Student Performance Interrelation with Gadget Use at Lessons

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Abstract

Purpose: The relevance of the article is conditioned by the use of gadgets is increasing rapidly every year. The purpose of this study is to establish the relationship of students' performance with their use of gadgets in the classroom. Methodology: The leading methods for the study of this problem are the methods of questioning and testing, allowing to make a qualitative analysis of the leading type's characteristics of students' attitude to the study. Result: Positive impact on academic performance consists in the fact that with the help of technical devices, students receive a share of information, prepare for classes, record lectures, view the textbook on the discipline. Negative impact on academic performance manifests itself in peeping answers and solutions to tasks on the test and on independent work; sitting in social networks during classes; distraction of students from educational material. Applications: The data obtained in the article can be used in social psychology, pedagogy, psychology of education, age psychology, sociology, as well as for further theoretical development of this issue. Novelty/Originality: The novelty and originality of the study lies in the fact that authors of the article reveal the positive and negative consequences of gadgets use by students in the classroom, as well as the motives for the use of gadgets in the educational process by teachers and students are shown.

Keywords: students, gadgets, University education, attitude to learning, academic performance.

1 Introduction

Information technologies play an important role in the life of each of us. The activity of using gadgets is increasing rapidly every year. More and more students around the world cannot imagine their learning without modern gadgets. Moreover, the faster the changes in the modern world, the better people realize the importance of modern education and knowledge of current technologies. At the same time, many domestic and foreign authors study the problem of academic performance; they also note a decrease in the level of academic performance. The problem of academic performance is a serious problem both at school and at University. The main problems of academic performance study are the essence, causes of failure; recommendations for

improving academic performance are developed (4,10,11,12,13,14,25,17,20,28,30,31,).

This problem was studied in the pedagogy of secondary school, but remains the subject of heated debate, and the area of confrontation of opposite points of view on the aspect of determining the leading factors of academic performance and prevention of failure (3,5,7,20,21,22,26,32,34). Pedagogy of higher education is experiencing in our time an urgent need to study this problem. The problem under consideration was studied in pedagogy from the point of view of the definition of *failure*, *lag* in the pedagogical process. The researchers tried to find ways and methods to overcome the phenomenon of student underachievement.

Initially, attempts were made to explain the causes of this problem; a hypothesis was put forward about the impact of intelligence on the educational activities of students. Further, an active search for effective approaches to learning, methods in which special attention was paid to the skill of the teacher;

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the need for an individual approach to each student was emphasized. Later, the research a tendency began to manifest to study the influence of motivation on the academic performance of students. Finally, it was found that the most important factor that has a direct impact on academic performance, learning activities and their success is the personal characteristics of the student. Therefore, in recent years, researchers have established the impact of different groups of factors on the academic performance of students, such as intellectual and personal characteristics, motivation, level of self-regulation and self-government, value orientations, organization of the educational process, the level of pedagogical skills, independent work of students and others (2,15,21, 8,9,17,35).

Many researchers are now seeing a decline in academic performance. For example, according to the Institute of age physiology of RAE, more than 50% of students experience significant difficulties in mastering the educational program, and thus fall into the category of unsuccessful in learning (19,36,39).

The very concept of success, in our opinion, is more voluminous. Of course, the success of learning involves a certain level of performance, but it is often not in the first place. Traditionally, the success of education is understood as the high academic performance of students, defined as the degree of coincidence of real and planned learning outcomes. The success of learning can be interpreted as full or exceeding the expectation of achieving its goals, which ensures the development of the student to move it to higher levels of quality of study and self-development as an internally conditioned change in personal qualities.

Training can be considered successful if, firstly, it allows you to achieve certain specified standards defined by the goals and objectives of training, that is, to achieve a predetermined result. In addition, secondly, if this result is achieved in the most rational way, namely, with less time and labor.

Some scientists define failures in teaching as "the discrepancy between the result of the student learning activities and the necessary one, which can cause emotional experience and subsequent changes in behavior" (26,29).

V.A. Yakuni understands the success of training as "the effectiveness of management of educational and cognitive activities, providing high psychological results at minimal cost (material, financial, personnel, physical, psychological, etc.)" (33).

It can be concluded that most often the success of educational activities of students is considered as a characteristic of the pace, tension, individual style of work, the degree of diligence and efforts made by them to achieve educational goals. Epistemological analysis of the concept of *academic success* allows us to draw the following conclusion: as a pedagogical category, the success includes the effectiveness of educational activities and the effectiveness of the methods used to achieve educational goals; subjective satisfaction of the student with the process and results of teaching, i.e. the experiencing your success.

