenomenon grows in other age groups; with respect to children aged 5–8, it reaches a very high threshold of 83% of media users⁸. Without doubt, such state of affairs results from the general availability of new information and communication technologies, significant reduction in the cost of their production and purchase and displacement of the traditional media (the co-called old, analogue) by the multimedia, known as the new media. The material status of families plays a significant role in the availability of the media; however, it is not tantamount to their intense use - the higher the education of parents and their media awareness, the more careful the use of media in such families is⁹.

As many as 95% of children have intense contact with the media even before they start to attend primary school and this percentage is continually growing¹⁰. According to the studies performed by the author, all children (irrespective of the education of their parents and place of residence) had daily contact with the media: television (90% of respondents), tablet (40%), computer with Internet access

http://www.abstracts2view.com/pas/view.php?nu=PAS15L1_1165.3; 2015; C. Kemp, *Babies as young as 6 months using mobile media: Survey shows most 2-year-olds using mobile devices, with some spending more than an hour a day on screens*, AAP News, <https://www.aap.org/en-us/about-the-aap/aap-press-room/pages/Babies-as-Young-as-6-Months-Using-Mobile-Media.aspx> [access: 10.08.2018].

⁸ cf. A Common Sense Media Research Study, *Zero to eight. Children's Media Use in America* in 2011, 2013, <https://www.common sense media.org/research/zero-to-eight-childrens-media-use-in-america-2013> [access: 10.08.2018]; D. Batorski, *Technologie i media w domach i życiu Polaków*, [in:] *Diagnoza społeczna 2015: Warunki i jakość życia Polaków*, ed. J. Czapiński, T. Panek, Rada Monitoringu Społecznego, Warsaw 2015, pp. 373–395.

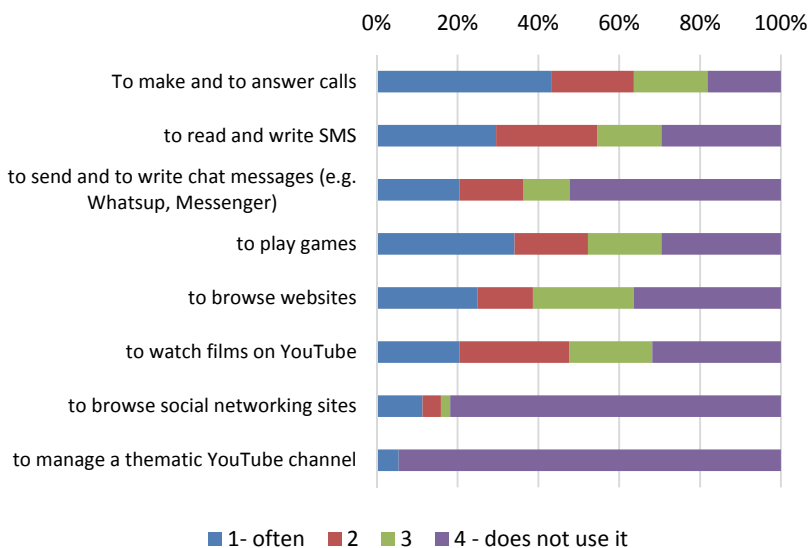
⁹ D. Batorski, *Dzieci z sieci – dostęp i korzystanie z internetu przez dzieci w wieku przedszkolnym*, [in:] *Małe dzieci w świecie technologii informacyjno-komunikacyjnych. Pomędzy utopijnymi szansami a przesadzonymi zagrożeniami*, ed. J. Pyżalski, Wydawnictwo "Eter", Łódź 2017, p. 87.

¹⁰ D. Batorski, *Technologie i media w domach i życiu Polaków*, [in:] *Diagnoza społeczna 2015: Warunki i jakość życia Polaków*, ed. J. Czapiński, T. Panek, Rada Monitoringu Społecznego, Warsaw 2015, pp. 373–395.

