DISTANCE LEARNING AS AN UNAVOIDABLE COMPONENT OF HIGHER EDUCATION DURING THE PANDEMIC

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Abstract. During the short period of time, the situation has changed dramatically and demanded significant correlations of our requirements and priorities in many areas, including the system of traditional higher academic education, which in turn revealed new opportunities, prospects, challenges, and even threats. The usual system of organizing the educational process (tests/exams) which is typical for full-time education is changing now. The initial euphoria from the widespread introduction of distance learning methods is replaced by anxiety and apprehension, taking into account the duration of the changing process of digital learning, as the only alternative platform that allows continuing the implementation of higher education as it is. However, studying the consequences of online learning, most researchers consider the problem: what impact digitalization of education has on a new contingent of students who are more adapted to global digitalization and do not feel stressed implementing new online resources. We could hardly say the same about the teaching staff of universities, where frequently the state of professional and emotional burnout due to the introduced distance learning forms is diagnosed. The purpose of this research consists of determining the correlation between the ratio of e-learning in the total academic load during the coronavirus pandemic and burnout at work among teachers implementing e-learning experience to achieve the best possible results, leveling the consequences of lockdowns, thereby preserving, and possibly expanding the boundaries of students' professional competencies.

Keywords: distance-learning; global digitalization; higher education; pandemic; professional and emotional burnout.



35

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ДИСТАНЦИОННОЕ ОБУЧЕНИЕ КАК НЕОТЪЕМЛЕМЫЙ КОМПОНЕНТ ВЫСШЕГО ОБРАЗОВАНИЯ ВО ВРЕМЯ ПАНДЕМИИ

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Аннотация. За короткий промежуток времени ситуация в мире кардинально изменилась и потребовала значительного согласования наших потребностей и приоритетов во многих областях, включая систему традиционного высшего академического образования, что, в свою очередь, выявило новые возможности, перспективы, вызовы и даже угрозы. Обычная система организации учебного процесса (тесты/экзамены), характерная для очной формы обучения, на какой-то период утратила свою актуальность. Первоначальная эйфория от широкого внедрения методов дистанционного обучения сменяется тревогой и опасениями, принимая во внимание продолжительность меняющегося процесса цифрового обучения, как единственной альтернативной платформы, позволяющей продолжать реализацию высшего образования как оно есть. Однако, изучая последствия онлайн-обучения большинство исследователей рассматривают проблему: какое влияние цифровизация образования оказывает на новый контингент студентов, которые более адаптированы к глобальной цифровизации и не испытывают стресса при внедрении новых онлайн-ресурсов. Вряд ли можно сказать то же самое о профессорско-преподавательском составе вузов, где часто диагностируется состояние профессионального и эмоционального выгорания из-за введенных дистанционных форм обучения. Цель этого исследования состоит в определении корреляции между долей электронного обучения в общей учебной нагрузке во время пандемии коронавируса и выгоранием на работе среди учителей, внедряющих опыт электронного обучения для достижения наилучших возможных результатов, нивелирования последствий карантина, тем самым сохраняя и, возможно, расширяя границы формирования профессиональных компетенций студентов.

Ключевые слова: дистанционное обучение; глобальная цифровизация; высшее образование; пандемия; профессиональное и эмоциональное выгорание.

Introduction

During the coronavirus pandemic, many studies have appeared that consider the orientation of most world countries to e-learning instead of face-to-face training as one of the ways to control the pandemic and minimize the number of cases of the disease. These researches were aimed at identifying the benefits and drawbacks of e-learning, as well as problems and difficulties arising in this regard.

The relevance of the study is due to the need that arose as a result of the spread of the coronavirus pandemic for the ubiquitous introduction of online resources and evaluation of their effectiveness in the short term with the help of a survey of both students and teachers of some universities in Russia (Federal State Budgetary Educational Institution of Higher Education «Moscow Pedagogical State University», a branch in Anapa, Samara State Technical University, and Samara State University of Economics). The authors also identified patterns by processing questionnaires using mathematical statistics of the dependence between the introduction of e-learning and areas of professional burnout. The stratified random sample was calculated using a variable at the level of 6 %, which is considered an appropriate proportion to represent the results of the study.

This research concluded that there is a negative correlation with statistical significance between the level of e-learning and the one of professional burnout among the study sample, but the results obtained in most cases are directly dependent on the age of the respondents.

Therefore, it is of importance to maintain academic continuity with the universal digitalization of higher education. The results and recommendations of this paper may also draw attention to the need for further research on e-learning and its impact on professional burnout in the academic sector.

