Students' Attitude Towards E-Learning in Russia after Pandemic

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Abstract: The article presents the results of the second stage of a sociological survey among students of the Russian Technological University (RTU MIREA) about their attitude to distance e-learning, problems and positive experience gained during 2020-2022. The authors examined the impact of distance e-learning through the prism of the individual qualities of students and their tendency to attribute the results of their activities to external or internal factors.

Keywords: E-learning; Students' attitude; Locus of control; Impact

1. Introduction

Over the past century, three forms of education were actively used in Russia: full-time courses, evening classes and correspondence courses. Correspondence courses included attending one-week lectures every month at college, doing homework and sending it to professors by post, as well as passing exams each semester. This kind of education implied a great deal of independent study with a book, and not everyone was capable and willing to study in this way. There were methodological and psychological instructions specially developed for correspondence courses. One of them said that correspondence education aimed to not only give students a set of knowledge, skills and abilities, but also teach them to study with textbooks on their own. A lot from that past experience has been taken into today distance learning.

With the advent of computers and access to digital information sources, online education as a whole has become much simpler, but it has also acquired its own specific features. Due to COVID-19 pandemic, a transition to e-learning got urgent. Although e-learning was not formally part-time, it had much in common with the above-said learning forms (Aleshkovski et al., 2021; Bolgova et al., 2021; Panov et al., 2021). Therefore, those students, who did not need or want it previously, were forced to learn how to study with a book or a video file on their own. At the same time, students needed much more independence than they previously thought. As A.V. Nikolayev stated, "When it all began, a massive shift to online education seemed to be an obvious godsend for students. Most of them were sure that studying through internet would be as entertaining as watching video blogs on YouTube or sharing their opinions on Reddit. Apparently, it didn't turn out exactly that way" (Nikolaev, 2022).

The most striking difference was that e-learning (which was announced four times in Russia during 2020-2022) was always unexpected, though it was perceived as a necessary evil. In contrast to the 1980s, when computer looked like a fairy tale, desired and unrealizable, and therefore, it was easy to criticize.

Authors of this article are teachers of foreign languages for chemistry students in the RTU MIREA in Moscow, Russia. Teaching languages, particularly their scientific style, enables future chemists to make preparations for reading professional scientific literature and writing scientific articles. According to the assumption of teaching program of foreign languages in the university, students have already mastered at least a foreign language more or less within the framework of high school curriculum.

Of course, it is necessary to distinguish the communication with a computer from that with other people by using a computer. The difference is especially noticeable not even when new materials are mastered, but when being corrected by computer. The reaction of a computer program is predictable and inevitable, which seems to be too harsh for this reason alone. As for "foreign language" as a humanitarian discipline, instead of providing

freedom of speech or variability of translation, a computer program corrects mistakes sequentially, uniformly and mechanically. A professor knows when to step back, he/she corrects mistakes in various ways, creatively takes into consideration language features, semantics and other linguistic and psychological factors, as well as keeps in mind the interests, motivation and psychology of students in learning, particularly their adaptation to e-learning. This includes not only the ability to learn, but also the individual psychological features of students, even organization of the whole educational process.

It should be noted that the subject "foreign language" in the university curriculum may be considered as either a laboratory class or a lecture, because its dual task is to teach how to communicate and to train translation skills. Therefore, "foreign language" was affected by e-learning in several ways.

2. Methodology

We were interested in how e-learning were integrated into the life of students from a Russian university. This study aimed to collect and analyze the attitude of students towards e-learning and their experience of adapting to it, thus finding the relationship between their psychological portraits and their attitude towards e-learning, as well as what e-learning meant for them. As Votintseva (2018) puts it: "Man or woman always wants to implement what is important and meaningful for him/her. Each man is an individual and his view of life and values may change. Therefore, he wants to know it about himself" (Votintseva, 2018).

From November 2021 to January 2022, the authors conducted an extensive voluntary and anonymous online survey among students from RTU MIREA, which could be replied in both Russian and English. The first part of the survey was devoted to a picture of the students' world via their associations to the stimulus words. The results are available in the article "Associative portrait of a Russian student in the context of an emergency transition to distance learning" (Baturina & Simakov, 2023).

