

THE IMPACT OF CYBER - ACTIVITY ON YOUTH DEVELOPMENT

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Abstract

The article focused on the impact of cyber-activity on individual as a risk' factor in development. The aim of this work was description the cyberspace and it impact to young people. Some psychological changes in human mind caused by cyber-activity were presented, as well as their socio-psychological and cognitive-emotional consequences. The analysis of chosen psychological conditions (attachment, temper, one's own experience) and motives for undertaking cyber-violence and cyber-bullying by young people were taking into consideration. In the conclusion, the way of re-interpretation this new threats was presented.

Keywords: brain; cyber-activity; mental health; youth

The changes in modern developmental context

Because of the globalization processes¹ the world has shrunk - socially, economically and culturally. We are able to do our shopping in various time zones on various continents and track the delivery 24 hours a day in cyberspace². However,

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¹ The term 'globalization' was introduced in the theory of culture by Marshall McLuhan (1960) to describe changes connected with the emergence of new media. Their use resulted in the subjective process of shrinking of the social space and increased velocity of social and economic interactions, which was named globalization or the 'global village' effect. Giddens (2008) pointed to the separation of time and space and uprooting of social institutions as indicators of that process.

² Cyberspace is understood as the space that has been created and is still being created by new technologies (particularly the Internet).

one should add here that the process of separating the traditionally understood time and space works both ways. Today, thanks to the use of cyberspace, the world may not only 'compress' - come closer, but also 'expand' - become more distant. Network participants can create their own worlds to suit their needs. The created worlds may be alternative to reality, and the network user may switch back and forth between the real and the virtual domain while retaining his or her core identity. A person may not feel psychologically attached to the actual physical location where that person is staying; on the other hand, someone staying physically close to us may actually live in a world that is unattainable and distant, because it is artificially created. Another problem that has been manifesting itself is greater and greater diversification of societies and distance between individuals measured by their competences and access to new technologies (Bauman, 2011). Lack of readiness and competences for living in a globalized world may cause a globalization shock leading to apathy and resistance, a certain aversion (Nieman, 2011) or even loss of access to culture (Salzman, 2001). Fast technological changes drastically alter the conditions of human development. As the life environment has been changing rapidly, recognized models of development (e.g. the adequacy of the concept of developmental tasks, Arnett, 2007; Baltes, Lindenberger, & Staudinger, 2006; Trempała & Ciecuch, 2016) or notions used in psychology (Sampson, 1989; Kowalik, 2015) are being questioned. Developmental psychologists undertake the problem of insufficient knowledge and lack of efficient tools for the measurement of psychological processes connected with functioning in a world that is variable and unstable in different contexts (amusement, virtual, family life, professional life, etc., cf. Farnicka & Liberska, 2016).

One of the ways to tackle and solve the problems discussed above is offered by the contextual approach. It is worth reminding here that in the contextual approach *developmental environment* and *developmental context* are two different things. Developmental environment comprises all the material and non-material elements that an individual potentially has access to and by which he or she is potentially influenced. The moment when those objects, events or situations enter the psychological reality of the individual, they become the context of his or her individual development (Brzezińska, 2000).

Berry (2013) presented the model of analysis of three basic characteristics of individual functioning in a social world. Those are: attitudes of cognitive processes, social competences and goal-directed social activity.

Another (older) proposal is the method of systemic description of complex psychological phenomena in the penta-basis approach. Ganzen (1984) proposed that the functioning of a given *psychological object (process)* should be described in relation to the following four dimensions: time, space, energy and information. With the use of that method one can describe interactions of each dimension with the object (process) and the emerging relations structure based on five elements. Approaching the process from the developmental perspective, those elements interact in time with the object and therefore researchers are able to observe and analyse the character of those interactions (at a given moment in time *t*, e.g. *t*₁ or *t*₂) or analyse the changes occurring in selected dimensions (e.g. between *t*₁ and *t*₂).

