The Study of Students’ Opinion on Learning Online in the Self-Isolation Period

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Abstract. The threat of the spread of coronavirus infection (COVID-19) gave rise to serious difficulties in the organisation of the students’ study process. Reactions of Higher Education Establishments to COVID-19 pandemic were various: from no response to the threat to the strategy of complete social isolation at home and rapid changes of the study programs in order to adapt them to the online mode of education. A lot of questions, which needed close consideration and making quick decisions, arose. The most urgent and important question was: what methods and forms of education to use in the period of COVID-19 pandemic, which ones will be the most effective? Another important issue was the attitude of the students to the studies online? What problems and difficulties will they come across during the time of self-isolation? The aim of the given research is the study of the peculiarities of the new study process mode, the difficulties and problems that students come across. The research was conducted by the teaching staff of the Chair of Humanities in the Transport and Telecommunication Institute. The empiric method was used. The questionnaire was compiled and offered to students. The authors offer several recommendations which are aimed at the improvement of the study process in the changing conditions. The knowledge of the problems and the difficulties which the students face will help the teaching staff to adapt the existing teaching practice to an online frame, and proceeding from the experience we have acquired during the self-isolation period, to improve the existing methods and to introduce new methods how to support the students in self-guided learning, which approach to choose and how to facilitate collaboration. We sincerely hope that the results of our research might be interesting and useful for other Institutions of Higher Learning.

Keywords: COVID-19 · Study process · Self-isolation · Online learning · Students’ satisfaction

1 Introduction

The threat of the spread of coronavirus infection (COVID-19) gave rise to serious difficulties in the organisation of the students’ study process [1]. This fact is easy to understand as starting from December 2019 COVID-19 spread around the world very quickly, and by March 15, 2020 there were 153,517 people who had fallen ill [2]. For the given moment (August 25, 2020) the number of people ill with COVID-19 has
already reached 23,673,902 people (in accordance with the applied case definitions and testing strategies in the affected countries), including 813,944 deaths. Latvia reported of 1,342 cases of illness [3]. The government announced the need for emergency measures and self-isolation as one of the most effective ways to limit the spread of COVID-19. In all universities and other educational service providers, it was decided to suspend all types of contact training sessions in classrooms and laboratories.

On the part of universities, where face-to-face education has always been a standard form of education, reactions ranged from no response to strategies for complete social isolation at home and rapid curriculum restructuring for all-online offerings. Discussions, polls, research were actively conducted [4, 5]. A lot of questions arose that required an urgent solution: What methods and forms of training are more effective to apply? How to conduct practical studies, design projects and laboratory works? How to provide methodological assistance to teachers who have no distance learning experience?

The topicality of studying this problem is also due to the fact that distance learning during the period of self-isolation affected the traditional lifestyle of students, the personal characteristics of students who have been accustomed to studying in classrooms and constant interaction with teachers, other students, to the work in public libraries and laboratories, having full-time industrial practice. The earlier planned trips for international student exchange were also called off. Studying the attitude of students to learning in the period of COVID-19 pandemic, having objective information obtained on the basis of a comprehensive analysis, it would be possible to make decisions aimed at introducing corrections and improving the educational process, training courses and educational programs.

The aim of this research is to study the peculiarities of the study process in the new conditions, the difficulties and the problems that students came across during the period of self-isolation. The authors offer several recommendations, based on the results of the research aimed at the improvement of the study process during self-isolation. The knowledge of the problems and difficulties that students came across would help to adapt the existing teaching practice to an online education. This experience acquired during the self-isolation period might be interesting and useful for other Institutions of Higher Learning, as well.

The following questions were formulated:

RQ1: What are the features of the study process in the period of COVID-19?
RQ2: What is the degree of students’ satisfaction with their studies?
RQ3: What influence did self-isolation frame of learning have on the results achieved, on the living conditions and personalities of the students?