Literature Review

Studies indicate that several synonyms can be used to define Distance Learning such as E-learning, Open Learning, Online Learning, Virtual Learning, Electronic Learning, and Mobile Learning, which is learning using mobile devices and tablets. Regardless of any of these synonyms, e-learning as defined as learning that occurs in whole or in part through the Internet or online learning as learning which at least 80 % is provided through the Internet [1]. Some define it as software that depends on the web to distribute, track, and manage teaching courses via the Internet [2, 3]. They consider distance learning as one of the learning types in which the student is not always present at the study site, meaning that they learn and qualify the subject they have chosen via the Internet without coming to the exam center, college building, or university campus. The researcher defines e-learning, regardless of the naming, as all activities related to the learning process that is provided to students in a non-face-toface manner, using electronic technologies and applications [4]. He explains that the origins of distance learning go back a hundred years, when the early distance learning materials used the first and second generations of communication technology, where the first generation extending between (1850-1960) consisted of printed materials, radio, and television, while the second generation (1960-1985) used other technologies except for the computer, and these technologies consisted of audio cassette tapes, videotapes, fax, television, as well as printed materials, adding that those who benefited from distance learning were students in rural and remote areas, in addition

to army soldiers, especially those who are forced to leave school because of their assignments outside their country which happened in the first and second world wars.

Studies have shown that many benefits can be achieved by transitioning to e-learning, regardless of what reason is behind the transition. Among the advantages is that e-learning takes place away from the restrictions of time and place which ensures the continuity of the learning system and helps learners return to lectures at any time they want, given that the lectures are usually recorded. Also, distance learning helps to invest time in a better way as it eliminates or reduces the time that students and teachers need to move to and from the place of study as well as reducing the financial costs of that movement, in addition to the possibility of investing time in practicing a job or work while learning at the same time. Distance-learning helps students spend more time with their families, which leads to strengthening emotional relationships between parents and children. Another advantage of applying the e-learning system is that such learning provides teachers with the ability to constantly update the material, offers a comfortable learning environment, gives teachers the chance to get instant feedback, enables them to diversify teaching methods from audio, video, etc. Moreover, it gives students the flexibility to choose study programs, enables them to talk freely with teachers using chat more than if learning was faceto-face, and finally reducing the risk of catching the virus [5–7].

At the same time, researchers have indicated that there are many disadvantages of e-learning. With regards to the technical aspects and the electronic infrastructure, studies have drawn attention to the most prominent problems, which are the following: instability of the Internet, interruption of the teacher's voice, delay in entering the live lecture, lack of synchronization between the audio and the educational material, and inability to access the Internet as some areas do not even have Internet access. As pointed out, this type of education, as well as the platforms used in it, may not be suitable for all educational disciplines. Also, there are other technical difficulties represented in the outdated computers of students and teachers and the inability of these devices to use modern software. In fact, those difficulties refer to students and teachers not having the necessary tools such as computers or the possibility to afford the costs of accessing the Internet. The shortage of technical skills by teachers and students, the unreadiness of many developing countries for e-learning, and the lack of technical skills for parents which are needed to help their children also contribute to the situation [8, 9].

As for what could negatively affect the learning process because of using e-learning, the absence and/or a low level of communication and co-operation between students and teachers, and the teachers' inability to determine whether students take learning seriously are behind it. The low concentration rate as students cannot focus for a long period, the note that there is a good level of distraction, frustration, anxiety, and confusion among students, the difficulty of adapting to the electronic learning style are added. There is also the lack of interest in building the student's personality, as there are no activities that support personal development, in addition to the difficulty of providing students with necessary skills. They point at unreadiness of the approved curricula, pedagogy, exams process for e-learning, and the lack of practical effectiveness of the exams [10, 11]. Some studies mention bad behavior of students during the lectures [12]. In addition, there are severe educational difficulties for students with special needs.

Studies conducted on the reality of e-learning during the coronavirus pandemic have revealed many difficulties and challenges resulting from the trend to use this type of education. It was found that teachers were exposed to a high degree of fatigue and faced health issues (headache and tired eyes) because of their long stays in front of the screens to prepare and present educational materials. As for the students, it was found that psychological and mental disorders, depression, stress, anxiety, and deviation have increased. They were short of motivation and integration, and felt negative emotions and isolation, as well as inability to follow up on the screen. Also, the e-learning trend during the coronavirus pandemic has resulted in more challenges and complications, represented in students and teachers having to carry out more burdens and meet household needs while being involved in the learning process at the time of a lockdown. The occurrence of family problems due to the long stay of teachers and students at home was completed by a new burden to parents: they became teachers, observers, and helpers in solving activities and homework. In addition to all this, there was not enough space for learning at home. Consequently, the lack an appropriate disciplinary environment could not provide a comfortable atmosphere for learning.