Based on the change of learning habits and certain personality traits of students, the second part of the survey aimed to project their tendency to attribute their activity results to external or internal factors. This is to be discussed in this article.

Totally 288 chemistry students took part in the survey, with one third of them being male students and two thirds of them female. With master and doctorate students accounting for 2 percent, the absolute majority of respondents were undergraduate students (56 percent freshmen, 29 percent sophomores, 8 percent juniors, and 5 percent seniors). The survey was conducted online on the Google Forms platform and calculated by using the Excel Workbook (xlsx) program.

3. Results and discussion

3.1 The first set of questions

3.1.1 Locus of control
The first set of questions were about the level of responsibility of students for their work results. Locus of control is a concept in psychology, which characterizes a person in terms of attributing his/her success and failure either to his/her own behavior ('internality') or to external factors of the outside world ('externality'). It is claimed that 'internality' positively correlates with the presence of meaning in life, and 'externality' may be connected with increased anxiety and less tolerance for the behavior of others (Chilikina, 2010; Muzdybaev, 2010; Rotter, 1966).

In order to determine the locus of control, we obtained 572 values of "internality" and "externality" from respondents by using the Rotter (1966) questionnaire, with two values from each respondent. The sum of the two figures of our method was 100. As we expected, majority of students had an equilibrium in values of internality and externality in their personality. The most interesting results were gained from respondents called 'pronounced externals' (E > 65 percent) and 'pronounced internals' (I > 65 percent). The positive and negative responses received were directly related to the locus of control. Alternative questions were asked to double check the results.

As for respondents, whose 'internality' accounted for more than 65 percent, they had much in common with each other. Their responses reflected the pragmatic level of personality organization, including language organization. These respondents, they preferred to have an e-learning system; they had a positive attitude towards foreign language by realizing its need in the future; "innovation" was associated with "technology" only, and "career" was associated with "money" and "success" only; the credits and pride for their work were attributed to themselves.

As for respondents, whose 'externality' accounted for more than 65 percent, they also had a lot to share. In most cases, they preferred to study in the classroom. They experienced lack of group communication; foreign language was associated with "travelling" and "internet", with the latter also associated with "innovation"; their credits were attributed to random circumstances; the list of associations with the stimulus word "career" mainly referred to "work", which mainly had negative connotations.

At the same time, only 25 percent respondents associated "random circumstances" with "e-learning", noting that more accidents occurred in e-learning than in the classroom.

The results of the second and third set of questions were evaluated while taking into consideration the locus of control.

3.2 The second set of questions

3.2.1 Time

The questions about time in our survey were cross-checked several times. As for the question *"Have you changed your time management habits?",* the answers were divided into three groups:

- 33 percent replied *"I have become more organized"* (*"Thanks to the time saved from Commuting, I have got more time to study", "I have become more disciplined", "I began to feel the time", "I learned to value time"*, and so forth).
- Another 33 percent replied *"I have become less organized",* including those who complained about the difficulties when being forced to transfer to e-learning (*"Difficulties appeared in organizing time", "I began to delay the work more", "It became difficult for me to cope with due to the changed format"* and so forth).
- There was yet another group, whose attitude towards time management *"nothing has changed"* (31.6%). It was likely that those students had known how to organize their time (*"I knew how to plan time even before e-learning"*).

Moreover, the word "time" was used by the absolute majority of respondents when answering the question about the results of forced e-learning. 84 percent respondents said that they had got more free time through e-learning. This applied equally to both our 'internals' and 'externals'. And only 16 percent students claimed to get less time.

Due to the saved commuting time, 90 percent students got more time for their own needs. It is important to note that the survey was conducted in Moscow, a huge city with 15 million population. Although the public transport is pretty well organized there, it often takes one hour and sometimes even more for students living on the other side of Moscow to get to the RTU MIREA. Half of those 90 percent responses linked the obtained time to more sleeping time.