2 Literature Review

COVID-19 pandemic caused substantial difficulties in the organisation of the study process in most Higher Education Institutions all over the world [1, 6]. Most Institutions made a decision to change the study mode to the distance learning, online frame, under the threat of COVID-19 pandemic. Statistics show that most Institutions of
Higher Learning changed their mode of education, and only 2% of them reported that the influence of the pandemic was minimal as most of them were engaged in the distance learning mode. Two thirds of the Institutions reported of the transfer to the distance learning mode. Most activities were suspended, but the authorities were looking for the developments in this area in order to find out the answers how to continue the study process with the help of digital technologies and self-guided learning [7].

The principal difficulties and problems that most Institutions came across are connected with the suddenness of the self-isolation mode introduction, and the necessity of using alternative forms and methods instead of full-time education. A fairly large number of universities turned out to be unprepared for the transition to online learning, to such radical restructuring of the educational process due to objectively different levels of development of the information infrastructure, provision of disciplines with digital educational resources.

Another important aspect is the teachers’ ability to adapt to online learning and distance learning competencies. The level of readiness of many teachers to use digital platforms and services in the educational process left much to be desired. Universities had to organize the educational process through distance learning technologies based on various methods of delivering electronic content and available tools for communicating with students. Therefore, it is important to study the forms and methods of learning in the online learning environment. The ability to develop online courses and courses for distance learning, to lead them today is becoming an integral part of the professional competencies of university teachers.

The authors use the terms “online learning” and “distance learning” at the same time, but only in order to emphasize the lack of face-to-face contact with the teacher. Online learning is the acquisition of knowledge and skills using a computer or other gadget connected to the Internet in the “here and now” mode. And it is considered a logical continuation of the distance learning. Key to this definition is a pedagogical design as an online course design tool. The most complete options for pedagogical design when creating an online course are presented in the works of Barbara Means and her colleagues [8]. There are nine main characteristics that must be taken into account when designing a course, with alternative options for implementing this learning online: a) learning model; b) the rate of development; c) the number of students; d) the purpose of the assessment in the course; e) pedagogical technology; f) the role of the teacher; g) the role of the student; h) synchronization of interaction; i) the feedback. Therefore, online learning is primarily a cognitive and social process, and not just a process of transferring and exchanging information via the Internet. In case of an emergency transition to “distance learning”, the above components are in most cases absent. However, in extreme conditions for the organization of distance learning it was necessary to solve the following issues very quickly: technical infrastructure and availability; competence of teachers and forms, methods of distance learning. It was required to study the possibilities of the university through its portals to provide online learning, the possibilities of the Internet, its speed, and software, which is a prerequisite for ensuring adequate distance learning. It may be necessary to revise the approaches to assessing progress and exams, the system of assessing learning outcomes. Also, there are questions of involving and motivating students in online learning.
Satisfaction with the educational process, the quality of education at the university is an important component and a prerequisite for the successful mastering of future professional activities by students [9, 10]. In this regard, the question also arises of student satisfaction with educational services in case of abrupt replacement of full-time education by distance learning, ensuring the quality of the educational process and educational materials.

It is important to study the effect of self-isolation on the conditions of study, life, leisure and personal characteristics of students. Self-isolation in the context of COVID-19 is associated with physical isolation, distancing from other people, and treating them as possible carriers of infection. However, the term “isolation” is centred mainly around the problem of a person’s connection with other people. Although isolation is a situation, not a mental state, its content has always had a strong negative emotional connotation. Man is a social being, he has historically developed in large groups, and is distinguished by a phylogenetically fixed need for constant communication with his own kind, especially in the period of prolonged loneliness. The lack of external stimulation of a physical and social nature is a serious frustrating factor for him. Here all the symptoms of sensory and social deprivation are manifested, caused by monotony, social isolation, the inability to communicate with other people, to receive socially meaningful information, and exercise a number of familiar rights and obligations [11]. The subjects may experience a feeling of loneliness, irritability, emotional instability, deterioration in mental performance, changes in self-esteem, etc. In the sociological research of Ural Federal University students during the COVID-19 period, it is argued that the destruction of previous social ties with teachers, classmates, friends, first of all, led to a deterioration in the mental health of young people. 38% students noted significant changes, and 41% - minor, 28% - indicated a frequent appearance of irritation, 24% - a state of stress [12].

However, accepting the situation of isolation, structuring your time, activities aimed at self-development or in the name of the future, reduce the level of influence of the “confinement” factor and inhibit the processes leading to altered consciousness and the above symptoms of sensory deprivation.