Each *object* has its intrinsic characteristics, which determines its mode of existence in each of the dimensions. *The time dimension* may describe the current status of the object and its developmental tendencies. One should remember that time is a multidimensional phenomenon. Various time dimensions are recognized for an individual human being or for a given culture: time may have a biological, historical, or social aspect or serve to differentiate between orientations towards the past, the future, or the present moment. However, time is not only understood as the dimension that describes one aspect of the developmental context (Trempała, 2002). Time is a universal unit measure that we devote to performing something. It is within a given unit of time that one can observe variety vs. constancy and regularity vs. randomness of occurrence of certain phenomena. The way of understanding and the attitude towards the phenomena observed within specific time may be characterized with the use of such dimensions as: flexibility, quick pace of performing tasks, undertaking risks, welcoming change versus conservatism, preservation of law and order, traditions, caution, repeatability.

The space dimension reflects the situation of the 'object' in relation to other objects. This dimension not only points out to physical aspects of space, such as material conditions, locations (of events or tasks) and their specific nature, but also to psychological aspects of space, such as closeness vs. distance to others, openness to new experience or closing one's space, control or lack of control over space, loneliness or the presence of others.

The energy dimension indicates the nature of mutual relations between the 'object' and the environment and other dimensions. Various aspects of that dimension describe energy connected with: involvement vs. apathy

(succumbing to the course of events or even inertia), activity vs. passivity, effort or resignation. The way of communicating with other objects is also characteristic for the energy dimension. One can observe that openness and permeability of boundaries may be describe space, but it may also relate to the energy dimension - if that openness or closing, permeability or its lack occurs as a result of actions (energy use) of an individual.

The informative aspect depicts and reflects cognitive orientations and the manner of analysing the environment. That relation line reveals the manner of functioning in reality in the following dimensions: separating - consolidating, looking for similarities - looking for differences, analysis - synthesis, specification - generalization. Those strategies characterize both the ways of organizing and processing information coming from the outside world and from inside a given psychological system and the undertaken and analysed activities. The presented dimensions have already been used for the analysis of various psychological phenomena, such as creativity, needs, personality, mental health, or some complex issues such as the educational system (Rongińska, 2013). Presented below is the systemic analysis of the functioning of Digital Immigrants and Digital Natives as examples of the individual's strategies (and their changes) of actions undertaken in order to best adapt to the changing life environment from penta - basis perspective (*see* Table 1).

Internet users are grouped into various categories according to the amount of time spent on the Internet or the manner in which they use it. One such criterion is being part of a certain generation (Millenials³, Generation X⁴ or Generation Y⁵). Those who were already born into the cyber world (i.e. persons born after 1981 - the Millenials and Generation Y) are Digital Natives; those who grew up in the world without cyberspace (i.e. born before 1981 - Generation X and older generations) are Digital Immigrants (Small & Vorgan, 2011, p. 46). With the employment of this criterion, the very birth date (time) determines (cyber) space as the development environment and the manner of functioning in it (familiarity, being 'at home' vs. distance, being a guest). Persons from those two groups (worlds) use new technologies, but their usage has different energy aspect (proactive vs. reactive approach), information

³ born on the turn of the 21st century and later.

⁴ born between 1965 and 1980.

⁵ born between 1981 and 2000.

dimension (looking for differences and new things vs. looking for useful patterns and heuristics); the groups also differ in the sense of belonging to certain space and openness to its change. The systemic description of their functioning is presented in Figure 1. That diagram was developed to depict the analysis of differences in cyberspace usage made by Small and Vogan (2011). It is worth mentioning here that due to the time criterion that division will soon become invalid, and new analysis criteria will be required for the classification of Internet users. Still, the opportunity to watch and analyse the functioning of two different generations according to the time of birth criterion is a fantastic opportunity offered to us by the creators of digital technology.

Table 1. Analysis of two types of cyberspace users with the employment of the pentabasis method