(60%) or mobile telephone (69%) - own or belonging to their parents. The frequency of having and using the mobile phone - a smartphone - increases together with the child's age - a clear growth is recorded in the third grade, after the child attends the First Holy Communion¹¹. Children use smartphones most frequently to make and to answer calls, to play games and to browse the Internet; only a slight percentage of children use telephones to browse social networking sites or perform other activities, e.g. manage their own thematic YouTube channel.

Diagram No. 1. Use of smartphones by children

For what purpose does your child use telephone?



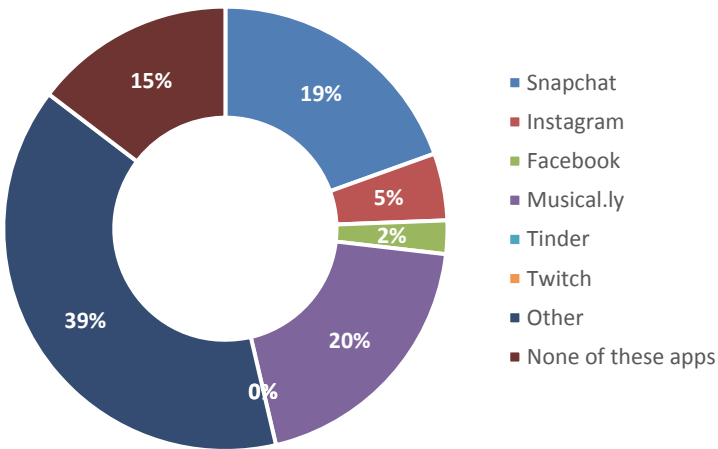
Source: results of own studies

¹¹ D. Batorski, *Dzieci z sieci – dostęp i korzystanie z internetu przez dzieci w wieku przedszkolnym*, [in:] *Małe dzieci w świecie technologii informacyjno-komunikacyjnych. Pomiędzy utopijnymi szansami a przesadzonymi zagrożeniami*, ed. J. Pyżalski, Wydawnictwo "Eter", Łódź 2017, p. 80.

If a child has a telephone, popular applications are often installed on it, such as: Snapchat, Instagram or Musical.ly (nowadays TikTok). A very small percentage of children have Facebook accounts, which is a good thing due to the fact that Facebook is formally allowed as of 13 years of age. This may testify to increasing media awareness of parents who do not allow their children to use this popular social site too early. Growing awareness of parents is also recorded with respect to the time that children devote to the media. As many as 60% of parents declare that they control the amount of time that their children spend using the individual media. However, 19% concede that they do not pay attention to it or agree to bend the rules and give in to the child, extending the stipulated time of using the media (21%).

Diagram No. 2. Apps installed on the child’s telephone

Does your child have any of the apps listed below installed on the phone



Source: results of own studies

Among children who had the popular application called Musical.ly, as many as 65% actively created their own videos which they shared with other users. The others were passive observers. Their case was similar with Snapchat and Instagram – they are willingly used by children to take photos (80%), record short films (45%) or make the so-called Instastories (20%), which are subsequently posted on sites and evaluated or commented on by other Internet users. However, these are not the products that tackle any valuable subjects – most often, they show the daily life of children, activities undertaken by them, hobbies and interests, their immediate surroundings, favourite items, animals, accounts of films viewed or songs listened to. Nevertheless, children willingly use these apps, not only to record their own materials, but also to view the content made available by other users.

