

Information Culture as a Factor in Developing Self-Attitude in Adolescents

Alexander Yuryevich Avdeyev and Mariya Andreyevna Reznichenko

Belgorod State National Research University, Belgorod, Russia

Abstract: The article is devoted to the problem of self-attitude development in adolescence under the influence of information and communication technologies. It is emphasized that social situation of modern adolescents' development undergoes considerable changes. The sample of the empirical study was 111 teenagers aged 13-15. The results showed that development of self-attitude in adolescents is determined by the level of information culture. The findings also indicate that information culture of personality can be considered as an intermediary in formation of self-attitude's components which provides harmonization of its structure.

Key words: Information culture (IC) • Self-attitude development in adolescence • Information and communication technologies (ICTs) • Structure of self-attitude • Nature of self-attitude

INTRODUCTION

Social situation of modern adolescents' development is changing considerably; therefore the issue of socio-cultural determinants in developing self-consciousness in adolescents is of utter importance [1]. The complex cultural situation-in which young people are struggling to find direction in their lives or simply to survive, to improve their living conditions, to develop their identities-has been given various names. Some call it the information or informational age, while others prefer the term technoculture, global media culture or simply information culture. The idea behind all these terms is that across the globe, ICTs are playing a central role in adolescents' lives, ICTs even surpass such traditional forms of socialization as family and school [2]. It is generally believed that ICTs can break the stability and reduce the level of socialization of young generation (loneliness, sleep disorder, depression, computer addiction etc.) [3]. But on the other hand socialization of adolescents who have constant access to computer is manifested in changes of their communicative experience (new norms of communication-forums, chats, social nets) [4], in extension of opportunities of role experiment (mainly by means of multi-user online games) [5], in the opportunities of maximal manageable self-presentations (instagram, twitter etc.) and earlier professionalization [6]. The variety and diversity of information helps adolescents to learn more about the ways ICTs can be used to increase their

proficiency and become literate in today's world. Also modern technologies empower adolescents to develop their creativity, problem-solving abilities, informational reasoning skills, communication skills; they change thinking structure, reinforce teenagers' autonomy from adults, strengthen and form new features of subjectiveness [7]. However, this period is characterized by increased self-consciousness, introspection, stress, inner conflict, uncertainty and disorientation. Adolescents feel changes of his/her "Self" painfully; this may convey that "Self" is an amorphous, mutable and divergent construct [8]. The most pressing problem in context of information socialization facing teens today is to build an integral and consistent self-concept of personality. It should be able to act adequately not only in ordinary or virtual reality, but in a situation where these two are interconnected to a great extent. It can be considered as a key process of maturing and existence of personality in adolescence [9]. If that's the case, adolescents' activity does not need strict differentiation between objective and virtual realities because both are parts of single whole continuum of existence-consciousness. The process of getting into culture or inculturation of adolescents into information space actuates their needs for self-determination and independency [10] and information culture can be considered as a synergetic factor which build and structure the process of socialization, define patterns and contexts of self-consciousness development of personality during life crisis periods [11].

Review and analysis of recent research have shown a lack of theoretical and practical elaboration of the self-attitude study in the context of developing ICT proficiency in adolescence; it gave us grounds to choose the given theme for the study.

Study hypothesis: information culture of personality in adolescence which is characterized by different levels of ICTs proficiency can be considered as a factor of self-attitude development; it determines the choice of scenario development of self-attitude (positive, negative, conflicting) and the level of positive attitude toward "Self" as subject of activity.

Methods of Study and Participants: The sample consisted of 111 students of secondary high schools # 20, 49 and lyceum #10 (city of Belgorod, 8-9 grades); there were 60 boys and 51 girls. Average age of respondents is 14,2 years.

Information culture (IC) was assessed with the author's inventory scale which resulted in division the sample of participants into 3 groups with different levels of IC development: user (54,1%), skilled user (29,7%) и expert (16,2%).

