

PSYCHODIAGNOSTICS OF GENERATION “Z” INTERESTS

Dalimova Nilufar Melibaevna,
National University of Uzbekistan Associate Professor of Psychology.
Uzbekistan.Tashkent. Email: n.dalimova@mail.ru

Abstract: This article covers the methodical stages developed for introduction of psychological diagnostics. The developed methodology is aimed at determining the degree of teenagers' dependence on computer games.

Keywords: generation, computer addiction, computer games, diagnostics, correction

Introduction. To develop a methodology to diagnose the dependence on computer games in teenagers, first of all, we have deeply studied the literature, conducted research on the topic, as well as signs of dependence on computer games, physiological features of adolescents, was compiled questionnaire consisting of 26 questions, taking into account the agenda. In developing this methodology, we tried to ensure that each question was aimed at identifying some aspect of dependence on computer games, so that the methodological issues as widely as possible cover computer addiction.

To assess the appropriateness of the questions in this questionnaire in terms of content, it was presented to experts who consisted of a group of psychologists. As a result, it was determined that some questions did not correspond to the content of the test and national beliefs, traditions and customs, so some of them were excluded, and some of them were printed a second time in an edited form, that is, the answers received passed the primary mathematical analysis and 20 questions were left for further research.

In order to test this questionnaire, aimed at determining the dependence on computer games, a study was conducted in two stages. Firstly, an initial study was conducted with pupils of 60 and 191 school, as well as 403 students in grades 6-9 of the foreign language specialized school. Each of the members was given a methodology with instructions and an answer sheet. According to the instruction, the teenager had to express his or her attitude to the opinion presented in the methodology as a "yes" or "no". On the basis of the data received from 403 pupils participating in this primary study, correspondence of each question to the content of the test was studied by special statistical methods.

Based on the results of the first phase studies, the questions were first placed on the efficiency index in ascending order (annex 1). To determine the question effectiveness index, we used the following formula, $E_i = 1 - \frac{3}{N}$, here E_i is the effectiveness of index, 3 is the number of answers indicating the dependence, N is the number of teenagers participating in the research.

The Efficiency Index (E_i) can vary from 0 to 1. How small the EI of an answer is, so little is it possible to determine the degree of dependence on computer games of

this question. Conversely, how large the IE, that is, the closer to 1, is so accurate that the question has the ability to determine the degree of dependence. Based on this reasoning, the questions were placed from low weight to heavy weight (appendix 1).

As can be seen from this table, a question with a small performance index was given at the beginning of the list under number 1. ($E_i = 0.367$). If you pay attention to the content of this question, you can see that it is addressed to the definition of teenagers who turn to computer games for calming and uplifting the mood. Probably, due to wide spread of such attitude to computer games, their use for such purposes both among teenagers and a little bit older, the index of definition of dependence on computer games of this question can have the lowest value. In other words, it is difficult to say that the degree of dependence is high among teenagers who turn to computer games only for this purpose. But it cannot be denied that such people may gradually form higher dependency stages.

And the question with the highest performance index ranked at the bottom of the list (appendix 1, question 20), this question is aimed at determining readiness for the crime of stealing money to play on the computer. It is obvious that readiness for such antisocial action means the dependence of a teenager ("from head to toe") on computer games. Unfortunately, of the 403 teenagers involved in the study, 13 were able to find the strength to answer the question in the affirmative. And by hiding the bitter truth (or trying not to see it), the number of those who answered with a pretended negative answer is unknown to us.

Despite this, to answer in the affirmative to this difficult "provocative" question, in our opinion, speaks of a too high degree of dependence on computer games, and speaking figuratively as if "absorbed with milk. Indeed, the equality of the efficiency index of this question to the highest, that is, very close to 1 value (0,968), confirms this very opinion.