<p style="text-align: center;">Energy</p> <ul style="list-style-type: none"> • Involvement, pro-activity; • Readiness for change; • Low costs of using and experimenting; 	<p style="text-align: center;">Information</p> <ul style="list-style-type: none"> • Looking for differences, novelty-seeking; • Looking for experiences, fun, satisfying many needs; • Life environment, analysing details;
Digital Native	
<p style="text-align: center;">Time</p> <ul style="list-style-type: none"> • Since birth • Adequate speed – being up-to-date and on time – keeping up; • Risk; flexibility; novelty-oriented 	<p style="text-align: center;">Space</p> <ul style="list-style-type: none"> • Familiarized – at home. Open to new things, welcoming change; • Proximity; • Social and personal dimension; • Illusion of control;
<p style="text-align: center;">Energy</p> <ul style="list-style-type: none"> • Reactivity, following...; • Accepting, receiving; • High energy costs when changes occur; 	<p style="text-align: center;">Information</p> <ul style="list-style-type: none"> • Levelling out differences; • Looking for usefulness; • Looking for models;
Digital Immigrant	
<p style="text-align: center;">Time</p> <ul style="list-style-type: none"> • Limited – from a certain point in time; • Too fast or trying to catch up with changes; • Order, caution, fixed routines, rigidity; 	<p style="text-align: center;">Space</p> <ul style="list-style-type: none"> • Guest: caution, avoiding changes; • Distance; • Various dimensions – often things that are necessary;

The consequences of cyber activity for an individual mind

Digital usage has not only altered the ways in which youth communicate, organize information, search for knowledge and accumulate it, but also modified our time-spending habits. Rapid, dynamic changes allow human development researchers to observe coping strategies adopted by two consecutive generations. As a result, the changes, not only in the way people think about the world (content), but also in the thinking process are noticed as such: - the change in the way people feel and also the way in which they organize their functioning in society. The emergence of that difference has made it possible to ask questions about the characteristics of the adaptation processes and adaptation skills that prove the most effective in face of new challenges for the generation of Digital Immigrants, and also to compare classical knowledge about various aspects of behaviour with the changes as observed in Digital Natives.

Table 2 (below) presents differences observed by various researchers in the functioning of persons using cyberspace as the main life environment and for those for whom that space is less natural⁶. Due to the fact that the present-day science and norms were developed in the 20th century, the comparison of changes always relates to a certain ‘earlier’ time, adequate for the generation of Digital Immigrants. The presented differences depict changes in ways of functioning in space (material and social), using time, specific attitude (information) and energy involvement.

Table 2. Analysis showing differences in functioning of individuals in the digital age and before it

Area	Before 1981	At present
Space-related habits	Reading books, magazines, watching TV Contact with nature, physical activity	Drop in those activities, looking for information on the Internet Decreased physical activity
Social functioning	Face-to-face meetings, personal involvement Building relationships – long-term processes, e.g. friendship	Speed; e-commerce, e-shopping, e-conferences, information on goods taken from the net without personal interaction Building cluster-type relations, task-oriented or ad-hoc/occasional groups

⁶ The material for the differential analysis was collected on the basis of the work by Small and Vorgan (2011).

Table 2. Analysis showing differences in functioning of individuals in the digital age and before it - *continued*

Area	Before 1981	At present
Social contacts	Face to face, by phone	Networks, social networking sites, e-mails
Cyberspace control and energy	None	Addiction, compulsion
Attitude to technology - information	Concentration on utilitarian aspects	Using gadgets, electronic toys
Functioning mode	Technical novelties feared, as they disturb the usual mode of functioning	New things welcome with interest
Values and gratification	Linear performance of tasks	Multi-tasking, parallel processing
Learning	Long-term gratification as a value	Short-term, instant gratification prevails
	Learning based on memory and concentration	Learning based on attractiveness and change

The analysis of the differences in human functioning that we may observe thanks to the existence of cyberspace is a source of questions concerning deeper consequences of that phenomenon. Analysed below are selected changes that may be examined as results of transformations in the surrounding world caused by the technological leap.

Changes in cognitive, social and physical functioning

An average representative of the generation of Digital Natives spends about eight and a half hours in cyberspace⁷, of which 6 hours are spent on the Internet and the remaining time is devoted to using the phone and playing games that do not require constant on-line presence. Youth who use modern equipment to communicate have been observed to develop stenographic skills and to understand and use a new language that is a lexicon composed of abbreviations and emoticons. It has also been observed that computer games influence cognitive processes of their users. Peripheral vision and attention switching function are improved, multi-tasking dominates, mental reactions and decision-making processes are speeded up (Small & Vorgan, 2011, p. 43).

⁷ Data retrieved from Mobirank (<https://mobirank.pl/2015/09/12/czas-spedzany-w-interecie-na-swiecie/>). The study was conducted in 2015 in 34 countries worldwide.

