

STUDY OF STUDENTS' EDUCATIONAL ACTIVITY STRATEGIES IN THE SOCIAL MEDIA ENVIRONMENT

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***Abstract:** The paper reports a study of students' education activity strategies in the social media environment. The authors' approach is based on the following three-component structure of educational activity: the motivational, the pragmatic and the management components. The research proved that students have different profiles of the educational activity in the process of using social media. These profiles are based on the characteristics of the mentioned components of educational activity. In general, students do not apply the most productive strategies of educational activity in the social media environment that meet the requirements for teaching and self-education in the 21st century. The authors propose several directions for advancing students' educational activity.*

Keywords: educational activity, social media, students, ICT tools, digital environment.

INTRODUCTION

Education today successfully applies digital technologies and various practices lying within its context. Educational institutions are well equipped with devices, providing the access to the global network. Teachers tend to upgrade their ICT competences constantly, which leads to the expansion of new forms and methods of educational practices (e-learning, b-learning, online learning). However, the analysis of information and communication technologies (ICTs) progress and their impact on society, as well as the ideas of a smart society and a digital economy, shows that it is necessary to advance the process of professional development (Morze 2017). The need for advancement is explained by modern requirements for a specialist, a university graduate.

The advancing education theory presupposes the purposeful preparation of students for life and work in an informationally intensive environment that requires people to be responsible, flexible and ready for lifelong learning (Safavi 2018). Consequently, educational practices demand continuous enrichment and

development. It is intended to combine the preparation of a new generation for the future with a meaningful today's life activity of students (Grishina 2017). For example, in the Russian professional standards of pedagogical activity, the implementation of e-learning, digital educational resources, research, project and other activities of students are declared as necessary skills for teachers (Register of professional standards of the Ministry of Labour of Russia).

The Horizon 2017 Report highlights the idea that “learning ecosystems must be agile enough to support the practices of the future. In using tools and platforms like LMS, educators have a desire to unbundle all of the components of a learning experience to remix open content and educational apps in unique and compelling ways” (p.2). This idea is consonant with the ecological systems theory of a psychologist Uri Bronfenbrenner (Bronfenbrenner 1979; Manning 2017). When a child develops, all the environments (systems) in which he or she is involved have a mutual influence: microsystem - the child's family; mesosystem – kindergarten, school, peers; exosystem - adult social organisations; macrosystem - cultural customs of the country, values, and resources. Similarly, for the professional development it is also necessary to create a set of conditions in the digital environment that will reflect the different levels (systems) of a learner's interactions – a specific practical competence, the ability to interact with others, the vision of the broad social context of various activities and consequences. However, today it is necessary not only to support development, but also to accelerate it. One of the directions of advancing education is the use of educational opportunities of social media.

What happens in the educational sphere? One of the answers is the expansion of the range of the opportunities for mastering educational programs and stimulating self-education through electronic environments and e-learning. In this context, very important is not merely the mastery of advanced ICT tools but also the acquisition of the progressive educational strategies such as self-directed learning, communicative learning, collaborative learning, critical thinking, experimental learning, etc. (Molonilo 2018). It is necessary to design educational resources, including digital resources, in such a way that all these requirements of future professional activity are reflected in students' academic activity. Therefore, it is necessary to use the up-to-date ICT tools, because they help learn how to act in the conditions of uncertainty and redundancy of information, how to study something new simultaneously with solving professional problems. Today social media are among the advanced developing technologies and they match students' information behaviour strategies (Noskova 2018).

Furthermore, it is necessary to study students' preferences, their expectations from those electronic tools that they intend to master. This will help, on the one hand, to take into account their request, needs, a level of readiness for independent work and a choice of different educational strategies. On the other hand, it will help to see the weaknesses that need special attention, e.g., not sufficiently productive learning strategies that they use, and create conditions for mastering strategies that

are more advanced. Thus, students need conditions to master strategies that will be productive in the process of continuous learning: cooperation, teamwork, critical information analysis, distributed activities, mutual assistance, experience exchange, independence, reflection, and the ability to set goals for oneself or redefine goals set from the outside.

1. METHODS AND PROCEDURES OF THE STUDY

The main goal of the study was to analyse students' educational activity strategies in the social media environment. Educational activity is one of the main factors of professional development. Activity is considered a dynamic condition, which determines the possibility of forward movement and development. Educational activity includes the intensity and volume of human interaction with the environment, as well as the ability to set in-depth goals and objectives and to rise above the level of the requirements of a particular situation.