Professional burnout is a relatively modern administrative concept, and the first appearance of this term was in the seventies of the last century. Job burnout represents a major obstacle that prevents individuals from carrying out their work as expected or as hoped for. Job burnout has been identified as a negative phenomenon: individuals are unable to work which leads to their feeling of incapability to solve problems, and thus loss of interest in work and feeling of psychological tension while carrying it out. Researchers define it as an internal state ranging from anger to anxiety, which is generated because of emergence of the factors related to work environment such as work pressure that leads to the individual feeling emotional fatigue, depersonalization, and inaptitude to achieve personal accomplishments [13–15].

There are multiple dimensions to job burnout of which the most important, according to the researchers' consent, are:

- Emotional exhaustion (Occupational) is the basis of job burnout and the main factor that accumulates in job burnout. Individuals are stressed due to the lack of emotional resources.
- Depersonalization is the most extensive dimension of job burnout, which is negative attitudes towards others and the individual's lack of any feeling towards the people they deal with. Some of these dimension symptoms are cruelty, pessimism, frequent criticism, sarcasm, blaming others, and disregarding the others' feelings.
- Low personal accomplishment that builds up due to feeling emotional stress and aggressive responses towards others, making the individual feel that they are unable to perform the tasks assigned to them and resulting in a lack of self-esteem and inability to work under pressure [16–19].

Job burnout, like other managerial behaviors, goes through sequential stages as follows:

- Absorption stage where the level of occupational satisfaction is high, but there is contrast between reality and what was expected, and the level of satisfaction begins to decline.
- Depersonalization stage that grows slowly at the same time when the level of occupational satisfaction gradually decreases, and the efficiency of work

performance and level of achievement go down. Individuals feel physically ill and begin to shift their interests to other things in lives such as social contacts and hobbies in order to fill their void.

- The stage of separation where individuals realize what happened and begin to withdraw psychologically. They feel mentally and physically ill with an increase in psychological stress.
- The critical stage which is the most difficult and farthest in job burnout, where psychological, physical, and behavioral symptoms worsen, and their danger increases. The individual's thinking is disrupted, and their self-doubt increases, reaching the stage of invasion (explosion). They think of leaving work, and it may even reach the point of considering suicide.

Materials and methods

This paper is a correlative study, and the descriptive correlative approach has been followed to achieve its objectives. It is a descriptive study because it concerns the reality and level of distance-learning practices in universities, as well as the level of job burnout. It is also a correlative study, as it reveals the proportion between the level of e-learning process and job burnout level among teaching staff in universities.

The study is built on questionnaires distributed electronically to teaching staff working in Russian Universities in 2021. The unit of analysis included all academic ranks operating in the mentioned universities (professors, associate professors, assistant professors, and lecturers, total amount of interviewees - 183).

This research rests on two main sources for collecting the required data: secondary sources and primary sources represented by a questionnaire that was designed to achieve the objectives of the study.

The questionnaire reposes on the scientific researches. Cronbach Alpha was applied to test the consistency of the questionnaire. The following table shows that the Alpha value for each variable is greater than the accepted value (0.60) that reflects the consistency of the questionnaire [20–22]. The questionnaire consisted of items that measure e-learning and job burnout including such types questions as "How do you assess your emotional exhaustion?" or 'What is your personal accomplishment?' (Table 1).

Table 1

Nº	E-learning scale/Job burnout scale	Alpha value
1	Emotional exhaustion	0.87
2	Depersonalization	0.86
3	Personal accomplishment	0.84
4	Infrastructure	0.92
5	Effectiveness of the educational process	0.93
6	Student achievement assessment	0.87
7	Effectiveness of e-learning	0.93

Distant learning and job burning out in 2021 among teaching staff in universities

To calculate the total score for each scale, alternatives have been elaborated for the respondents to choose one that expresses their opinions, and these alternatives range from 1-5. To determine the level of arithmetic averages of the items and areas

for both scales in the tool, the statistical standard was adopted using the following equation: Upper limit of the scale (5) — Lower limit of the scale (1) (Table 2).

Table 2

Distant learning and job burning out	Mean	Level
Infrastructure	3.66	High
Effectiveness of the educational process	2.63	Moderate
Student achievement assessment	2.38	Moderate
Effectiveness of e-learning	2.81	Moderate
Emotional exhaustion	3.12	Moderate
Depersonalization	2.56	Moderate
Personal accomplishment	2.81	Moderate

Level of distant learning and job burning out in different areas of educational process in 2021 in Russian universities

The e-learning level in most areas was moderate as well, except for the infrastructure, which came high with the highest arithmetic average, followed by effectiveness of the educational process, and then the field of student achievement assessment. It was the lowest for e-learning effectiveness. This study consisted of several variables as follows:

- Independent variable: the level of e-learning in its dimensions (infrastructure, effectiveness of the educational process, student achievement assessment, and effectiveness of e-learning) in universities.
- Dependent variable: the level of job burnout with its dimensions (emotional exhaustion, depersonalization, and personal accomplishment).
- Secondary independent variables (Intermediate): gender, academic rank, university, college, years of service, and social status.

