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The Semantic Analysis of Students' Life Activity in a Social Network

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Abstract

Global trends related to the development of digital space provide researchers with new opportunities for studying human behavior in virtual interaction on platforms of various social networks. In the modern personality cognition psychology, one of the relevant study areas is the virtual communication. Interaction in the virtual space is actively being introduced into the existing reality, in this regard, a person is forced to constant behavior change, taking into account the reality in which (real or virtual) he/she interacts.

Today, most Russians have accounts on social networks and are actively using other features of the virtual space. Interaction in social networks has its advantages over ordinary communication, namely: tools for finding any information and the ability to conduct a dialogue with several people at the same time, while being in different places. Users of social networks can actively form their profile on a digital platform in which they reflect any information about themselves including personal ones. A user of a social network creates a virtual personality on the personal website page, the characteristics of which are presented in the form of markers (photos, posts, audio recordings, videos, group topics, number of friends, subscribers), which we can use as virtual ones. We can use virtual markers as success criteria of a modern student since a competition for a successful student is an important component for the educational environment, and the fact that a successful student who demonstrates success in studies, science and life activity is a resource for the future of our country, it follows that the search for applicants differing in the potential of a successful student is an important task for an educational institution. In this regard, the purpose of the study is a semantic analysis of the students' life activity based on virtual markers of the VKontakte social network user.

This article discusses the results of the virtual markers research of students' vital activity in the framework of the project, which is carried out with the financial support of the Russian Science Foundation and aims to develop a theoretical and applied model for predicting a person's vital activity in educational and professional activities through social networks.

This study is aimed at exploring the possibilities of predicting students' life activity through the study of the objective laws between a number of quantitative and content characteristics of their profile in social networks (the number of friends, the nature of groups, subscribers, photos and posts) and their academic performance. The research methods in this work are a comparative analysis of personal pages in a social network using content-analytical research and statistical methods (percentage ratio and analysis of average values).

This article considers the life activity of a person in a virtual space through social networks. The empirical data obtained make it possible, based on the analysis of virtual markers, to compose a psychological portrait of a user, predict models of his/her behavior, and also develop new psychological methods of work that will help overcome difficulties and solve problematic situations that arise in person's virtual space.

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Introduction

The global trend associated with the development of the concept of “digitalization” opens up completely new possibilities for modern science. Digitalization is the main path of progress that provides the transition to the next generation economy. Therefore, the problem of studying the influence of this concept on personality development exists and requires special attention from scientists, including psychologists. Digitalization is that sphere of life which is developing rapidly and transfers into another format not only existing economic relations, and existing business models, but also the ordinary life of people. Thus, the possibilities that are open to psychological science in the digital age are connected with the study of the features of human behavior in virtual space, namely, on platforms of various social networks. One of the most promising areas in modern personality psychology is the study of the mechanisms of virtual interaction (Asmolov et al., 2010; Voiskunsky, 2013; Zhichkina, 2000; Zinchenko, 2011; Turkle et al., 1996; Albrechtslund, 2008; Back et al., 2010; McAndrew et al., 2012; Khakimzyanov, 2016; Popov et al., 2016). The interaction in the virtual space flows smoothly into a real interaction between people, in this regard, a person has to constantly monitor and change the features of his/her behavior considering what reality (real or virtual) he/she interacts here and now.

Today, active interaction in the virtual space takes place on social networking platforms. According to the results of the Russian Public Opinion Research Center, the majority of Russians (62%) have accounts on social networks, about half (45%) of citizens over 18 use them almost every day. This is due to the fact that interaction in social networks has its advantages over ordinary communication. The benefits are as follows:

- search tools for any information;
- the ability to conduct the dialogue with several people at the same time, while being in different places;

- the possibility of hiding one's identity;
- the possibility of forming a new personality, etc.

Based on the data of a sociological survey, we can conclude that most students have accounts in social networks and actively interact not only with each other, but also with potential employers in social networks. Competition for a successful student, specialist is an important component for the development of the environment which we live in. This is due to the fact that a successful student, who demonstrates high efficiency in educational, scientific and social activities, is a resource for the future of our country. In this regard, the study of students' life activity in social networks, the search for psychometric markers of student success is an important task for society in the digital age. Consequently, social networks are an element of the global digitalization of the country and the educational environment, and they act as a resource which possibilities are still being revealed.