If based on this reasoning, pay attention to the indexes of efficiency of other questions in the table, then we can come to the conclusion that the strength of determining the dependence of each question is different, that is, we can come to the conclusion that the ability to distinguish the dependence on the independence of the 2 and 19 questions is absolutely not equal. Since the survey questions have different meanings, according to the test rules, these questions should make different "contributions" to the overall test result, i.e. generalized indicators reflecting the degree of dependency. Therefore, in order to give the questionnaire the status of the measurement scale and its adaptation, we tried to implement the task - to express in specific points "contribution" of each question. As mentioned above, the reason is that it is not true that, as in conventional questionnaires, each suitable answer to the test was given 1 point. The higher the efficiency index, the higher the weight of the question. Having processed the results of the test, we did the following in the process of determining the degree of dependence in order to get rid of fractional numbers.

First, we marked the weight of the question with the smallest performance index with the smallest integer, i.e. number 1. If we take into account that this number is 2.723 times greater than the efficiency index of 0.367 1 question ($1/0.367 = 2.723$), if we count the weight of other questions by multiplying the indexes

of the questionnaire on a given constant (i.e. by 2.723), it will be logically correct. Suppose the weight of the second question is $0,469 \times 2,723 = 1,277$, the weight of the third question is $0,511 \times 2,723 = 1,392$ etc. Then the weight of the question with the highest efficiency index will be equal to the highest value, that is 2,635. But weight also consists of fractional numbers, in the use of which in determining the degree of dependence of each teenager disadvantage is natural. The most correct way to get rid of fractional numbers is to obtain integers by rounding them off completely. As a result, we got the points given in the last column of appendix 1. That is, if it was determined that the weight of the first 3 questions with a low degree of efficiency is 1, the weight of questions with numbers 4-19 is 2 points. And the weight of 20 questions, which have the highest efficiency index, is 3 points.

Taking into account the weight of this question, the highest score is now 38 rather than 20 if the results are processed by dependency (appendix 1). We decided to use this method of results processing in the next stages of our study.

The second stage of the study involved students in grades 6-9 of secondary schools № 60 and № 191 interested in computer games, as well as 150 teenagers who expressed a desire to participate in this study.

The data were statistically processed on a computer using a special program.

According to statistical analysis, if the average arithmetic value obtained by determining the degree of dependence on computer games was 12.613, the standard deviation is 8.060. Thus, we can conclude that on this sample, the standard rate of dependence on computer games varies from 4.55 to 20.67. 4 points and below this figure indicate that there is no computer addiction and 21 points and above this figure indicate a high degree of computer addiction in a teenager. Proximity to zero asymmetry (0.308) and excess (-0.852) indicates that the indicators of dependence on computer games to the normal distribution.

It is known that the reliability of all psychodiagnostic methods is considered one of the important psychometric criteria. The degree of reliability of the test expresses the weakness of various random factors and conditions that can affect the results. According to the majority of specialists, there are a lot of ways to check the reliability of methods (V.Cherni, 1983). But in practice, mainly several types of reliability are used. In many cases, the method of "division into parts" is used to check the reliability of measuring instruments, mutual closeness of questions on the content.

Using this method, we divided the test questions into parts in several ways, i.e.: a) the first and following ten questions; b) 1-, 2-, 3- and 4-five; c) the sum of 1-, 3-five and 2-, 4-five; d) even and odd questions. We then attempted to examine the mutual correlations between the individual sum indicators obtained for the groups of these questions (see appendix 2).

As you know, if the questions of the method are similar in content, the correlation coefficient between the obtained sums in the divided parts will be much higher. If the correlation coefficient is not lower than 0.75 - 0.85, the technique can be considered reliable. Usually, if correlation coefficients are 0.90 and higher, their results are considered the most reliable (A.Anastasi, 1982).

But according to some specialists, not very high reliability coefficients may appear at the early stages of the diagnostic method development. The reason is that several questions in the composition of the developed method have a specific, some other content, it is these questions that lead to the correlation coefficient reduction. Traditionally, such questions are specially analyzed. It will be useful if they are either modified after editing, or excluded from the test.

In order to determine which questions reduce the correlation coefficient, usually obtained digital data of "suspicious" questions are excluded from the processing and the remaining questions are calculated by the correlation coefficient. They are then compared to previous results. It is worth noting that excluding a question from the methodology, changing its place or content after editing, requires recalculating the correlation coefficient.