Another noticed change is a different mode of cognitive functioning in the learning process. Digital Natives often complain about unattractive form of traditional teaching. Single - or even dual - channel message mode employed by teachers (e.g. book or presentation) is boring and too slow for their expectations, which is connected with excitement seeking and concentration time (shorter attention span). These habits and practice in cognitive activity is a really challenge faced modern teachers. A following example may serve as an illustration of young people' needs connected with content attractiveness: while watching an educational programme on TV, Digital Natives are also listening to music, handling their phones and taking part in an online chat, because as recipients they know that the motion picture can be stopped at any moment that is of interest to them.

Those transformations, connected with new communication possibilities, have brought about changes in the frequency and form of face-to-face social contacts and the time devoted to cultivating bonds and building social competences. A new style has been observed in interpersonal and intergenerational communication, based on texting, e-mails, sporadic necessary telephone calls to family and friends; also, certain anonymity, little activity related to social co-operation and overcoming frustration in relations with persons from the so-called 'group of further friends'. The possibility of instant gratification of social needs on the Internet instead of regular social training in a given group of people in fixed time sequences (family rituals) is a threat to the development of communicative skills, emotional intelligence that is based on recognition of multidimensional non-verbal signals, as well as self-confidence in intimate relationships. A dropping number of interactions between people, and particularly between parents and children undermines the process of transmission of culture and prevents intergenerational support, which is detrimental for long-term functioning of relationships, families and groups. Being in a long-term relationship requires such traits as empathy and ability to cope with emotions, frustrations and mutual interdependence.

The time spent on offline physical activity undertaken for pleasure is also getting shorter. This phenomenon is illustrated by the latest experience with a game that forces physical activity of players. People (not only youth) spend hours outdoor are looking for hidden objects or figurines with the use of maps. In order to win points, they need to be physically present in the place marked on the map (which is verified by GPS). However, the motivation

behind that is not the pure pleasure derived from physical activity but be part of game⁸.

The Functional changes in the nervous system

Multi-tasking, quick changes of stimuli, high level of neural activity force our brains to adapt to such a functioning mode. Developing new connections and changing the frequency of activation of certain areas, we adapt and tune to the challenges faced by individuals living and working in cyberspace. For the brains of Digital Immigrants, those changes have the adaptive nature and are proof of our learning capacity and neuroplasticity. For most people, those changes take place imperceptibly. However, some people experience the so - called 'burnout', manifesting itself in attention deficits (also called distractedness).

Different processes occur in the generation of Digital Natives, for whom such a mode of functioning is a natural alternative that they practice since birth. In their case, researchers focus more on studying the development of those neural areas and connections that are rarely activated in cyberspace, and had earlier been developed in off line activities, first of all during social interactions and solving complicated tasks in memory. One of the problems that may serve as an example is social spontaneity and the ability to empathize. Speaking from the neurological point of view, this relates to the simulation of the activity of the amygdaloid body responsible for initiating and maintaining eye contact. Therefore, everyday social contacts are also crucial for the development of memory, not only for the elderly but also for young people (Small & Vogan, 2011, p. 179).

According to research carried out to date, the analysis and use of both spoken and written language activates the Broca's area in the frontal lobe. Meanwhile, writing and reading emoticons activates primarily the right inferior frontal gyrus previously associated with non-verbal communicative skills (Small & Vorgan, 2011, p. 28).

Due to quick gratification of needs on the Internet and the possibility of providing stimuli that match expectations, the limbic system is activated.

⁸ The individual decision is treated as an object in the game not as a subject (Fromm, 1970; Sampson, 1989).

Frontal lobes and parietal cortex, the activation of which helps us plan, control and inhibit cognitive and emotional arousal, are less often activated.

Questions about the consequences of presence of little children in cyberspace resulted in the emergence of hypotheses connecting a different mode of their cognitive, social and emotional functioning with changes in brain functioning. Problems so far labelled as concentration deficits or psychomotor over excitability disorders are now proposed to be treated as a new model of cognitive functioning.