It is important that in the modern digital environment the proportion of personal activity increases. An example of such activity in the general social aspect can be the concept of a user-generated content based on social media. The concept of a "collaborative filtering" was introduced not just as an exchange of meaningful information through various communities, including network ones, but also as a tool for constructing predictions of the community members' preferences on the basis of their commonality in the evaluation of certain objects (Wang 2012). The economic effect of this phenomenon is proved, however, undoubtedly, the educational effect also exists - it is the development of knowledge sharing communities, with the effects of self-organisation (Patarakin 2017).

Based on the analysis of the generalised structure of human activity (the activity approach in psychology), the authors propose the following structure of educational activity in the context of the use of social media. It includes three main components:

- the motivational component (interest in the variety of activities with social media, the level of social media use skills, the awareness of the practical importance of social media tools in solving various types of problems - educational, professional, and life problems);
- the pragmatic component (independence and autonomy, orientation to the actions of the members of the group, preference for actions by patterns, orientation to the creative approach, orientation to the level of complexity, aspirations to discover something new, needs for mutual assistance);

- the management (and self-management) component (self-organisation, orientation to the maximum score, orientations to the position in the rating, orientations to the content reflection, requirements for a teacher's feedback, awareness of the portfolio objectives, needs for joint activities).

In order to receive information about students' educational activity strategies in the social media environment, a questionnaire was prepared, which included questions on all three components of the educational activity. The questionnaire was made with the use of the Google Forms tool. The questions had several types of presentation. In most of the questions, it was suggested the respondents determine the significance of one or another aspect of educational activity on a five-point scale (1 point - never or almost never, 2 points - very rarely, 3 - rarely, 4 - quite often, 5 - very often or constantly). For example, "When preparing assignments, I would like to see examples of other students", "I try to be creative", "I would appreciate the teacher's comments on the results of my work", etc. Several questions offered a choice of answers. For example, "Choose one of the options:

- 1) If difficulties arise during the study, I will overcome them independently; this will make study even more interesting for me;
- 2) If difficulties arise during the study, I will seek help from the teacher;
- 3) If difficulties arise during the study, I will ask other students for help;
- 4) If difficulties arise during the study, I will analyse how other students act and find a solution myself".

The questions with the suggested answers were further analysed separately in terms of the qualitative analysis of students' choice. It is important that the characteristics of educational activity were considered in the context of the application of social media. In general, the use of social media in educational practices was not something completely new to the respondents, as in the process of delivering their courses, teachers offer students various tasks that they can perform with the use of appropriate social media tools. For example, joint editing of documents based on Google services, creating mind maps, designing a personal website or a blog as an e-portfolio. Thus, having some experience, students could quite adequately assess their preferences. The sample of research included 245 respondents: bachelor students from the Herzen University (Russia). All respondents represented different directions of pedagogical education, e.g., future teachers of information technologies, art, music, foreign languages, and primary school teachers.

During the study, a hypothesis was put forward that students can have different profiles of educational activity in the process of using social media. These profiles are based on the characteristics of the motivational, pragmatic and management components of their learning activity. In general, students do not apply the most productive strategies of educational activity that meet the requirements for teaching and self-education in the 21st century.

2. ANALYSIS OF RESULTS

2.1 Cluster analysis of students' activity profiles

For the analysis of answers, methods of descriptive statistics were used, as well as the correlation analysis. To visualise the correlations between the variables studied, as well as to group them, the cluster analysis was used (Figures 1-3).

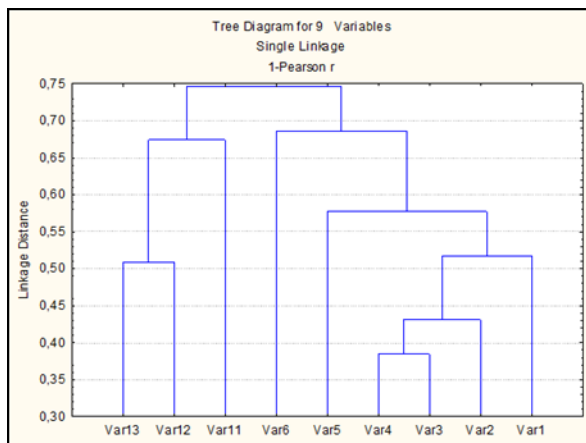


Figure 1. Motivational component of educational activity

Source: Own work

Variable 13 - Preferences in the content presentation format (text format)

Variable 12 - Preferences in the content presentation format (video format)

Variable 11 - Preferences in the content presentation format (screenshots with explanations)

Variable 6 - Self-reliance

Variable 5 - Awareness of social media practical importance in solving life problems

Variable 4 - Awareness of social media practical importance in solving professional problems

Variable 3 - Awareness of social media practical importance in solving educational problems

Variable 2 – Interest in social media

Variable 1 - Initial level of social media skills

Figure 1 shows that variables related to the motivational component of educational activity form two clusters. The first cluster comprises the variables: 13 and 12 ($r = 0.49$), and variable 11 is added to them at a higher distance. The variety of content representation forms was significant for the most of the students. For example, the

rank “4” and “5” chose 73% of students for screenshots, 53% for video and 54% for texts.