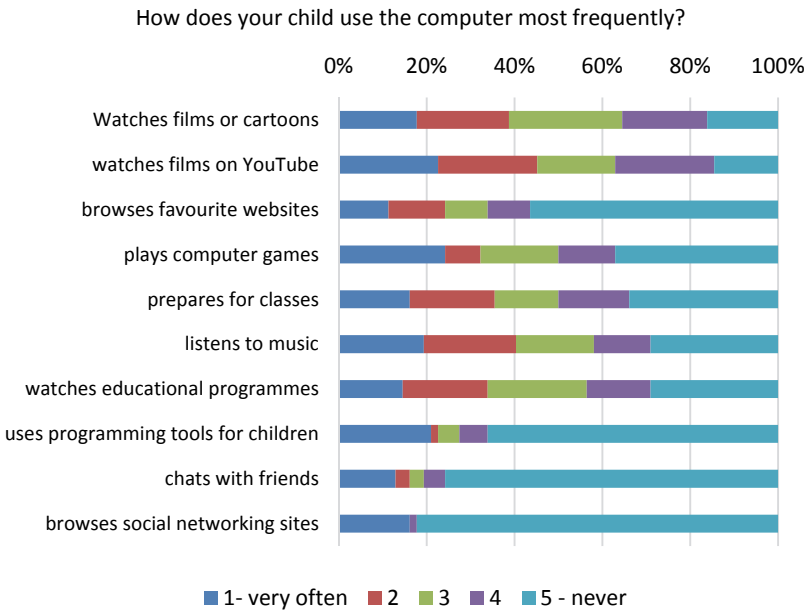
Television, which had been popular until recently, is losing its attraction more and more, becoming a medium that accompanies other activities performed by the child (like the radio in the past). This may result from absence of its interactivity – this is a medium with a typically passive character, which is unattractive for children who are accustomed to responsive media. According to parents' declarations, whilst watching television (usually cartoons or animated films) as many as 60% of children perform other activities at the same time, e.g. play with traditional toys (35%), check their phone (10%), do something on the computer (6%), prepare for school (4%) or eat a meal (5%). A tablet is gaining popularity among children: the percentage of children using it grows year by year; more children use tablets than computers with Internet access¹². Its attractiveness is definitely determined by easy, almost intuitive use, interface often adjusted to the child's age, high mobility of the device (it is easy to carry it to a place convenient for the child, without the necessity of connecting to power supply) and relatively safe use

¹² D. Batorski, *Technologie i media w domach i życiu Polaków*, [in:] *Diagnoza społeczna 2015: Warunki i jakość życia Polaków*, ed. J. Czapieński, T. Panek, Rada Monitoringu Społecznego, Warsaw 2015, pp. 373–395.

- the probability that the child will encounter undesired content when using a tablet is much smaller, as most often only applications, cartoons and films verified by parents are installed on it. Its feature is also interactivity, which is an important trait of multimedia: children know that they can immediately react to certain media content, influence its shape or even create new content. Tablets, computers and smartphones are the most interactive media for them, simultaneously acquiring the status of the most attractive.

When asked about activities performed by children on the computer, parents indicate as follows: playing computer games and watching films on YouTube. Subsequently, there is also programming, listening to the music and watching cartoons and films.

Diagram No. 3: Activities performed by children on computers



Source: results of own studies

It is worth adding that the feature distinguishing youngest generations is the need of high interactivity of the media environment, coupled with the skills and the desire to co-create the content subsequently posted on-line and the feeling of affiliation with the virtual community that acquires the traits of a real society for them.

Child As the Creator of Media Content

In the EU Kids On-line¹³ project, three types of roles were selected which young people using new technologies may adopt. They may be the recipients of content, the participants (when they contact other Internet users on-line) or the actors, when independently, of own accord, they undertake certain activities with the use of the Internet. As the recipients of media content, they do not perform any activities apart from passive use of the media resources, adjusted to their cognitive potential (by assumption). As the participants, they fully use the interactivity of the media to communicate with other members of the group to which they belong (family, peer group, interest groups), depending on their age and skills either with the assistance of adults or independently, with the use of chats and social networking sites. Such participation not only enables communication, but also exchange of various types of information. The third of the adopted roles – the actors – allows for creative expression of self through independent production, creation and eventually publication of media content, which is the core of the aforementioned idea of content creation¹⁴. This role is available to few young people: in the author's surveys, only a small percentage

¹³ S. Livingstone, L. Haddon, EU Kids On-line: Final report. LSE, London 2009, [http://www.lse.ac.uk/media@lse/research/EUKidsOnline/EU%20Kids%20I%20\(006-9\)/EU%20Kids%20Online%20I%20Reports/EUKidsOnlineFinalReport.pdf](http://www.lse.ac.uk/media@lse/research/EUKidsOnline/EU%20Kids%20I%20(006-9)/EU%20Kids%20Online%20I%20Reports/EUKidsOnlineFinalReport.pdf) [access: 10.08.2018], p. 10.