Development of self-attitude was assessed with MIS questionnaire (Pantileyev, 2003), it allowed to study 9 factors of attitude toward "Self" (inner honesty, self-confidence, self-guidance, reflected "Self", self-worth, self-acceptance, self-attachment, conflicted "Self" and self-accusation) in order to discover the prevailing character of self-attitude and evaluate its structure depending on adolescents' IC level.

The analysis of empirical data were made by means of mathematical statistics methods, implemented in the system SPSS 19, among which we used correlation analysis (Spearman's rank correlation coefficient [ρ]), nonparametric statistics (Mann-Whitney U test, Kruskal-Wallis H test, Jonckheere-Terpstra J* test, Fisher's exact [ϕ]* test).

RESULTS AND DISCUSSION

The self-attitude indicators of three analyzed groups (Figure 1) are on the average, normative level; overestimates and underestimates are absent. The best impression about the influence of ICTs proficiency on the attitude toward "Self" as subject of activity in adolescence is formed by factor self-guidance, however significant differences between groups were not found ($H=3,41$ $p=0,18$).

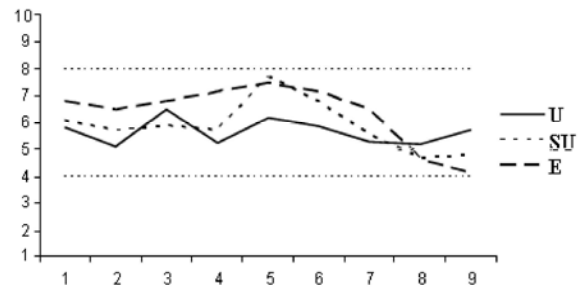


Fig. 1: The average values of self-attitude components selected groups of adolescents

Comments:

U-User, SU-Skilled User, E-Expert

1-Inner Honesty, 2-Self-Confidence, 3-Self-Guidance, 4-Reflected "Self", 5-Self-Worth, 6-Self-Acceptance, 7-Self-Attachment, 8-Conflicted "Self", 9-Self-Accusation

Increase in positive pole of modality self-attachment ($z=2.17$ $p=0,03$) from 1st to 3rd group shows more rigidity of "Self-concept" adolescents group "Expert" than "User", in other words they possess conservative self-sustainability, deny possibility and appropriateness of development of their own "Self". In our opinion, orientation to keeping such image is one of the defense mechanisms of self-consciousness.

Its worth paying attention to the tendency of reduction of values conflicted "Self" ($H=9,53$ $p=0,009$) and self-accusation ($H=11,07$ $p=0,004$) depending on the level of ICTs proficiency-we can admit that skilled users apart from beginners are less liable to self-analysis and introspection which take place against general negative emotional background of self-attitude. This fact is confirmed by rather high estimates in Reflected "Self" factor ($H=7,81$ $p=0,02$), "Self-Worth" ($H=18,72$ $p<0,001$) and "Self-Acceptance" ($H=6,44$ $p=0,04$) which demonstrate a feeling of sympathy to oneself, agreement with one's own beliefs, acceptance of one's own image of "Self" even with some faults. Moreover, adolescents of "Expert" group believe that their personality, character and activity must provoke respect and sympathy, approval and understanding in others.

According to E.T. Sokolova [12], there are three main structure-forming factors of self-attitude-autosympathy, self-respect and self-humiliation, which allow determining the nature of attitude towards "Self". It can be *positive* ("Self" is a condition contributing to self-realization; autosympathy and self-respect predominate over self-humiliation in the

Table 1: The nature of adolescent's attitude towards "Self" depending on the information culture level

Self-attitude nature	The Level of Information Culture					
	User		Skilled User		Expert	
Positive	18	30%	15	45,5%	15	83,3%
Negative	18	30%	0	0%	0	0%
Conflicting	24	40%	18	54,5%	3	16,7%

structure), *negative* ("Self" is a condition that hinders effective self-realization; self-humiliation predominates over two other factors in the structure) и *conflicting* (contradictory nature of "Self").