Social networks are a relative recent phenomenon - a digital platform that connects millions of users from all over the world and expands the boundaries of their interaction with each other. Also, social networks are one of the leading areas of research at the intersection of psychology, political science, sociology, etc. (Asmolov et al., 2010).

Users of social networks independently form their profile on a digital platform where they reflect any information about themselves, including personal one. A user of a social network creates a virtual identity on the personal page of the site; the characteristics of this virtual identity are presented in the form of markers (photos, posts, audio recordings, videos, group themes, the number of friends, subscribers, likes, hashtags) that we can use as virtual ones. And since competition for a successful student and specialist is an important component for our society, and the fact that a successful student, who demonstrates success in studies, science and social activity, is a resource for the future of our country, it follows that the search for virtual markers of successful students is the important task of our research. In this regard, the issue of identifying virtual markers of vital activity of successful students on the basis of VKontakte social network becomes relevant.

Purpose and objectives of the study

The object of the study is the life activity of students in a social network.

The subject of the study is virtual markers of students' vital activity in a social network.

The purpose of the study is a semantic analysis of the students' virtual life activity in a social network.

Methodology

This article discusses the results of a semantic analysis of virtual markers of students' vital activity in the framework of the project, which is carried out with the financial support of the Russian Science Foundation and aims at developing a theoretical and applied model for predicting a person's vital activity in his/her educational and professional activities through social networks.

The following research methods were used to achieve this goal and solve the tasks: a comparative analysis of personal pages on a social network using content-analytical research and statistical methods (percentage ratio and analysis of average values).

The study was conducted on the basis of Kazan Federal University. The subjects were students of different courses. The selection was carried out on the basis of the randomization method through a random choice of respondents. As a result there was formed a sample group which included 1,500 subjects. All students gave their consent to participate in the study and work with their personal data.

The subjects were divided into 2 groups:

Group 1 - academically successful;

Group 2 - academically unsuccessful.

Next, the analysis of the personal pages of students who are in the public domain on the social network VKontakte was made. A preliminary comparative analysis of personal pages was carried out. As a result, preliminary analysis positions (group themes, hashtags, likes) were highlighted.

Results

The analysis of students' personal pages showed that the first three frequently visited thematic groups of Vkontakte are identical for academically successful and unsuccessful students.

Academically successful students are subscribed to the following thematic groups:

- Podslushano KFU (Overheard KFU) - 46% of students;
- Kazan | Kazan. Where to go? | Event Poster - 45% of students;

- KFU students trade union committee - 33% of students;
- KFU teachers quotes - 26% of students;
- Inde • Kazan - 24% of students;
- Secrets of the Universiade Village - 19% of students;
- VKazani Poymut | The main community of Kazan - 18% of students;

Academically unsuccessful students are subscribed to the following thematic groups:

- Podslushano KFU (Overheard KFU) - 41% of students;
- Kazan | Kazan. Where to go? | Event Poster - 33% of students;
- KFU students' trade union committee - 22% of students;
- Secrets of the Universiade Village - 21% of students;
- KFU teachers quotes - 18% of students
- VKazani Poymut | The main community of Kazan - 16% of students
- Inde • Kazan - 12% of students.

An analysis of the likes of academically successful and unsuccessful students for the publication they preferred on the social network Vkontakte gave us the following results (Table 1).

Table 1. Information about students' likes on publications they preferred

| Successful students | | |
|--|-----------------|---------|
| Groups | Number of likes | Percent |
| The best poems of great poets Literature | 471 | 9.25 |
| Ward N 6 | 427 | 8.39 |
| Kinomania | 371 | 7.29 |
| Lepra | 351 | 6.89 |

| | | |
|--|-----------------|---------|
| NR | 319 | 6.26 |
| Lentach | 301 | 5.91 |
| Vocabulary (EN) | 252 | 4.95 |
| Kazan Kazan. Where to go? Event Poster | 217 | 4.26 |
| Unsuccessful students | | |
| Groups | Number of likes | Percent |
| Podslushano KFU (Overheard KFU) | 621 | 14.50 |
| Kazan Kazan. Where to go? Event Poster | 317 | 7.40 |
| Institute of International Relations, KFU | 259 | 6.05 |
| KFU students' trade union committee | 250 | 5.84 |
| NR | 225 | 5.25 |
| Ward N 6 | 178 | 4.16 |
| Rhymes and Punches | 176 | 4.11 |
| MDK | 171 | 3.99 |

A semantic analysis of the content of personal pages made it possible to single out the top 1000 hashtags for reposts written by academically successful and unsuccessful students. The hashtags were taken as a basis, since they reflect the semantic context of the written message.