An example of such an understanding of the changes in the way in which children function is the phenomenon of 'Indigo Children' introduced by Carroll and Tober (1999). The term applies to children who are highly talented but socially maladjusted. What makes those children unique, apart from their problems with discipline, observing norms and respecting authority, is their exceptional creativity, intelligence, intuition, exaggerated self-esteem, and frustration and boredom connected with functioning in traditional social systems (school). The numbers of such children are growing and this was probably the reason behind linking their exceptional features with functional changes in the brain resulting from the use of modern technology. Classically understood, the symptoms listed above would suggest cognitive deficits, hyperkinesis and behaviour disorders, as well as disturbances from the autistic (Asperger syndrome) or psychotic (hebephrenia) spectrum. A frequent danger resulting from the search for new functioning models is the delay of the correct diagnosis and first of all therapy that would enable a child to function with success in the social world (Small & Vorgan, p. 105).

Risk' factors of cyber-activity

The basic risk factors from the point of view of an individual development in adolescence are total anonymity and loneliness. Next is the fear of losing privacy or fear of being rejected in the real or the virtual world.

Another risk is the power of influence of various contents that can be found on the net. Every now and then, reports occur in the media about strange Internet-spread diseases, hysteria cases or even Internet group suicides. As an Internet user has control over the content found online and the intensity of that content, we can say that such a person creates his or her world of values and accepted behaviour and may fail to notice other aspects of reality or his/her

own functioning. Such [self - imposed] limitation of access to information is a threat to building one's identity, self - esteem and proper judgement of reality. An example of that problem is the popularity of various blogs and sites related to solving various life problems, from treating influenza to treating cancer and from passing a chemistry test to healing a broken heart. Internet blogs or forums are under no professional verification, being only controlled by moderators or admin s with regard to compliance with the rules. They are often hidden, not accessible for everyone (e.g. for parents or friends). At this point it is worth noting that the problem relates not only to the question of safety and reliability of information but the development of deeper structures of human psyche, such as awareness building and self-limitation of one's development (narrowing the field of exploration by excluding other dimensions of life or functioning).

Excessive presence in cyberspace has got new negative consequences and poses threats to safe functioning of individuals. More and more often doctors link sleeplessness and obesity to night-time Internet activity and the new pattern of day and night, activity and regeneration (Akmed, 2010).

According to statistics, about 20% of Internet users meet the clinical criteria of addiction. In simplified terms, one can say that the addiction process relies on dopamine release in the situation of excitement and gratification (Jakubik, 2002). Due to the fact that gratification on the Internet is irregular, strong gratification balances the influence of numerous disappointments caused by, for instance, losing a level in a game or receiving an e-mail with some negative information. As is the case with other types of addiction, Internet addiction involves mood swings, lowered tolerance to abstinence, withdrawal symptoms and relapses. The American Medical Association is currently in the course of studies to determine whether it is legitimate to officially recognize *Internet and computer games addiction* as a separate diagnosable disorder (now better know as behavioural addictions).

Cyberspace and social development

The emergence of cyberspace has brought about the occurrence of such antisocial phenomena as cyber-bullying, cyber-violence and cybercrime. Mapping a new developmental environment reveals the existence of numerous threats connected with those phenomena. As cyberspace is programmed - settled by people or human-made programmes, this section presents individual

features and motives of persons who engage in activities that may be classified as cyber-bullying and cyber-violence.

Violence with the use of electronic media has become a social issue in many countries. A metaanalysis carried out by Gradinger (2014) shows that the motives of perpetrators of cyber-violence and cyber-bullying are most often anger, authority (sense of power), as well as free-time entertainment. Dixon referred research indicates that in case of combined motives (e.g. authority, power and anger) the risk of all types of aggressive behaviour in all the traditionally recognized channels (verbal, physical and indirect) increases. When motives such as anger prevail, one can suspect that a perpetrator will choose a single channel considered most effective under the circumstances (cf. Dixon, 2011). One may quote here the assumptions connected with the concept of frustration - aggression, i.e. that such behaviour stems from reactive motives such as the attempt to cope with anger, or instrumental motives serving the purpose of achieving authority, power or affiliation (according to the assumptions of the concept of social learning to achieve goals). If the motive of play is involved, the development of such behaviour is hard to determine, as very few studies have been conducted from that angle. So far both the need of play and boredom have been treated as motives specific for violence activity on the net, as in real life such motives behind inflicting harm on others are treated as predictors of disturbances of psychopathic nature.