¹⁴ A. Lenhart, M. Madden, A.R. Macgill, *Teens and Social Media*, Pew Internet & American Life Project, 2009, <http://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/> [access: 10.08.2018].

of children in this age was involved in such a stance, the rest adopted the two other roles. Other studies show that our stereotypical perception of the Internet as a place where children and young people manifest negative behaviour and are dealing exclusively with threats is misleading: the majority of activities undertaken by them were of neutral or positive character¹⁵. However, only a small portion are active measures, exceeding the average Internet use. Among them, it is possible to include activities particularly valuable not only for the individual, but for the entire society, creative activities, activities developing creativity or supporting development. Little is known about them, as it is the Internet threats that are usually within the researchers' interests; there are still very few studies with a holistic approach (thus indicating both positive and negative aspects) to the possibilities of the use of Internet by children, even though positive changes are noticeable¹⁶.

Children use the media primarily for entertainment purposes¹⁷, and they do it with a significant skill. They have no problems with independent use of the television (100% of respondents), tablet (88%), smartphone (79%) or computer (only 37% need slight assistance of parents to turn on a favourite cartoon, a DVD film or to find a website). In the age group that was of interest for the author,

¹⁵ D. Finkelhor, K. J. Mitchell, J. Wolak, *Online victimization: A report on the nation's youth*, National Center for the Missing and Exploited Children, Alexandria 2000, http://www.unh.edu/ccrc/pdf/Victimization_Online_Survey.pdf [access: 11.08.2018]; E. Dunkels, G-M. Franberg, C. Hallgren, *Young people and online risks* [in:] *Youth Culture and Net Culture: Online Social Practices*, ed. E. Dunkels, G-M. Franberg, C. Hallgren, I-Global 2011, <http://www.mucl.se/sites/default/files/young-people-and-online-risk.pdf> [access:11.08.2018].

¹⁶ J. Pyżalski, *Od paradygmatu ryzyka do paradygmatu szans: prorozwojowej i prospołecznej używanie internetu przez dzieci i młodzież*, [in:] *Nastolatki wobec internetu*, ed. M. Tanaś, NASK, Warsaw 2016, https://akademia.nask.pl/publikacje/Nastolatki_wobec_internetu_.pdf [access: 11.08.2018], p. 57.

¹⁷ R. Zevenbergen, H. Logan, *Computer use by preschool children: Rethinking practices as digital natives come to preschool*, *Australian Journal of Early Childhood*, 2008, https://research-repository.griffith.edu.au/bitstream/handle/10072/23047/53861_1.pdf;jsessionid=5AECB87B4BB315B523C9AD98D3513C3F?sequence=1 [access: 10.08.2018].

there was a significant diversity with respect to the mode of using the new technologies - from passive reception of media communications (e.g. watching films and cartoons) to a quite active stance, e.g. making films, taking photos with the use of the camera in the smartphone or programming educational robots. In the context of children's media activity, it is worth differentiating between the creative and imitative activities: derivative and repetitive behaviour is evaluated as a lower form of activity and called imitative; higher and innovative behaviour goes beyond the stereotypical conduct and instils creative activities with innovative elements¹⁸. New communication and information technologies provoke children to manifest active and creative behaviour – the computer and the Internet¹⁹ occupy a special place in this respect, along with educational robots. Programming in simple, visual languages, e.g. in Scratch, performs well in this role; it not only teaches the children logical, algorithmic thinking, but also develops creativity, imagination and active, creative operation. Even though the programme as such is a product of somebody else's activity and creative stance, it may stimulate such behaviour on the side of its users. Educational robots become more and more popular ICT tools: their price is still a barrier; nevertheless, more and more schools decide to buy them and use them to implement the core curriculum, which for a year has been featuring a provision about the necessity of implementing new technologies - including the programming-related skills in the early school education. They also start to appear in private homes (11% of the examined parents declared having it), which is a good thing, as they are an excellent tool developing the child's creativity, teaching logical and analytical thinking, independent problem solving, accuracy, precision and conscientiousness. They also integrate families:

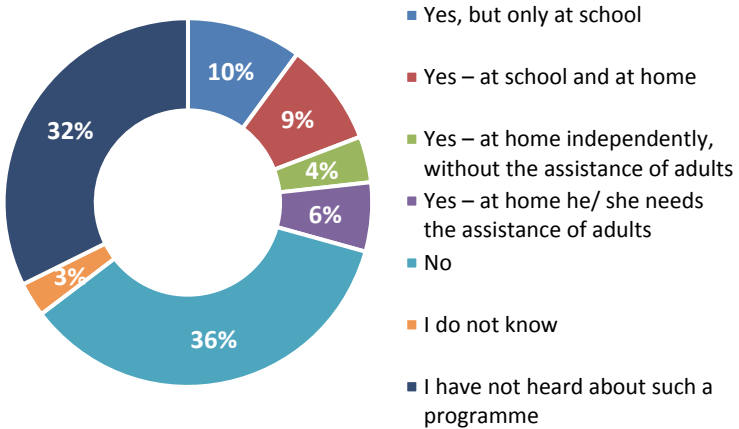
¹⁸ E.B. Hurlock, *Rozwój dziecka*, PWN, Warszawa 1985, s. 90; M. Przetacznik-Gierowska, G. Makiello-Jarża, *Psychologia rozwojowa i wychowawcza wieku dziecięcego*, WSiP, Warszawa 1992, pp. 57.

¹⁹ S. Papert, *Burze mózgow. Dzieci i komputery*, Wydawnictwo Naukowe PWN, Warszawa 1996, p. 16; A. Walat, *Wprowadzenie do języka i środowiska Logo*, OELiZK, Warsaw 1996, p. 27.

only 8% of parents declared that their child played with such robot at home independently; others needed adult assistance, which provides a great opportunity for playing and working together.

Diagram No. 4. Coding in Scratch by children in early-school age

Does your child code in an educational programme such as Scratch?



Source: results of own studies

The new core curriculum introduced to schools on 1 September 2017 sets the following objectives for the teacher: developing creativity, critical and logical thinking ability, reasoning, arguing and concluding, exciting the students' cognitive curiosity and motivation to learn²⁰. The majority of changes are related to the students'

²⁰ Ministry of National Education, Core Curriculum for General Education for Primary Schools, http://edukacja.wczesnoszkolna.edu.pl/wpcontent/uploads/2017/02/podstawa_programowa_2017_sp_edukacja.wczesnoszkolna.edupl.pdf, p. 1 [access: 01.08.2018].

accomplishments in the area of programming and solving problems with the use of computers and other digital devices and refer to such activities as: using computer to perform a task, visual programming, creation of computer graphic communications, use of Internet resources. Such possibilities are offered by the above-mentioned Scratch programming, which gains popularity in the Polish schools, as well as outside of them, in the child's home environment.

Programming is a skill that allows children to develop creative thinking, draw logical conclusions, improve analytical skills and reach solutions independently. Next to native and foreign language skills, it is considered the third language today, necessary to understand the world surrounding us and the dynamic communication and information changes that occur in it. Its popularisation is however not aimed at educating throngs of programmers: it is primarily aimed at ensuring that a child/ pupil ceases to be a passive recipient of the ICT and is able to use it creatively and with understanding for own needs and purposes.