Table 1 demonstrates that adolescents from "User" group are characterized by all three features of self-attitude, but dominating one is missed ($[\phi]^*=0,73$ $p>0,05$). The particular feature of the groups "Skilled User" and "Expert" is absence of adolescents with negative character of self-attitude.

Conflicting attitude toward "Self" is most prominent with the representatives of the 2nd group ($[\phi]^*=2,80$ $p<0,01$), which manifests itself in opposition of two generalized factors-modalities: self-respect and self-humiliation. Increase in mastering of ICTs leads to changes in auto-sympathy ($[\chi]^*=8,9$ $p=0,01$). If with the first two groups we observe a trend to its increase, respondents from "Expert" group demonstrate abrupt decrease and prevailing of negative pole of the factor. Increase in negative emotional states of adolescents from the 3rd group can lead to re-structuring of the whole system of self-attitude, which takes place either as a result of neurotic disadaptation (reduction of effectiveness of social activity of a person, departure into virtual space) or as a result of depth self-acceptance (anti-social personal orientation-hackers).

It is worth paying attention to increase in number of adolescents with positive character of self-attitude depending on the level of information culture ($[\phi]^*=2,79$ $p<0,01$). As we know positive self-attitude as steady personal feature is a central link of inner psychological world of a man, a foundation of unity and integrity of his personality, it provides belief in one's capabilities. We share opinion of A. A. Ryseva [13] and believe that developed positive feeling addressed to one's own "Self" facilitates fuller realization of a person, determines its success in learning or other activities, provides for implementation of creative potential. Steady positive self-attitude of adolescents from "Expert" group manifests itself in their independence, decisiveness and risk readiness; it provides active position and authorship of a person in self-determination.

In order to investigate the patterns of structural organization of self-attitude of adolescents from "User", "Skilled User" and "Expert" groups we used method of structural analysis (A.V. Karpov, A.V. Shadrikov). Having run these results through correlation analysis we got the following matrixes of inter-correlations, presented in the form of graphical structures. Every correlation pleiads consists at most of 9 vertices-modalities of self-attitude, connected with each other by edges; length of edge is equal to absolute value of correlation coefficient $[\rho]$.

Analysis of structures by indexes of organization, differentiation and coherence allowed to arrive at the following conclusions:

- Self-attitude structure of adolescents from the group "Users" having wide range of correlations in the same time is characterized by low level of system organization. Special role in the structure is played by self-accusation because its weight is formed only from negative relations, they make system more "friable", disorganization of structure takes place under powerful divergent trend. The essence of "Self" of adolescents from "User" group is fixed in the form of conflicted "Self" and self-accusation ($[\rho]_s=0,35$ $p<0,01$) and is experienced mainly through negative and conflicting self-attitude, which reflect their inner honesty and reluctance to hide all negative information about oneself in spite of its significance.
- Self-attitude structure of "Skilled user" is characterized by high level of integration. Ordered state and balanced character of modalities can testify harmonious structure of self-attitude, its formed character and maturity. One's own "Self" as an inner center integrates and organizes personality of skilled users which can provoke respect, sympathy and approval from other significant people. Moreover the system of self-estimates experienced by adolescents in the form of reflected "Self", feeling of self-guidance and self-worth is a "display" by which subject can judge about effectiveness of his own activity.

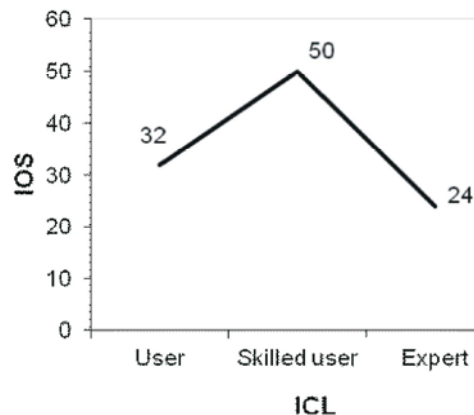


Fig. 2: The dynamics of change in the index of organization structure (IOS) of self-attitude components depending on the information culture level (ICL)

- High integration of modalities of self-attitude into single whole system increase auto-sympathy and self-respect of the adolescents from “Expert” group against background of decrease of self-humiliation and positive character self-attitude puts milestones of interrelated processes of self-actualization (awakening of the need in self-development), self-perfection (activization of personal features and realization of accumulated creative potential) and self-realization (presenting for the world of own “Self” through creative work).