The research of Gradinger and her group indicates (Gradinger, Yanagida, Strohmeier, & Spiel, 2015) that the rise of bullying and cyber-bullying is parallel. This may mean that the reasons for both types of behaviour should be sought in similar psychical processes of perpetrators and also in processes taking place in groups, or one may assume - after Mensini (2009) - that cyber-bullying is about the group's aggression towards an individual, but in a modified environment. Reports on cyber-violence show the consequences of such experience for psychical well-being, mental health, educational and social achievements, and interpersonal relations (Dixon, 2011). Negative consequences of behaviour recognized as violating the norms and principles and encroaching personal boundaries affect not only persons who are directly involved in the process, but also those who witness it. The Czech researchers Machackova, Dedkova, and Mezulanikova (2014) draw attention to the consequences of witnessing cyber-violence. The results reveal that in cyber-violence witnesses the level of support for the victim was

dropping along with the increased number of attacks and the duration of the process of bullying. The researchers called this phenomenon the specific 'spectator effect'. Protective factors in that situation were empathy, sense of self-confidence and good relations with the victim. Those three factors increased the probability of help being offered to the victim. However, as pointed out by authors, empathy is a specific double-edged tool that not always guarantees offering help to the victim, as due to their sensitivity level emphatic persons may have problems with undertaking actions aimed at getting the perpetrator into trouble. The research of Machackova, Dedkova, and Mezulanikova (2014) confirmed that proposition, indicating that the high level of the observer's empathy and the long-term process of violence cause lowering of the perceived attractiveness of the victim and, consequently, leads the observer to dissociate him- or herself from the victim.

Research by Farnicka and Grzegorzewska (2016), aimed at separation of individual traits responsible for the undertaking of aggressive behaviour on the Internet among teenagers, has indicated the significance of attachment type (mother alienation) for the undertaken risk behaviour, both perpetrator-type and victim-type. The differences relate to the type of relationship with parents (secure or insecure pattern), own experience of being in the victim or aggressor role, and the level of hostility. In the light of the presented results, the proper diagnostic process seems important in order to differentiate between assumed roles (aggressor/victim) and then apply suitable measures. In the case of indirect-type aggressors the focus should be on coping with hostility, self-control and emotional control skills and working on alternative ways of functioning in the family (particularly in the relationship with mother).

How to cope with threats - searching for solutions

The awareness of the impact of that developmental context on behaviour should encourage steps aimed at enjoying its advantages with prevention of its negative effects. First of all, this means the recognition of the multi-dimensional aspect of human existence and the necessity to function in numerous relations in many worlds, both digital and traditional. Therefore, individual knowledge and attitudes towards new technology become important. Presented below are some aspects of traditional threats and their solution such

issues as: addiction, fear, loneliness, communication, violence and environment organization.

Individual competence should comprise fluency in digital technology usage (particularly in the field of data and content safety) and knowledge of threats such as addiction. At that moment, an individual should recognize and be alert to addiction symptoms, such as preoccupation and over-involvement, thoughts revolving around online activity, lower tolerance to being offline, longer periods of staying online and looking for pretexts to get online, lack of control and negative feelings when network activities need to be interrupted, situations when any attempts to change the activity model (skipping online activity) lead to unrest, irritation, mood changes, sense of emptiness and in consequence the online presence is even longer (relapses – the yo-yo effect). The symptoms listed above decrease individual well-being and may be subjective. However, functional disturbances connected with online presence - such as a real threat of losing one's job, position, or important personal relationship, lack of promotion at school, hiding the actual time spend on the net, using the Internet in order to alleviate negative feeling or run away from real-life problems - should be alarming both for the user himself/herself and for his/her family and friends.

Another effective method, apart from awareness, is the introduction of protective habits in Internet usage, including time limitation (protects against attention deficits and distractedness) and diversification of activities by including physical activity (protection against physical problems such as degenerative conditions of the spine, spine ache, sore eyes, obesity).

Loneliness, anxiety. Research indicates that the development of the sense of coherence and mindful approach to self-development processes are protective factors against disturbances that result from imbalance (Dudek, Koniarek, & Szymczak, 2007). Positive bonds and successes connected with own activity also have a preventive function. Social interactions are an example of such gratifying activity. The process of communication between generations is a natural resource and conscious focus is required on building positive experience and relations between those two worlds and modes of functioning through supporting natural ways of communicating or, if necessary, specialist training such as social skills training, assertiveness training, empathy and listening training, etc.