At this stage of the study, we have decided not to carry out such a complex task yet. There are two reasons for this. First, the process of adaptation described above is a separate research work that takes several years and does not constitute the main objective of our study. Second, as some researchers have argued, the reliability factor depends not only on how well or incorrectly chosen questions are, but also on how similar or different respondents are from a psychosocial point of view, the reliability of whose measurement methods have been tested. The fact is that simpler concepts, values or states that are understandable for a certain group of respondents may be unclear or may be an anomalous case for another group of respondents. The more such "different content" questions in the test, the less reliable the reliability coefficient of such a test will be. Interestingly, because such questions in the questionnaire can be placed in both the odd and even half, it is much more difficult to pinpoint them accurately.

However, such issues reflect the fact that computer games addicts are different from other teenagers with certain properties. For example, actions related to "lying" in question 17, "stealing" of question 20 are usually considered as antisocial qualities. For this reason, the number of teenagers who answered these questions positively is smaller (not exceeding 10-15%). The reasons for the low reliability coefficient of 0.400 and less than that can be attributed to certain qualities typical of this type of adolescents, namely low self-esteem, insecurity, guilt.

In spite of this, we can see from the results that all the obtained reliability coefficients for the "computer dependencies determination" method are very high ($p < 0.001$).

Correlation coefficients between certain issues of this technique (2-application) are also calculated. There are high correlations between all groups of questions, this confirms the similarity of questions in content and reflects their common direction. It should be noted that the correlation coefficient below 0.5 shows that the technique contains several questions of specific content (I.G. Senin, 1991). The methodology we are developing also contains such questions, these questions are mainly located in the fourth five.

Especially, the last question chosen by respondents, "Did you steal money for computer games?", is very rare. (3.23%) is characterized by high antisociality and, therefore, this fourth five, in correlation with the other three fives, received low rates.

In order to determine how close each method of question is to the content of other questions, the results obtained for 20 questions were processed by factor analysis varimax. As a result, the factor loads of each of the six factor questions were calculated using a computer program. As can be seen from Table 1, most questions on the first and third factors showed high correlations.

Table 1

Results of factor analysis of test questions (n=150)

Serial question number	Factors					
	1	2	3	4	5	6
17.	.708	-.112	.101	-.152	.121	.215
18.	.656	.024	.052	.226	.096	.147
16.	.560	.150	.083	.089	.200	-.095
11.	.516	.308	.115	.074	-.025	.070
2.	.454	.323	.396	.150	-.229	-.270
1.	-.023	.788	.046	-.020	.026	.092
8.	.230	.674	.049	.129	.015	-.104
5.	.070	.573	.273	.099	.208	.090
3.	.165	-.022	.755	-.004	-.073	.033
9.	.036	.103	.508	.322	.067	.348
4.	.047	.185	.440	.171	.305	-.174
6.	.123	.279	.431	.167	.133	.316
10.	.403	.225	.408	-.056	.151	-.088
12.	-.066	.027	.162	.766	-.180	.047
14.	.150	.226	-.038	.621	.129	-.006
15.	.072	-.017	.059	.554	.425	.012
13.	.411	-.047	.096	.476	.148	-.195
19.	.254	.047	-.024	.135	.679	.041
7.	.084	.238	.444	-.119	.538	-.053
20.	.117	.033	.022	-.044	-.034	.840

If you look carefully at Factor 1 figures, you can see that the following questions have high factor loads: 17 - "To hide your interest in computer games, did you have to cheat your parents, teachers or other adults? - 0,708", 18 - "if computer games cause problems with your studies, will you continue playing them? - 0.656", 16 - "when there was a chance of trouble in your studies or personal life, were there times when you kept playing computer games? - 0.560", 11 - "Are you indifferent to sleep because of computer games? - 0.516" and 2 - "do you devote more than two hours of your time to computer games per day or do you play continuously? - 0,454".

These results reflect the substantive closeness of the issues that were included in this factor. Based on the content of the questions, this factor can be called "readiness to violate social norms in order to meet the need for computer games". In other words, this factor may reflect the relationship between the overall content of all questions and the failure to take into account social and regulatory constraints.