Objective success involves external assessment of results of student educational activity on the part of teachers, parents and other reference persons and usually expressed in the form of encouragement or reproaches in the address of the student (16,18,23,36, Alexandrov, 2009;). There are the following

reasons for this phenomenon: 1) shortcomings in the education of teaching's effective motives; 2) complication of educational material at this stage of education; 3) unwillingness to persist in educational work in connection with either overestimated self-estimation and ease of mastering knowledge in school, or with low self-estimation, which arose due to persistent failure; 4) weakening of parental control over children or, conversely, too hard control; 5) switching the attention of many teenagers to extracurricular activities: participation in sports events, collecting something, small trade, cinema hobby, etc. The main reason for intellectual passivity among the adolescents is often the inability to show their activity, independence, adulthood nature. This increased need of adolescent students for activity is often not met due to the reproductive nature of education, the constant structure of knowledge transferring by the teacher, rigid methods of control on assimilation. Teachers' knowledge transferring in a ready form makes students passive listeners. Alternatively, maybe teenagers want to show their mental abilities in the classroom, actively and independently solve educational problems, express their views, compete with each other.

Passion for learning, as well as passion for work, leads to a positive attitude to the activities, accompanied by a sense of *psycho-emotional well-being* (6,24,38). Researchers distinguish three characteristics of this state: energy, enthusiasm and absorption. Thus, passion for learning is a type of behavior associated with investing physical and psychological energy in educational experience that is, demonstrating a high level of internal motivation and activity; representing a positive experience of the educational context by the individual and himself in it. It is expected that a high level of enthusiasm can lead to more noticeable indicators in educational changes and personal development. One of the stages of this development may be the perception of their own readiness for the labor market as a positive response to the passage of the educational process and, perhaps, as a result of this process. Attitude to learning can also be viewed in terms of motivation. The reasons for the lack of motivation to study may be different.

Electronic textbooks are a great alternative to books, because one small tablet can include all the manuals and textbooks, and the search for the necessary information in them will be simple and fast, not to mention the fact that you do not have to carry many textbooks. Computer developments in the Humanities are no less useful. E-book help in the study of languages, because it is a device with which you can read novels, and also take notes, listen and create audio recordings. Gadgets-translators will translate text of any complexity online from any language you are interested in. Information technology has penetrated so deeply into our daily lives that sometimes we abandon the outside world, replacing it with technical devices.

What could be the reason? First of all, the fact that our society has reached the level of development of human intelligence. More and more new technologies are being created, thanks to which our life becomes more comfortable and simpler (1,37,Alexandrov, 2009;). The use of information technologies in education provides great opportunities for both teachers and students. It should be noted that, studying a particular discipline, both the student and the teacher could not do without the help of the Internet.

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After all, it contains all the information we need, which we can easily find and apply in the area in which we need it.

The emergence of new technologies has aroused great interest in their application in the field of education. The computerization process is irreversible and cannot be stopped. All developed countries develop and use information technology training. This is because the gadget has increased productivity in all spheres of human activity. The Internet is the infrastructure that all educational institutions need. The possibilities of the Internet in education make the learning process more accessible and faster for any user of the network.

Today it is becoming an urgent problem of the relationship between modern information technology and the features of the formation of a holistic educational space.

2 Methodology

Teachers and students of the first, second, third and fourth years were interviewed. Data analysis was carried out by using the SPSS 17.0 for Windows software package. The study involved 18.3% of male students, 81.7% of female students. Of these, 23.4% at the age of 16-17 years and 33.3% at age 18-19 years and 43.3% at the age of 20-22 years.

The method of questionnaire survey was used in the research process. We chose this method because it allowed us to solve the following problems in our study:

1. What is the current academic performance of students?
2. How do teachers and students relate to the use of gadgets in the classroom?
3. Do teachers and students use the Internet for educational purposes?
4. What types of digital activity of students are found in the classroom?
5. What are the motives of students to use gadgets in the classroom?
6. What is the assessment of the comfort nature of using gadgets in the classroom?

As indicators of the questionnaire are allocated:
1. Satisfaction with the chosen specialty and University
2. Number of missed classes without a valid reason
3. The purpose of using gadgets.
4. Frequency of gadgets use by teachers and students.
5. How teachers relate to the use of gadgets in the classroom.

6. What are the motives of students to use gadgets in the classroom?
7. What types of activity of students are found in the classroom from the position of teachers?
8. Has the use of gadgets influenced the way teachers prepare for classes?