Cyber-violence and cyber-aggression are often manifested as infringement of personal interests, dampening somebody's spirits or lowering his or her position in the group, all that achieved by using communicative techniques on the Internet. Most often such activities involve extortion, imposing something on the victim or ignoring him/her, depriving the victim of information, ignoring, belittling or exaggerating certain features, behaviour or work results in a given social context. In this aspect, relevant research indicates that protective factors are personal traits such as realistic self-evaluation and the feeling of peace and happiness. There is a slogan in English literature promoting self-improvement: 'stability of mind in unstable times'.

Organizing one's environment. Shaping social skills and personal competences should be a mandatory element in the educational process, and should be verified (for positions connected with group work) and systematically developed in adult life. Without proper shaping of communicative skills and their development we deprive ourselves of tools for solving intra- and interpersonal problems. Also, a proper amount of offline training not only enables intergenerational communication but widens the developmental context, and thus helps us build a stable identity and self-image. At the present, Digital Immigrants are mostly responsible for activities of that type. However, that responsibility will soon be passed on to the first generations of Digital Natives. Persons from that group should be required to 'keep their eyes on the ball' and ensure a proper dose of social training and face-to-face relations for both children and adults.

The synthetic activities suggested below may be viewed as measures intended to shape up protective factors by equipping cyberspace users with social competencies, particularly in the sphere of interpersonal communication, constructive conflict solving, assertive protection of one's rights (as a communication technique) and coping with stress, implementation of suitable norms and procedures that will actually prevent cybercrime. One of the solutions could be developed by Spears and Taddeo (2014) in Australia "The Keep It Tame Campaign". The programme is based on four pillars: right to respect, right to self-acceptance, right to seek help and aspiration to be integrated. In the first step, project participants are taught how to promote respect on the net. They may take care of themselves by using the icons that signal 'nasty' information or by deleting persons who damage their reputation from the contact list. In the second step, participants have at their disposal icons

that cheer up and contain kind messages. Researchers observe the frequency of their use in Internet contacts. Studies carried out after one year and two years after the programme implementation indicate that the number of cases of cyber-bullying and ordinary bullying among participants has dropped, fear and depression decreased, while self-evaluation improved.

Instead of conclusions author has one hope: maybe, the Campaign 'Keep It Tame' (2012) and whole article will be the good standpoints to re-defining the problem with cyber activity among youth.

References

- Arnett, J. J. (2007). *The long and leisurely route: Coming of age in Europe today*. *Current History*, March, pp. 130-136. Retrieved from: <http://www.jeffreyarnett.com/articles.htm>.
- Baltes, P. B., Lindenberger, U., & Staudinger, U. (2006). Life span theory in developmental psychology. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology*. Vol. 1. Theoretical models of human development (6th ed., pp. 569-664). Hoboken, NJ: John Wiley & Sons Inc.
- Baumann, S. (2011). *Collateral Damage: Social Inequalities in a Global Age*. Cambridge, England: Polity Press.
- Berry, J.W. (2013). Achieving a global psychology. *Canadian Psychology*, 54(1), 55-61.
- Brzezińska, A. (2000). *The social developmental psychology [Społeczna psychologia rozwoju]*. Warszawa, Poland: Wydawnictwo Scholar.
- Carroll, L., & Tober, J. (1999). *The Indigo Children: The New Kids Have Arrived*. Carlsbad-New York, NY: Hay House.
- Dixon, R. (2011). *Rethinking School Bullying*. New York: Cambridge University Press.
- Dudek, B., Koniarek, J., & Szymczak, W. (2007). Work - related Stress and the Conservation of resources Theory by Stefan Hobfoll. *The Occupational Medicine [Medycyna Pracy]*, 58(4), 317.
- Farnicka, M., & Grzegorzewska, I. (2016). Intrapersonal correlates of aggression in adolescents: determinants of undertaking the role of the perpetrator and the victim. *Current Issues in Personality Psychology*, 3, 25-35.