Since it is integrative structural patterns which determinate the whole architectonics of self-attitude it is necessary to study comparative degree of manifestation of these effects depending on the level of IC.

Dependency (Figure 2) belongs to a category of so called “flat optimum” dependencies. Their meaning is that values of function (in this case-index of organization structure) are maximal and change little on very big range of argument value (here-level of information culture). Function is in the same time steady and resistant to changes in argument and the whole organization of the system of components of self-attitude is invariant with big variations of information culture. Only with its low and high values index of organization structure decreases substantially.

Analysis of dependency allowed to find out that the value of index of organization structure is maximal on that level of development of information culture which corresponds to the 2nd group of adolescents.

Interpretation of this result must take into consideration that it is the index which is the most general and reliable indicator of system perfectness, degree of its general structuredness and the measure of their functional capabilities. Therefore general structure of self-attitude components is most perfect on that level of its development which can be characterized as level above average. This is achieved by high degree of integration of components of self-attitude in combination with low differentiation which in the end results in high values of organization structure index.

CONCLUSION

In summary, the present research reveals that there is an optimum relationship between the level of information culture and degree of structural organization of self-attitude. Self-attitude of adolescents with low level of proficiency in ICTs as well as with high skills is characterized by less organization and perfectness of its structure. However, higher level of information culture contributes to positive attitude toward “Self” as subject of activity in adolescence.

REFERENCES

1. Zhichkina, A., 2005. Interrelation of identity and behaviour in Internet of adolescent users, PhD thesis. Moscow State University, Moscow.
2. Belinskaya, E. and A. Zhichkina. Strategies of self-presentation in Internet and their correlation with real identity. Date Views 15.06.2013. www.flogiston.ru/articles/netpsy/strategy.
3. Whitlock, J., J. Powers and J. Eckenrode, 2006. The virtual cutting edge: the internet and adolescent self-injury. *Developmental psychology*, 42(3): 407.
4. Manusov, V. and A. Jaworski, 2006. Casting nonverbal behavior in the media. *The SAGE handbook of nonverbal communication*, pp: 237.
5. Young, K., 1998. Internet addiction: The emergence of a new clinical disorder. *CyberPsychology and Behavior*, 1(3): 237-244.
6. Browne, K. and C. Giachritsis, 2005. The influence of violent media on children and adolescents: a public-health approach. *The Lancet*, 365(9460): 702-710.
7. Avdulova, T., 2011. Trends in socialization of teenagers in the context of information preferences. Date Views 15.06.2013. www.psystudy.ru/index.php/num/2011n6-20/573-avdulova20.html.

8. Martsinkovskaya, T., 2010. Information space as factor of socialization of modern adolescents. *World of psychology*, 3: 90-102.
9. Drotner, K. and S. Livingstone, 2008. *International handbook of children, media and culture*. Sage.
10. Zilka, G., 2011. Interactions between children within and outside of social networks. Date Views 15.06.2013. www.webfirstlive.lse.ac.uk/media@lse/research/EUKidsOnline/Conference%202011/Zilka.pdf.
11. Avdeyev, A., 2012. Modern adolescent in the space of informative technologies: psychological aspect. *Vestnik of Kostroma State University named after N.A. Nekrasov*, 3: 67-72.
12. Sokolova, E., 2008. Self-attitude as acmeological phenomenon, *World of psychology*, 3: 238-249.
13. Ryseva, A., 2008. Particularities and development of self-attitude of intellectually-gifted adolescents, PhD thesis, Irkutsk State University, Irkutsk.