The work was carried out in several stages. At the first stage, we interviewed teachers in order to identify the frequency with which they use gadgets in the classroom. With the help of a pilot study, we found that half of the surveyed teachers (56 %) use gadgets in lectures, seminars. Teachers *resort* to the Internet in preparation for scientific conferences: 72 % of respondents regularly use the Internet in the preparation of their reports, only 9 % practically do not use it. At the second stage, we interviewed students in order to identify their attitude to learning, their performance and the frequency of use of gadgets in the classroom. To do this, we conducted our questionnaire, consisting of several units (1. Satisfaction with education; 2. Current academic performance and attitudes; 3. The frequency and purpose of gadgets use in training sessions) In the third stage, we analyzed the results presented below.

3 Results

Our first task was to find out how satisfied students are with the quality of education, as education is one of the most important stages in a person's life, which determines his/her future. It is important for us to understand how satisfied students are with the education they receive, to consider how students can use gadgets: as a simple pastime, to brighten up classes that are not interesting for them, or for other purposes that promote learning. Students' answers to the question about satisfaction with the quality of education are given in table 1.

Analyzing table 1, we see that the proportion of students' satisfaction with the quality of education is quite large: 83.4% expresses a sense of satisfaction. At the same time, 1.7% of students are completely dissatisfied with the learning process. However, this percentage can be due to the peculiarity of adaptation of the surveyed freshmen to the new team, and the peculiarity of adaptation to new educational requirements, compared with school. 3.3% of the students surveyed expresses their uncertainty.

The second objective of our study is to clarify the current performance of students and their attitude to learning. We found that the high importance of learning is combined with high academic performance in 15.4% of students. In 76.9% and 7.7%, the high importance of learning is consistent with average and low academic performance, respectively.

Table 1: Degree of students' satisfaction with the quality of education

Answer choice	The share of the answers (%)
completely satisfied	41,7
I am more satisfied	41,7
not completely satisfied	11,6
completely not satisfied	1,7
I find it difficult to answer	3,3
in total	100,0

We also found that the equivalence of study and other activities correlates with high academic performance in 6.1%, average academic performance in 69.7% and low academic performance in 24.2% of students. At the same time, it is interesting that the average performance of students (64.3%) is consistent with the low significance of education. Accordingly, high academic performance (7.1%) and low academic performance (28.6%) correlate with low academic significance for students.

Thus, among the students who treat learning as the most important activity, respondents with high and average academic performance prevail. Among students who pay equal importance to both study and other activities, the majority are students with average and low academic performance, and among those who refer to learning as a secondary activity, respondents with medium and low academic performance dominate the same. The share of students with low academic performance increases as the importance of study in comparison with other activities decreases.

The next unit in our questionnaire was a unit concerning the use of gadgets by students and teachers in the educational process.

Table 2: Teachers' use of the Internet for educational purposes

Frequency of use	Preparation for classes	Writing reports, abstracts, articles	Writing a study	In the classroom	At the conferences	Interpersonal communication
Regularly use	65,1	66,1	60,1	20,1	13,0	56,3
Irregularly use	26,9	25,6	27,7	30,3	37,5	29,3
Practically do not use	8,0	8,3	12,1	49,6	49,5	14,4

Analyzing the data in table 2, it can be concluded that the majority of respondents regularly use gadgets in preparation for classes (65.1%), only 8% of respondents practically do not use gadgets in preparation for classes and 49.6% do not use them in the classroom). Comparing the results, we see that most students use gadgets when writing any reports, articles, abstracts (66.1%), then – to prepare for classes (65.1%), 56.3% - for interpersonal communication and the smallest percentage of use – at conferences.

The next question in our study is: "What types of activity do students meet in the classroom from the position of teachers? »

We identified the following types of student activity associated with the use of gadgets in the classroom:
- Recording of the teacher's lecture. In our time, it is more convenient to immediately take notes of the lecture in your gadget than in a notebook. 18.1 % of the surveyed teachers confirmed that in their lectures record lectures in their device quite often. 38.2% of the interviewed teachers faces with a situation of the gadgets use by the students to record the lecture. A little more (43.7 % of the surveyed teachers) practically do not face, but there are such situations.
- Photographing materials prepared by teachers for classes: 67% of teachers often faces with this.
- On the test or exam.

The study shows that students actively use their gadgets in seminars and exams and tests. 43 % of the teachers interviewed regularly face this situation at seminars. 31.3 % of respondents notice how students use gadgets in the exam, while it is not excluded the moment of students' access to the Internet to find answers to exam questions.