Depending on the child's skills, his/ her needs and interests, the ICT instruments offer a possibility of various types of behaviour mastering the child's essential competence. They allow for becoming involved in activities which are not only attractive for the child, but also stimulate and motivate the child's development. In this place, it is worth referring to *edutainment and playful learning* - thanks to the fact that the producers of the ICT tools try to package them in the most attractive form, for many children they become a good source of entertainment and play used for educational purposes²¹. Such devices include the above-mentioned educational robots, programmes that teach coding or programmable Lego WeDo blocks - the child masters vital skills when playing with them. Apart

²¹ M. Resnick, *Computer as Paintbrush: Technology, Play, and the Creative Society*, [in:] *Play = Learning: How play motivates and enhances children's cognitive and social-emotional growth*, ed. D. Singer, R. Golikoff, K. Hirsh-Pasek, Oxford University Press, 2006, http://www.computerclubhouse.org/sites/default/files/ComputerAsPaintbrush_Singer.pdf, [access: 10.08.2018].

from the above-listed benefits, it is also possible to mention: counting, combining items in groups, segregating, practical use of previously acquired knowledge by incorporating it with the newly acquired information. They are not very popular now, but they start to appear in the Polish homes, encouraging children to creative learning via playing. 13% of respondent parents declared that they had such blocks (among this group, only 8% of children use them very often, the rest rarely uses them for playing/ learning).

From the point of view of the child's development, particularly valuable are these ICT instruments that not only develop certain tool-type media skills (e.g. programmes/ tutorials for taking photos or making films), but also have a potential for being used for educational and creative purposes²². These tools that prepare the children for the role of **media-creators** or the so-called **content creators** are particularly important from the point of view of the child's development. As shown by the survey, persons who are active on the Internet often manifest such patterns of functioning in the off-line environment²³ (e.g. at school, in a peer group, circle of interests, etc.). Younger children manifest less creative and active behaviour with the use of the media; creative activities are often carried out with the assistance of adults - however, easy to use ICT instruments result in the fact that young children start to be active creators online and our task is to encourage children to use them, showing good practice and examples of valuable use of the ICT tools.

Recapitulation

Thanks to the media, children experience success, observe their progress and development in a given area and feel fulfilled when they can share their products with others, present them to peers and

²² M. Resnick, *Computer as Paintbrush: Technology, Play, and the Creative Society...*

²³ A. Lenhart, M. Madden, A.R. Macgill, *Teens and Social Media*, *Pew Internet & American Life Project*, 2009, <http://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/>, [access: 10.08.2018].

use the ICT instruments together²⁴. Co-sharing is an important feature of the new media: such tools as YouTube, Instagram, Snapchat or Musical.ly rely their operation on the idea of creating new content on the one hand and on the other on making it available and sharing it with other users. This feature is a value coveted by children in an early school age, for whom appreciation of the peer group is of great significance - nowadays, it is possible to gain it by showing one's own products in social networking sites. Compliments (in the form of positive comments) from the group have a great value for the child: they boost his/ her competence and constitute a confirmation that the efforts made in functioning in a social group were noticed. In order to receive them, one simply has to cease to be a passive on-line observer and show some activity, a specific action which would be noticed by others. These activities acquire diverse forms, depending on the medium in which the child displays his/ her creativity. For the purpose of the study, the author differentiated such activities as: taking photos with the smartphone, making films and videos, managing a thematic YouTube channel, coding in visual programmes such as Scratch, programming education robots or Lego WeDo blocks. The above-listed activities are not yet strongly embedded in the life of a child during first years of the primary school: they are more of a supplement to the activities performed with the use of media, their passive reception, stirring curiosity rather than inspiring for independent searches and creative activities. The supportive presence of adults is important in this respect: adults show technological novelties to children, teach how to use them in a desired manner so that they contribute to the child's development. Without doubt, all of the child's on-line activities should be managed and controlled by parents. Their ongoing and careful presence seems to be justified and desired until the child becomes aware of potential dangerous behaviour that may be encountered on-line.

²⁴ I. Kalaš, *Recognizing the Potential of ICT in Early Childhood Education*, UNESCO Institute for Information Technologies in Education, Moscow 2010, <https://iite.unesco.org/publications/3214673/>, [access: 10.08.2018].

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