The second cluster comprises variables 1-6. The closest relation is found between the variables 3 and 4 ($r = 0.61$); variable 2 merges at a higher distance. This means that the awareness of the possibilities of social media for solving educational and professional problems are closely linked, but the higher the interest in the application of social media is in general, the more the student is interested in mastering them for solving professional and educational problems. Thus, it can be concluded that in the proposed assignments it is important for students to see the meaning and the value for the ICT tools use in different types of activities. The variables 5 and 1 join at the highest distance of the association, which means that the initial level of social media skills, as well as their use for solving everyday problems do not have a decisive influence on their value for educational activity of students. However, this aspect should also be taken into account when designing assignments for students, since they can have an indirect effect on students' activity.

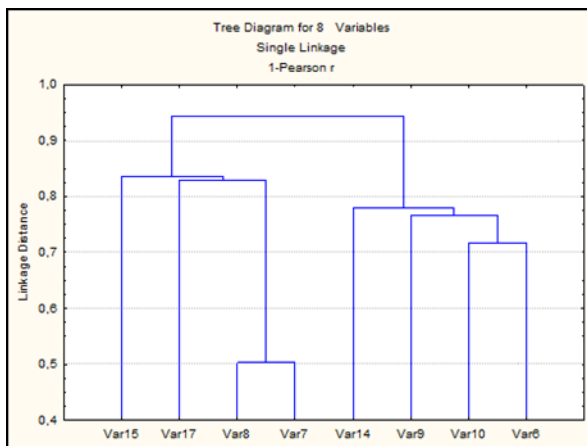


Figure 2. Pragmatic component of educational activity

Source: Own work

Variable 15- Needs for mutual assistance

Variable 17 - Needs for joint activities

Variable 8 - Needs for a pattern

Variable 7 - Orientations to the actions of group members

Variable 14 - Aspirations to discover something new

Variable 9 - Focus on creativity

Variable 10 - Orientations to the level of complexity

Variable 6 - Self-reliance

Figure 2 shows that the variables of the pragmatic component form two clusters. The first cluster includes the variables: 15, 17, 7 and 8. The most closely related variables are 7 and 8 ($r = 0.49$). Such close interrelations indicate several interesting aspects. On the one hand, students, apparently, are not ready to act independently. They want to see an example, a pattern, get some support, feedback from peers, etc. On the other hand, this shows their focus on social interaction, which is a good basis for the use of social media tools. After all, social media give all these opportunities – to work in a group, to share content, to give advice, to comment, and to see patterns. It can be assumed that at the initial stages of a new content study, social media tools can improve learning efficiency, due to their wide opportunities for interaction.

The second cluster is formed by the variables: 14, 9, 10 and 6. The closest interrelation is visible between the variables: 10 and 6 ($r = 0.28$). The variables: 9 and 14 join them at a farther distance. This agglomeration shows the features of interested and motivated students. If they are willing to work independently, they are ready to choose more difficult tasks, to discover new and to apply an individual, creative approach to the solutions of problems.

Accordingly, the analysis of the pragmatic component makes it possible to distinguish two profiles of students. The first profile is typical for students, initially not completely confident in their abilities, needing support, samples of completed assignments, opportunities to ask their peers for help. The second profile is typical of self-confident students, willing to work independently and to perform complex tasks with the elements of creativity. However, for this group, the vector of development can be the inclusion of them in the interactions with weaker students as consultants or as advisers for performing assignments.

20 - Orientations to a substantive reflection

19 - Orientations to the position in the rating

22 - Awareness of the portfolio importance

21 – Need for a teacher's feedback

18 - Orientations to the maximum score

16 - Self-organisation

Figure 3 shows two clusters. The first cluster is formed by the variables 19 and 20 ($r = 0.70$). The second cluster comprises the variables: 22 and 21 ($r = 0.43$); they are joined by variable 18 and variable 16. Based on the presented peculiarities of the grouping of variables, it is possible to draw conclusions about the nature of the educational activity of students. For students who are interested in their own progress, success, the position in the rating, it is also important to understand the reasons for their status, score, and the position in the rating.