- Farnicka, M., & Liberska, H. (2016). Stages and Paths of Aggression Development - Knowledge that Awaits being Uncovered. In H. Liberska, & M. Farnicka (Eds.), *Aggression as a challenge* (pp. 15-31). Frankfurt am Main, Germany: Peter Lang GmbH.
- Fromm, E. (2005). *On Being Human*. New York: Continuum.
- Jakubik, A. (2002). The Internet - Addiction Syndrome [Zespół uzależnienia od Internetu]. *Studia Psychologica*, 3, 133-142.
- Ganzen, V. A. (1984). *Sistemnye opisanija v psihologii* [System descriptions in psychology]. Leningrad, USSR: Leningrad University Press.
- Giddens, A. (2008). *Konsekwencje nowoczesności (The Consequences of Modernity)*. Kraków, Poland: Wydawnictwo UJ.
- Gradinger, P., Yanagida, T., Strohmeier, D., & Spiel, C. (2015). Prevention of cyber bullying and cyber Victimization: Evaluation of the ViSC Social Competence Program. *Journal of School Violence*, 14, 87-110.
- Gradinger, P. (2014). *Risk Factors for and Prevention of Cyberbullying*, lecture at XIX Workshop Social and Media Dimensions of Aggression, Berlin, Germany, November 20-21.
- Kowalik, S. (2015). Globalisation as a psychological context in human functioning [Globalizacja jako kontekst funkcjonowania psychologicznego ludzi]. *Science [Nauka]*, 1, 7-37.
- Machackova, H., Dedkova, L., & Mezulanikova, K. (2014). Bystander effect in cyberbullying incidents. *Workshop Aggression*, Berlin, Germany: November, 20-22.
- McLuhan, M. (1960). Effects of the Improvements of Communication Media. *The Journal of Economic History*, 20(4), 566-575.
- Menesini, E., & Nocentini, A. (2009). Cyber bullying definition and measurement: some critical considerations. *Journal of Psychology [Zeitschrift für Psychologie]*, 217(4), 230-232.
- Nieman, M. D. (2011). Shocks and Turbulence: Globalization and the Occurrence of Civil War. *International Interactions*, 37(3), 263-292.
- Rongińska, T. (2013). The creativity of modern education [Kreatywny charakter współczesnej edukacji]. In B. Pietrulewicz, E. Baron- Polańczyk, & A. Klimientowska (Eds.), *The problems of Human Development [Problemy Rozwoju Człowieka]*, pp. 19-28. Zielona Góra, Poland: Wydawnictwo Naukowe Polskiego Towarzystwa Profesjonalnego.

- Salzman, M. B. (2001). Globalization, Culture, and Anxiety: Perspectives and Predictions from Terror Management Theory. *Journal of Social Distress and the Homeless, 10*(4), 337-352.
- Sampson, E. E (1989). The challenge of social change for psychology: Globalization and psychology's theory of the person. *American Psychologist, 44*(6), 914-921.
- Spears, B., & Taddeo, C. (2014). Model of preventing program Keep It Tame in Australia, *lecture at Aggression Workshop*, Berlin, Germany: November 20-22.
- Small, G., & Vorgan, G. (2011). *iBrain. Surviving the Technological Alteration of the Modern Mind* [Polish ed.]. Poznań, Poland: Vesper.
- Trempała, J. (2002). *The Time and The Change [Czas i zmiana]*. Bydgoszcz, Poland: Wydawnictwo AB.
- Trempała, J., & Cieciuch, J. (2016). The analysis of change in behavior and development: on some errors and possibilities to correct them. *Current Issues in Personality Psychology, 4*(2), 65-74.

Internet sources

- Akmed (2010). The Medical Consulting Centre Web Site (Centrum Konsultacyjnego Niepublicznego Zakładu Opieki Zdrowotnej) Retrieved from: <http://www.akmed.waw.pl/siec>
- Campaign Keep It Tame (2012). Retrieved from: <http://www.news.com.au/national/south-australia/online-campaign-aims-to-teach-teenagers-how-to-respect-each-other-on-social-media/story-fndo4dzn-1226515454517>
- Mobirank (2016). Retrieved from: <https://mobirank.pl/2015/09/12/czas-spedzany-w-internecie-na-swiecie/>

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