Thus, the changes in the study of students who found themselves under the influence of the COVID-19 pandemic, require rapid adaptation to new educational conditions, changes in the educational environment. The main goal of students in universities has not changed and remains the same - to get a quality higher education. It requires an attentive attitude to the needs of students, the study of various aspects of the educational process, paying special attention to the most important factors contributing to professional development in the educational environment of the university.

3 Research Methodology

The aim of our study was to study characteristic features of the educational process, difficulties and problems that students of the Transport and Telecommunication Institute (TSI) faced in the period of self-isolation and COVID-19. The following empirical method was used - a survey. The research was conducted in the period from June to August of 2020. 56 students took part in it. The age of the respondents varied from 19
The questionnaire contained 21 questions. The questions were grouped in the following way: the studies online; the satisfaction with the learning process within the period of self-isolation caused by COVID-19; life mode and free time during this period. The questionnaire was supplemented with UCLA Loneliness Scale (version 3), adapted for the conditions in Latvia [13, 14]. We could apply it as a reliable method for considering the level of loneliness, and hope that we receive a reliable result showing students’ loneliness. Therefore, in our research, we can use it as a serious method for measuring loneliness and hope to get an adequate picture of students' loneliness. An online questionnaire was used to collect data. The link to the electronic questionnaire was sent to the 2-3rd year students of the Transport and Telecommunication Institute. The research was carried out by the teachers of the Department of Humanities of TSI. The survey was conducted anonymously, subject to privacy and data protection policies. Participation was optional.

4 Research Results

The results of the study show that during their studies during the period of self-isolation, from the very beginning, students were actively involved in the educational process using online services. Perhaps this was facilitated by the fact that most of the teachers and staff of the Transport and Telecommunication Institute were familiar with the basic principles, forms and methods of distance learning, as in the university, firstly, there exists a direction of distance learning in basic educational programs; secondly, the e-learning portal (Moodle) is actively used in the educational process. This was probably also facilitated by the fact that in the first week pedagogical seminars for teachers were organized, methodological guidelines for the use of certain distance learning tools were developed, and advisory assistance was organized from the heads of departments, especially from the staff of the IT Department.

As it has been noted by the majority of students, during the period of self-isolation, face-to-face classes were replaced by online classes led by a leading teacher (78.6%), and they conducted lectures and seminars online using video communication programs (71.4%). There were also responses that teachers provided everybody with a list of literature and assignments for independent study - 17.9%, the teacher asked to watch video lectures on YouTube, etc. and complete tasks (14.3%). But there were no answers that the teacher stopped teaching in the discipline during the period of the threat of the spread of COVID-19, or that the teacher was replaced by another.

The following forms and methods of distance learning were most actively used during the COVID-19 period: online lectures, educational tasks in Moodle, presentations, interactive tasks (tests, polls, etc.). We used webinars, consultations, correspondence with students.

An abrupt change of forms and methods of a study mode always causes a predicament, and some time is needed for the adaptation to it. The answers to the question “What problems did you come across during the period of online learning?” indicate that the principal problems were those of technical character, such as Internet failure (44.4%). In general, in the period of online study mode, the learning process became less effective (59.3%), there was a feeling of a shortened, abridged training
format, having no practical and laboratory works (25.9%). Students noted that the absence of practical works didn’t allow them to achieve high results (14.8%). But no one mentioned shortage of the study materials. There were also no problems with software, Internet accessibility, software met all the requirements for distance learning (53.6%), was up to the mark (46.4%).

As the respondents pointed out, while answering the question “What problems with communication and what personal problems did you come across in the course of distant learning?”, every second student noted the deficiency in communication with fellow students (48.1%), and lack of live discussions with the lecturers (44.4%) (Fig. 1).