If you closely observe the figures in factor 2, you can see the high factor loads of questions number 1, 8, 5. 1 - "Have you had time when you played computer games to cheer up (avoiding guilt, helplessness) or just to feel at ease? - 0.788", 8 - "Have you used computer games to avoid everyday problems? - 0.674", 5 - "Have you ever refused to eat in order not to stop an interesting game or eat in front of a computer? - 0,573".

These figures testify to the substantial closeness of the corresponding questions in the minds of teenagers and, we called this factor "high emotional-sensual attitude to computer games". Because, if you carefully consider the issues of this factor, you can see the experiences and attitudes of teenagers associated with different feelings about computer games.

As stated above, most questions showed high correlations on the third factor and these are 3, 9, 4, 6 and 10 - questions, that is 3 - "Do you constantly think about computer games, remembering the previous levels of the game, are you interested in what will be at the next levels? - 0,755", 9 - "If necessary to stop the game, you had anger, resentment, do you experience negative emotions as if you had lost something? - 0.508", 4 - "When you sit at the computer, do you experience a state of euphoria, exciting moments of exhilaration? - 0.440", 6 - "Do you always feel like you haven't played much time and you often want to play more? - 0.431" and 10 - "Did you have to give the wrong answer (cheat) to the question about how much time you spend on your computer? - 0,408".

In our opinion, this factor can be called "the need and desire for internal experiences that arise in the process of computer games. Questions of this factor include internal experiences, aspirations of the teenager in the process of playing.

In indicators of the 4th factor - 12, 14, 15, 13 - you can see high factor loads: 12 - "After playing at the computer, do your eyes dry out and itch? - 0.766", 14 - "Do you feel constant pain on your back? - 0.621", 15 - "Did you feel numb palms and hands or pain while using a computer? - 0.554" and 13 "Does your head hurt after playing on the computer? - 0,476".

Proceeding from the content of questions, this factor means the interconnection of questions on a certain sign, namely, speaking the scientific language, "awareness of the impact of computer games on physical health" in the minds of teenagers. Because all questions of this factor show the teenager's awareness of the negative impact of computer games on physical health.

In factor 5, questions 19 and 7 have high factor loads, namely, 19 - "Do you feel apathy (indifference), decay, anger when you are not sitting at the computer? - 0,679", 7 - "Have you ever had a chance when you wanted to limit your time to computer games, but you couldn't do it? - 0,538".

Not surprisingly, these numbers show "a sense of hopelessness and weakness associated with dependence on computer games.

In the 6th factor you can see that only one question has a high factor load, is "Did you steal money to play computer games?". 20 - question, its factor load is equal to 0.840. Based on the content of the question, without any doubt, this factor was called "readiness for antisocial actions to meet the need for computer games. Because the readiness of the teenager for the actions contradicting social norms in order to satisfy the need for computer games can also be seen through the indicators of this factor.

Based on the results obtained with the help of factor analysis, it should be noted the main features of teenagers' interest in computer games:

1. Preparedness to violate social norms in order to meet the need for computer games.
2. High emotional and sensory attitude to computer games.
3. Necessity and aspiration to the inner feelings arising in the process of computer games.
4. awareness of the impact of computer games on physical health.
5. Feeling of despair and weakness connected with dependence on computer games.
6. Ready for antisocial actions to meet the need for computer games.

As it is visible from the above results of the factor analysis, the developed technique for diagnostics of dependence on computer games contains various features of dependence on computer games and it can be included in number of reliable techniques.

REFERENCES

1. Beard K. Internet addiction: Current status and implications for employees//J. Employment Counseling. -2002. - Vol. 39, N 1. - P. 2-11.
2. Beck A. T. Cognitive therapy and the emotional disorders. - New York: International Universities Press, 2001. - № 2. - P. 34 - 40.
3. Griffiths M.D. Internet «addiction»: an issue for clinical psychology? // Clin. Psychology Forum. - 1996. - № 5. - P. 32-33.
4. Orzack M. Computer Addiction: What is it? // Psychiatric Times. -1999. -P. 34-38.
5. Young K. Internet addiction: symptoms, evaluation and treatment. - Innovations in clinical practice: a source book, 1998. - Vol. 3. – P. 19-31.