The analysis allows us to identify the motives as rational justification of their digital activity in the lecture: getting new information here and now; unloading; motive - you have to answer; motive - panic; check the news feed in social networks; solving organizational momentary issues with the teacher; dependence; search for information to perform the task; photographing part of the lecture as an answer to the testing task and sending it to his group mates.

According to the study, even the most motivated students are distracted in the classroom in order to communicate with their gadget. They do not notice how much time they spend on it. Today, students can present special situational requirements to speak by the teacher. Because classroom communication is now hacked, there are changes in the content of the lecture, its thematic organization. The student today can also directly at the seminar or before it type in the search engine keywords and find the necessary information. The University today does not keep up with the pace of social change. Digital mobility presents a challenge to education, which a modern University must meet in one way or another, breaking almost all of its usual educational formats.

4 Disscussions

Young people are the main users of gadgets in education. More and more students around the world cannot imagine their learning without modern gadgets. Gadgets provide a huge number of new features designed to affect the improvement of the learning process, to make it more fun. The use of information technology in education opens up additional opportunities for the qualitative improvement of education, increasing its intensity. We list a number of basic features provided by information technology: computer visualization of educational information of any nature: both real objects of study and virtual; archival storage of large amounts of information of any nature: graphic, text; the ability to transfer large amounts of information; easy availability of information; automatic solution of computational and information retrieval problems; it facilitates the possibility of contact with the teacher at any time, if necessary, instant access to the necessary materials within the course, facilitates the monitoring of progress, both for the teacher and for the student. In addition, the use of various gadgets significantly increases the interest of students to study a particular subject. New devices allow you to use computer applications in the learning process and work with them, write and draw using special electronic markers, as well as save all the results of their work on a computer or on any medium.

It becomes possible to use the appropriate Internet services. This is a great help in the study of subjects that require precision and complex calculations. Gadgets are part of a person's life, change his/her life, including have an impact on education. They are used for photo, audio, video recording lectures, gradually replacing the usual noting.

With the help of gadgets, students can exchange information directly in the classroom. Today, students have less notes. Phone, laptop, tablet, e-book - this is not the whole list of gadgets that can provide invaluable assistance in learning any subject.

5 Conclusion

The gadgets used in the classroom present a challenge to education, to which the modern University must respond in one way or another. The ability to handle gadgets allows you to increase involvement in the educational process. Of course, the hope that the gadget will always be at hand creates for the student and new ways to organize their preparation for the lesson. The gadget acts as a chance of contact with a huge world, which is always more interesting than any interaction in the classroom with the teacher. The ease of access to information as a characteristic of a new cognitive situation gives rise to the problem of replacing one's own research by compiling other people's statements or even the phenomenon of plagiarism of another's text as a whole. This situation, according to teachers, has a consequence of a certain differentiation of students - users: making strong students even stronger, more motivated, helping them deeper and more thoroughly master the material, and the weak - weaker, giving them almost unlimited opportunity of clip thinking, making their training quick and superficial.

Another aspect of the new cognitive situation - the emergence of new situational effects caused by the presence of students' gadgets in the classroom, giving the opportunity, for example, in the lecture *here and now* to go online. In our study, we identified the structure of the motives for the use of gadgets by students, according to teachers: learning objectives; verification of the information received from the teacher; entertainment; momentary information.

The student today can also directly at the seminar or before it type in the search engine keywords and find the necessary information. The presence of gadgets radically affects the problem of involvement of students in the classroom. In these new conditions, the role of the lecturer changes significantly: he/she becomes a mentor from the transmitter of knowledge and an expert on this topic, developing with students the skills of information management, as well as an assistant in the development of critical thinking and the application of knowledge. However, it is clear that such new functions require appropriate digital skills from teachers.

Because of the analysis, it is found that today teachers are calm about the use of gadgets: do not prohibit, but not particularly welcome. The main reason not to prohibit the use of gadgets in the classroom is that students can quickly find the necessary information and get at least some knowledge. As well as a part of the disciplines, it involves the use of gadgets to perform tasks in the audience. Various types of students' activity who use gadgets are revealed: conducting of a personal blog; check of news in social networks;

conducting at the same time several correspondences in chats; communication with the relatives; the solution of questions on work; passing of games in the gadget; search of answers to questions of test work; photographing of lectures. Among the negative impact of gadgets on the educational process of students can be called peeping answers and solutions to tasks in the test works and independent work, spending time in social networks during classes. Currently, many educational institutions use interactive whiteboards, which have already proven to be highly effective. In our study, we concluded that the effectiveness and success of training with the application of gadgets increases many times.

Knowledgment

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