Revealing are the comments of the majority of students: “I am not against online learning but, in my opinion, no matter how well the structure of distant learning material presentation is organized, it will never substitute live communication with the teachers who are ready to support you with the kind word, direct you and help you to find the right decision”. Another student writes in his comments: “Nothing can substitute direct, live contact with a teacher. It is also worth mentioning that lecture attendance together with other fellow students often helps to make a joint decision on some questions in the study program”. These comments confirm once again that the main problems during the period of self-isolation are of socio-psychological character. Students feel the need of communication with the teachers and fellow students, they also need a certain socio-psychological environment, the situations of social comparison which enhance the opportunities of self-development and mastering competences.
There is one more serious factor, connected with the personal time management and personal behaviour self-regulation. Every 3rd student pointed out that he/she experienced difficulty in concentration of attention while attending online lectures (29.6%). And every 4th mentioned the difficulty of self-organization, the inability to concentrate on the study materials absorption (24.8%). They also mentioned that they more often postponed the task performance (26.8%) while studying from home. It is interesting to note that a lot of respondents mentioned that they experienced difficulty in studying from home (40.7%).

Of course, we can’t but mention some positive moments of distance learning. Students noted that there appeared an opportunity to plan their free time (70.4%); they managed to combine studies with other activities (51.9%), some noted that they became less tired after classes (51.9%), there was no much external noise (48.1%), etc.

When they were asked “Would you be interested in studying if your program is offered online next year?” students answered as follows: yes - 42.9%, rather yes - 21.4%, rather no - 28.6%, no - 7.1%. It should be noted that every third student is against studying online. Students are sympathetic to the situation of self-isolation and measures due to COVID-19, but they adhere more to the point of view expressed by one student: “Despite the advantages of distance learning, full-time education suits me more and I consider it more effective”.

Overall student satisfaction with studies during COVID-19, that encompasses various aspects - the organization of the educational process, the content of training courses, teachers’ support, the quality of classes conducted online, student service, is evaluated very high - more than 90%. Most of all students are satisfied with the support from teachers - 96.4%. However, students note as we see in the comments: “Complete satisfaction does not mean that I like distance learning. I am opposed to distance learning. I am for live contact with groupmates and a lecturer”. Another comment is in tune with the preceding one: “I want to return to TSI and study full-time, but even if I have to go online, the university is completely ready for this” (Table 1).

| Satisfaction of students                          | Fully satisfied | Mostly satisfied | Mostly dissatisfied | Fully dissatisfied |
|-------------------------------------------------|-----------------|-----------------|--------------------|-------------------|
| Study process organization                      | 46.4%           | 46.4%           | 7.1%               | -                 |
| Study course content                            | 39.3%           | 53.6%           | 7.1%               | -                 |
| Teachers’ support                               | 50.0%           | 46.4%           | 3.6%               | -                 |
| Quality of distance mode lectures and tutorials | 35.7%           | 53.6%           | 10.7%              | -                 |
| Students’ needs service                         | 35.7%           | 57.1%           | 7.1%               | -                 |

The period of self-isolation influenced the life and leisure of students in a lot of ways. They began to communicate online with friends and relatives more often. They were more at the computer, watching videos on YouTube and on similar sites (‘more often’ was indicated by 60.7% of students,’less often’ by 3.6%), TV series (more often - 42.9%, less often - 10.7%), following world news (more often - 62.5%; less often - 3.6%). Students also more often paid attention to reading books (46.4%) and hobbies...
They began to smoke less frequently (indicated by 25% of people) and drink alcohol (21.4%), play computer games (19.6%) (Fig. 2).

| Activity                          | More Often | Hasn’t Changed | Less Often |
|-----------------------------------|------------|----------------|------------|
| The feeling of stress about the future | 25.0%      | 48.21%         | 26.79%     |
| Online/mobile communication        | 32.14%     | 61.79%         | 16.07%     |
| Watching video on Youtube and other sites | 60.71%     | 33.71%         | 5.57%      |
| Following world news              | 62.60%     | 33.03%         | 4.37%      |
| Watching TV serials               | 42.86%     | 45.43%         | 10.71%     |
| Time for hobbies                   | 39.29%     | 42.86%         | 10.71%     |
| Reading                           | 46.43%     | 50.00%         | 3.57%      |
| Sports                            | 28.57%     | 65.07%         | 14.29%     |
| Meeting friends                   | 8.93%      | 62.60%         | 28.57%     |
| Feeling lonely                    | 19.64%     | 66.07%         | 14.29%     |