One fifth students realized that they *"Had to learn how to plan their time"*, or *"Found time for long postponed favorite things"*, or *"Stopped wasting time on the way there and back"* and so forth.

As for the question "*What else did you do during e-learning besides studying?*", respondents gave multiple answers. We conditionally divided 563 replies received into different categories, such as "active pastimes", "passive pastimes", "super-passive pastimes" and subcategories, such as "work", "family", "house chores". However, as for the responses, such as *"I was listening to a lecture while cleaning the floor",* they were not considered as a free time activity because studying was the main activity at that moment. The responses of the same person could be assigned to more than one category, if they mentioned more than one activity, which was especially the case for internals.

61 percent answers received involved "active pastimes". The biggest subgroups were "hobbies", "sports", "self-development". (*"I was engaged in creativity", "I filmed videos for Youtube", "I painted pictures", "I went to the theatre", "I learned cooking".*)

A few people mentioned their official work (*"I worked as a street cleaner", "I did telemarketing", "I earned lots of money"*), looking after family members (*"I took care about my sisters"*) and pets (*"I walked with my dog"*), and household chores (*"I had to clean the house"*).

A slightly smaller group (29 percent) was classified to "passive" category (*"I read books", "I watched a lot of films", "I listened to music", "I walked in deserted places", "I strolled the streets", and "I played computer"*).

A separate category "super-passive" (9 percent) included the answers (*"I did nothing", "I slept and ate", "I restored my sleep", "I just rested"*).

3.2.2 Health

Although most of the surveys conducted in the post-pandemic period indicated health problems and psychological discomfort (Kislyakov et al., 2023), only 14 percent out of 287 students in our survey noted health deterioration, which we considered as a sign of their good adaptation to changes. We are also positive in our assumption that the blended learning form, which is used by most universities in the world today, would adapt students to new realities and eliminate most of the problems while taking on board all positive work experience during the lockdown.

Health problems noted by the students included vision (9 responses), posture (6 responses), burnout (11 responses) and fatigue (15 responses). (*"I couldn't plan my day properly, because most of my free time I tried to overcome the fatigue", "Anxiety has developed because, I didn't see my friends much, and the main feedback was in the form of an assessment. In other words I had very little emotional reinforcement", "Emotional exhaustion",*

"I was tired of always being in the same room", "I couldn't keep working hard, and I burned out" and so forth).

3.3 The third set of questions

The third set of questions involved the personal outcomes of e-learning. Students were asked to write the positive impact of e-learning on their life first, and then the negative impact.

3.3.1 Positive impact

Totally 228 responses were received, which were conditionally divided into two types: connected and not connected to studies. The distribution between 'internals' and 'externals' turned out to be even.

The first type of responses (87 percent) was related to studies. 62 percent respondents thought commuting time was saved, with 27 percent of them linking this to enough sleeping time. Five respondents, who claimed they didn't have enough sleep, were 'externals'.

35 percent students noted their achievements in terms of *"I learned /I managed /I achieved",* such as *"I learned to plan time", "I have at last passed all the tests", "I managed to get transferred to free education", "I successfully passed the exams", "I learned to work and study online", "I began to understand something", "I understood the subject", "I came to an internal balance"*. One seventh students wrote their improvement in computer literacy (*"I mastered certain programs and program functions", "I improved my information search skills"*). Interestingly, three 'externals' wrote the ease of passing distance exams and the possibility of cheating among the positive results of e-learning.

The second type (13 percent) of responses was not directly related to studies. Some respondents claimed they could *"leave for parents", "visit friends", "see the doctor", "spend more time on hobbies (cooking, sports, reading, languages)"*, as well as admitted the opportunity to eat at home and save money.

3.3.2 Negative impact

36 percent respondents claimed no negative experience. As for 64 percent students, who had some kind of negative experience, 'internals' were exactly half of 'externals'.

21 percent students noted the lack of practical laboratory work and contact with their teachers (*"This is the second semester in a row when I can't actually do chemical experiments with my own hands!", "I can't immediately ask a teacher questions and the questions in our chat were disregarded", "There was no communication with my teachers or my group mates in daily life", "I failed to have social life or lab practice!", "There is too little daily communication!"*).