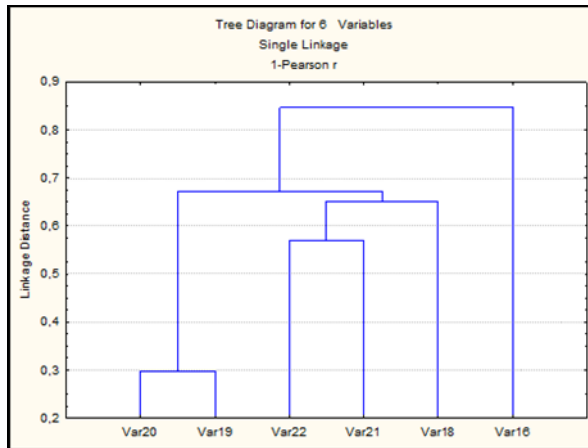


Figure 3. Management component of educational activity

Source: Own work

Accordingly, such students should be given the opportunity to implement this reflection. These opportunities are, primarily, formative assessment technologies that can be embedded in educational content (criteria for evaluating works, scales, criteria columns and tables, etc.) (Noskova 2016). At the same time, for students who are interested in applying the portfolio technology, feedback from the teacher is important (Cain 2018). It can be assumed that feedback from the teacher is important for students in terms of their wish to demonstrate their work, educational achievements, as well as to get some value judgments from a more experienced person. The connection of the variable “self-organisation” with the listed variables confirms that these features are characteristic of the motivated students who are able to plan their activities and manage time.

2.1 Additional features of educational activity

The analysis of answers to the questions with suggested variants showed additional features of students’ educational activity. Firstly, most students prefer to choose easier tasks (75%), rather than more complex ones (25%). Secondly, half of the students expect to receive the majority of necessary knowledge and skills during the lessons (50%), a significant number of students are eager to work independently, in addition to classes to show their abilities (43%). Almost half of the respondents will ask for a teacher’s help (48%), and 22% of the students will ask for their peers’ help, 17% will monitor others, analyse, but find a solution on their own, 13% will act completely independently.

The majority of students (68%) tend to manage and distribute their time for fulfilling assignments, and 20% believe that the main thing is not to miss the deadline, 12% need a clear plan and supervision from their teacher.

49% of the students prefer to perform assignments in pairs with other students, counting on their support and cooperation. 45% of the respondents prefer to work

individually. Only the remaining 4% are ready to work in a group, and only 2% are ready to assume the role of a leader of the group.

Thus, students' preferences show that not all the strategies implemented by them are productive, especially in conditions of using the opportunities of social media, as well as the ideas of continuous education and self-development. In particular, the preference to get feedback only from the teacher, an inactive use of mutual assistance, occasional knowledge sharing with colleagues, and the lack of self-management – all these are the features of non-productive learning strategies.

CONCLUSION

The analysis of the answers obtained makes it possible to draw a number of conclusions about the specifics of students' educational activity strategies in the social media environment.

Firstly, the results showed that the motivational aspect is crucial in the process of implementing a particular strategy of educational activity. The most significant for the development of students' motivation is the awareness of the opportunities of social media for solving educational and professional problems. This understanding is more important than the initial level of social media skills or the experience of their use in everyday life. Consequently, tasks when students clearly see the practical outcome, the aspects of their new knowledge and skills application in the future, and the benefits come to the forefront.

Secondly, in the pragmatic aspect of students' educational strategies, two alternative profiles can be identified. The first profile unites students who are initially not fully confident of their abilities, need support, samples of completed assignments, and opportunities to ask for help. The second profile unites confident students, aimed at independent work, ready to fulfil complex tasks with some elements of creativity. Therefore, in the process of preparing assignments for students in the electronic environment, with the use of social media, teachers should focus on these two students' profiles. At the same time, the most promising for development is the transition to the third profile, which still was not completely identified in this research, but its outline can be drawn from the answers of the most advanced students. This is the transition of the most motivated and self-confident students from exclusively individual work to the group work as leaders, consultants and facilitators. In addition, the most outstanding and interesting students' works can be included in the bank of the best examples for other students.

Thirdly, in the management aspect for students in general, it is important to see their position in the overall rating, as well as to receive feedback on the works performed. For students who are interested in their own progress, success, position in the rating, the possibility of understanding the reasons for their status and score is also important. Accordingly, such students should be given opportunities to implement this reflection using the technology of formative assessment. At the

same time, a teacher's feedback is meaningful for students as an opportunity to get value judgments from a more experienced person. To realise this feedback productively we can suggest portfolio technologies.

Summing up, we can note that all the above listed, identified and described features of students' educational activity in the social media environment are very useful for teachers in the process of developing particular assignments, as well as electronic educational resources in general. The digital learning environment should be variable, and it is expedient that this variance should be based, on the one hand, on students' preferences, and on the other hand, should open opportunities for self-development, upgrade to a higher competences level, and mastering the most advanced strategies of educational activity.

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