**Fig. 2.** Changes in students’ life and leisure time in the period of COVID-19 (in %; N = 56).

There has been a certain change in personal time distribution. 64.3% of students indicated that the amount of time for working at the computer increased, 60.7% - began to talk more on the phone, 50% - paid attention to social networks more often. Also, 41.1% of people had more time to study, and 35.7% - to communicate with the family (Fig. 3).

| Activity                          | Increased | Hasn’t Changed |
|-----------------------------------|-----------|----------------|
| Work time                         | 25.0%     |                |
| Time for the communication with a family | 37.0%     |                |
| Leisure time                      | 41.1%     |                |
| Time for studies                  | 46.4%     |                |
| Time for sleep                    | 33.9%     |                |
| Time for social networks          | 50.0%     |                |
| Time for a mobile phone           | 60.7%     |                |
| Time for a notebook               | 64.3%     |                |

**Fig. 3.** Students’ time distribution in the period of COVID-19 (in %; N = 56).

It is common knowledge, that the self-isolation can have an extremely unfavourable effect on the individual, influencing his cognitive, emotionally-regulatory sphere, causing feelings of loneliness. A person can also experience passivity and helplessness. The number of social contacts may also decrease.
Below you can see the results of a statistical analysis of the characteristics of the UCLA Loneliness Scale (version 3) [13]. When interviewing students, we obtained indicators where the average values of the group under observation are higher in comparison with the research of Ishmuhametov, 2007 [14] and research of 1996, D. Russell [13]: the average value of the group (N = 56) - 42.55; 2007 group (N = 526) - 39.53; D. Russell’s group (N = 487) - 40.08. There are other discrepancies (Tabe 2).

| Statistics         | Authors, research Students, 2007 group [14] | Students, D. Russell’s group [13] |
|--------------------|---------------------------------------------|----------------------------------|
| N                  | 56                                          | 526                              | 487                              |
| Mean               | 42.59                                       | 39.53                            | 40.08                            |
| Median             | 42.5                                        | 39                               | 40                               |
| Std. Deviation     | 9.131                                       | 7.411                            | 9.5                              |
| Minimum            | 26                                          | 23                               | 20                               |
| Maximum            | 58                                          | 65                               | 74                               |

To determine the differences in loneliness between the group studied by the authors and the group of 2007 [14], one-way analysis of variance (ANOVA) was used. It follows from the results that F = 8.208 at p < 0.01, which means that the differences are statistically significant at a high level of significance. The indicators of the UCLA Loneliness Scale (version 3) of the subjects have a tendency to increase.

5 Conclusion

The process of switching from contact training sessions to online education in universities in the period of self-isolation due to COVID-19 was sudden, extreme, and most universities were unprepared for it. Teachers had to organize the educational process via distance learning technologies. However, despite the difficulties during the period of self-isolation, from the very beginning, students were actively involved in the “non-contact” educational process.

The terms “online learning” and “distance learning”, which are actively used to denote classes without face-to-face contact with a teacher in the period of self-isolation, are not always identical. The key instrument of the online course design is pedagogically- oriented design that is composed of several components. In case of emergency transfer to distance learning, most components are missing. In case of emergency and for a limited period of time, such an abridged variant suit both Institutions of Higher Learning, the teaching staff and the students. Students’ general satisfaction with the process of learning in the period of COVID-19 is more than 90%.

The main problems that most Institutions have come across are of socio-psychological character. In the period of self-isolation students are deprived of communication with the teaching staff and fellow students, there is no situation of social
competition that enhances the opportunities of self-development and mastering competences. There are difficulties connected with self-organisation and concentration of attention. We can watch a certain change in one’s personal free time. There is also a certain tendency of rise in the indices of the Scale of Loneliness (version 3). In the future, in the period of online education in order to increase the efficiency of the study process, it would be necessary to pay more attention to socio-psychological factors. And it should be an organised, complex process. Such an assistance could be organised in the form of socio-psychological trainings, webinars, etc.

Acknowledgment. There were 56 students of TTI who volunteered to participate in the study. The age of the respondents ranged from 19 to 26 years. All of them received information about the study and gave voluntary consent to participate in it.

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