It should be noted here that the discipline "foreign language" in university curriculum cannot be attributed to either laboratory classes or lectures. Instead, it is in an intermediate place, because on one hand communication is the basic content of this discipline, and on the other hand training skills are the essence of learning languages. Since the survey was conducted by the teachers of foreign languages, we asked the students how they preferred to have language classes. The option "in the classroom" was preferred by 51 percent versus 47 percent "e-learning".

21 percent responses with negative experience was about the lack of self-discipline. (*"I didn't manage to learn how to meet deadlines for the delivery of work", "I didn't learn how to plan time", "I got lazy"*).

Among the negative results, health problems were noted, with "stress" and "nervous tension" mentioned several times, and we have mentioned the problems earlier in this paper (*"I had to always be in touch, since the most important organizational decisions can be made at any time of a day", "Compliance with the hygiene of work and rest is simply impossible in an environment where both work and rest mean watching videos on a small screen"*).

We know that many students and Universities experienced technical problems at the beginning of the pandemic. 4 percent negative responses were about poor internet connection, and getting used to work on the platform.

4. Conclusions

The three academic years coincided with the pandemic, which certainly influenced the character of students. This experience facilitated their adaptation to e-learning. Therefore, the students tended to see more pros than cons in e-learning in a 2022 survey. In addition, we used the classical Rotter 'locus of control' test in the psychological aspect. As we had expected, majority of students had an equilibrium in values of internality (ability to attribute success and failure to themselves) and externality (ability to attribute success and failure to external circumstances). The most interesting responces received were from those, who could be called 'pronounced 'externals and 'internals''. 'Externals' reported twice as much negative experience than the 'internals'.

Many students regretted the lack of laboratory practice, which was resumed by the RTU MIREA later after the pandemic, though it caused a certain overloading.

Many students enjoyed saving commuting time. In fact, spending time in public or private transport is one of

the most essential problems in any megapolis. A third of our respondents mentioned saving free time for hobbies and long-delayed private affairs, including improving computer literacy, staying with families and friends, and improving their sleep habits. On the other hand, some students mentioned getting nervous due to the necessity of always being on the internet.

Although e-learning was considered as work rather than an entertainment or relaxation by the majority of students, some students noted the ease and formality of taking tests and exams and the opportunity of cheating in front of the computer screen.

Only 14 percent students noted health deterioration, which we considered as a sign of their good adaptation to changes. Stress and workload were successfully released by additional sleeping time, saved from commuting time. We assumed that the blended learning form, which is used by most universities in this world today, would adapt students to new realities and eliminate most of the problems while taking on board all positive experience from the lockdown.

More than one third of the respondents did not mention any negative impact of e-learning. Only a small part complained about internet and technical support. The lack of practical work in laboratory and communication with teachers or other students was considered as the biggest negative impact. The majority of students proudly mastered time management, while few of them mentioned lack of self-discipline.

We believe that the results of our survey reflected the essence of the transition of education nowadays from being taught to getting taught and further to professional acts (Petrovsky & Yaroshevsky, 1998). As for our discipline "foreign language", it aims to both teach how to communicate and train separate grammar and translation skills. Therefore, it was affected by e-learning in more than one way. "Foreign language" can't be referred to a pure humanitarian subject, which is the reason why respondents' preferences to have language classes "on-line" or "in the classroom" were equally divided based on their personal aims.

Some students were trying to understand the meaning of their experience: "After comparing two frameworks, I have found that each one is good in its own way. Thus I have found a lot of time to achieve my goals". Not surprisingly the vast majority of students seemed happy to have blended education after the pandemic was over, with remote lectures and non-remote other classes and laboratory hours.

A particular limitation of our study is the thorough survey in only one university, though we are confident that the results obtained can be extrapolated to wider Russian students. We would like to continue the study by comparing the results with universities in other countries.

Author Contributions

Both authors have equal contributions to the project.

Data Availability

The data, used to support the research findings, are available from the corresponding authors upon request.

Conflicts of Interest

The authors declare no conflict of interest.

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