Results

The overall results, which came at a moderate level, indicate that universities are moderately suffering from e-learning during the coronavirus pandemic. This is a significant matter given the importance of the continuity in the university educational process under emergency conditions and in a way that meets aspirations and goals of these universities in maintaining the quality of graduates as well as their abilities to enter the labour market with strength and professionalism. Therefore, this fact needs to be considered by the university administration because of its impact on the performance of faculty members, students' performance, and thus the performance of the university. The findings may be explained by the weakness in the skills of e-learning among faculty members and students as well. This is due to many factors, the most prominent one was non-usage of e-learning previously by many faculty members and students, as university administration did not focus on this subject and did not make it one of the basic requirements in education. Before the pandemic, face-to-face education was dominant, and using e-learning was at a low level by many Russian universities, even though most of them provided appropriate infrastructure, educational platforms, and Internet subscriptions, which was proven by the infrastructure that came at a high level in Table 2. The sample

members indicated, through their answers on the e-learning scale, the accessibility to the educational platform and the ease of exchanging educational materials between teachers and students, as well as the university provision of appropriate technical support to facilitate the process of learning and teaching.

As for the other three areas (effectiveness of the educational process, student achievement assessment, and effectiveness of e-learning), which got a moderate level, this may be due to some difficulties in communication between teachers and students for various reasons. The most prominent one is technical problems on the Internet for students mostly because their places of residence are geographically distributed over areas near and far so that the network coverage is not the same for everyone. Also, the universities did not support students by providing them with the Internet, and many learners with low living standards cannot afford the Internet throughout a week, which sometimes pushes them to miss classes. Moreover, the degree of supervision during courses is not at the appropriate level due to the difficulties of determining the reasons for not attending classes or exams, where some of students claim that interruptions occur constantly and they have to re-enter more than once, in addition to other factors and reasons. It must be pointed out that the educational environment in e-learning is not completely suitable. Furthermore, there is a huge number of students in some academic courses and the difficulty to control cheating during exams which lead to unfair evaluation results.

Therefore, if universities want to succeed in e-learning, they will have to make appropriate arrangements for teachers and students, and support them with sufficient internet devices at minimum.

Otherwise, the process will remain to be appropriate sometimes and inappropriate the other times, affecting the motivations of students and teachers towards learning and teaching.

Discussion and Conclusion

The Covid-19 pandemic has caused a lot of problems for both learners and universities. However, we need to come up with some strategic initiatives at individual and institutional levels to make a difference. The work-related issues in universities should be changed under the requirements of digital learning. There is a severe need to inculcate awareness among the groups of learners on adoption of digital initiative by the higher educational institutions. Learners should be made clear why such steps have been taken and how they can adopt for the change. There is a need to strengthen IT platforms by making necessary adjustments with respect to its continuous availability and uninterrupted services. The Government should facilitate the usage of less expensive platforms in order to encourage students and teachers to adopt them. Faculties need to be empowered with IT staff to solve the technical difficulties that universities are facing now. Teachers have to get themselves more prepared and be ready to work an extra time, since the nowadays circumstances demand for rapid change and quick adoption for online learning. Some institutions with higher resources should take the initiative to communicate plans and policies and provide adequate training to the faculties in relation to online platforms. There is an urgent need for higher educational institutions to acquire certain minimum facilities, if not there earlier, to encourage and facilitate online learning platforms. All higher educational institutions need to conduct online training, integrate

their non-academic staff to be a supportive part of online platforms for better implementation of the initiative.

Based on the findings of this study, it could be recommended for universities to pay more attention to e-learning in the following way:

- encouraging teachers and students to improve the communication process between them in various possible ways,
- controlling the examination mechanism to give a true image of the students' level of proficiency,
- considering the standards of living of teachers and students and assisting them in solving problems that hinder the e-learning success,
- training teachers to deal with e-learning efficiently.

Our particular attention goes to the fact that today it is necessary to focus on the teaching staff in order to prevent their level of job burnout. This can be achieved as follows:

- providing a comfortable academic and social work environment,
- taking into consideration the staff issues,
- focusing on their achievements and supporting the distinguished ones,
- motivating them to express their opinions and share ideas,
- dealing with faculty members fairly and equitably.

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