Academically successful students most often repost a text on a social network with the mention of the following hashtags:

1. #Trap
2. #Skrillex
3. #bicyclereligion
4. #steampunk
5. #Методичка_для_учителя_русский

6. #Legolas
7. #ElectroHouse
8. #Sherlock

Academically unsuccessful students most often repost entries with the following hashtags:

1. #iKON
2. #EXO
3. #боевик
4. #VolgaStory
5. #от_подписчика
6. #reed900
7. #rk900
8. #detroitbecomehuman

Discussions

An analysis of the content of the thematic groups, that the student is subscribed to, shows us that 33% of successful students are more interested in the statements of university teachers, their quotes and various subject areas that are studied at the university, in contrast to unsuccessful students (18%).

Twice as many successful students (24%) compared with unsuccessful (12%) are subscribed to the “Inde-Kazan” group, which highlights the life of the cities of the Republic of Tatarstan, therefore, successful students have a more pronounced cognitive activity.

In general, the majority of academically successful students are subscribed to thematic groups on the social network VKontakte, which are associated with cognitive activity, and academically unsuccessful students are subscribed to groups related to job search, music updates and humor.

Based on the data given in table 1, we can conclude that:

Academically successful students like publications related to the poetry and works of great poets (The best poems of great poets | Literature), as well as publications related to the study of English (Vocabulary (EN)). Academically unsuccessful students are more impressed with information related to gossip (Podslushano KFU), with a description of places where you can go and have fun (Kazan | Kazan. Where to go? | Poster). This indicates that successful students are more open to new things, knowledge and creativity, in contrast to unsuccessful students, who are more characterized by a desire to get quick emotions from gossip and entertainment.

A semantic analysis of the hashtags used for reposting academically successful students indicates their interest in certain areas of music (#Tarp, #ElectroHouse, #Skrillex); they are also passionate about the novels of J.R.R.Tolkien (#Legolas), which testifies to their cognitive activity in the fantasy world. Academically successful students spend their time on studying the subject “Russian language” (#Методичка_для_учителя_русский), this hashtag contains files with textbooks and guidelines on the subject “Russian language”. Very often, these students have the #Sherlock hashtag, which is used for the Sherlock television series posts, for posts with various detective stories, all of which indicate that academically successful students are prone to developing their cognitive abilities. And another hallmark of academically successful students is their passion for bicycles and their rides (#bicyclereligion).

A semantic analysis of the hashtags used for posts of academically unsuccessful students indicates that this category of students is more oriented to Korean (#Ikon) and Chinese (#EXO) pop music, to watching “action movie” genre (#боевик). Students in this group repost entries for the computer game “Detroit: Become Human” (#detroitbecomehuman, #reed900, #rk900). This indicates that one of the hobbies of these students is playing computer games and getting pleasure from them. There are notes on how to spend cultural holidays on the Volga River in the residence “Volga House” (#VolgaStory), this indicates their orientation to entertainment and not to cognitive activity.

Conclusion

The results of the semantic analysis of students' vital activity in a social network gave us the following results:

1. Successful students are subscribed to thematic groups on the social network Vkontakte, which are associated with cognitive activity, and academically unsuccessful students are subscribed to groups related to job search, music updates and humor. This may indicate that by means of analyzing the user's social

network page and paying attention to the subject groups the student is in we can determine his/her academic success.

2. The vital activity of successful students on a social network shows that they like publications related to creativity and poetry, the study of foreign languages. The vital activity of unsuccessful students in a social network is focused on information about gossip, about where you can have fun. This indicates that successful students are more open to new things, knowledge, creativity, in contrast to unsuccessful students, who are more characterized by a desire to get quick emotions from gossip and entertainment.

3. A semantic analysis of the hashtags of academically unsuccessful students showed that they are more focused on listening to Asian music and watching the action movies. They like computer games. Academically successful students are more focused on cognitive activity.

This article considers the activity of a person in a virtual space through social networks. The empirical data obtained make it possible to compose a psychological portrait of a user, based on the analysis of virtual markers, to predict models of his/her behavior and also to develop new psychological methods of work that will help overcoming difficulties and solving problematic situations faced by a person in virtual space. The knowledge obtained in the course of the study is of great theoretical and practical importance. So, we have the opportunity to purposefully identify successful students in a social network.

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