

Students' Well-being in Online Education in Covid-19 Context

Eugen Florian POPESCU¹

Mihaela TĂTUCU²

Valentin DOBROMIRESCU³

1 – Psychologist, Engineer. MSc Student at Faculty of Psychology and Educational Sciences, University of Bucharest, 050657, Bucharest, Romania. Email: eugen2popescu@yahoo.com (corresponding author)

2 – Psycho-pedagogue. MSc Student at Faculty of Psychology and Educational Sciences, University of Bucharest. Email: mihatatucu@gmail.com

3 – Clinical Psychologist. MSc Student at Faculty of Psychology and Educational Sciences, University of Bucharest. Email: valentindobromirescu@gmail.com

Abstract

The study explores the dynamic of students' well-being in the online educational context occasioned by the Covid-19 pandemic. A couple of theoretical studies and recent findings are presented, with regards to the factors that influence the students' well-being and learning process in a fully online education.

The hypothesis derived from theoretical analysis states that the students' well-being in online education is lower than in classical education. We approached a qualitative methodology of research to explore the evolution of students' well-being in the current situation of remote participation to the University courses, deploying an open-question interview with students from Engineering and Psychology Faculties.

The results of the study reveal there are multiple factors – related to emotional state, social interaction, informational content, study materials and instruments, self-regulation, and physical state and context – that influence the students' well-being and learning process in the online education. The paper is concluded with perspectives for refinement, deeper exploration and integration of the research topic.

Keywords

Online education, Well-being, Learning process, Covid-19

1. Introduction

Covid-19 pandemic brought challenges never seen before, in all our areas of activity. Educational system encountered the most disruptive dynamic in its recent history, by abruptly switching from a traditional and inertial workflow in physical space towards a new and enforced online experience that has no certain ending.

Educational Ministries, Universities, schools, instructors, students, parents were all affected by the need to conduct activities only remotely, making them to spontaneously and forcibly adapt the educational process to this context.

There was no time to predict and anticipatedly analyze the impact that the fully online education could have on the learning process, and only a few studies have been developed so far, that looked into the educational and psychological conditions that occur to the students in this context.

We proposed to study the status of the University students' well-being in the online education, by comparison to the one experienced in the traditional education (that was being held in the physical context). We identified a series of factors that influence the students' well-being and learning process in online education, while setting a path to future research directions in these regards.

From the existing studies on the subject, we found that there is a series of factors that model both the students' well-being and the learning process. More so, the well-being has a direct influence on the learning process (Nedelcu et al., 2018).

The factors of influence may regard different dimensions of the students' experiences, including: the emotional state, the self-regulation processes, the interaction with technology, the communication and relations with instructors and other students, the interaction with didactical materials, the learning process itself, or the perception of the physical working context.

Thus, students' well-being and learning process may be affected by:

- the courses design and structure (Eom et al., 2006; Eom & Ashill, 2016; Tello, 2007; Yang & Cornelius, 2004; Liu et al., 2021);
- instructional technology and academic programs (Tello, 2007; Yang & Cornelius, 2004; Naddeo et al., 2021);
- interaction, feedback and facilitation received from instructors (Eom et al., 2006; Eom & Ashill, 2016; Tello, 2007; Kukreja et al. 2021);
- collaboration (Kumar, 2021; Lloyd-Jones, 2021);
- learning styles (Eom et al., 2006);
- inclination towards IT&C (Kukreja et al., 2021; Paudel, 2021; Kumar, 2021);
- self-regulation (Eom & Ashill, 2016; Yang & Cornelius, 2004; Paudel, 2021; Kumar, 2021; Liu et al., 2021; Lloyd-Jones, 2021);
- introversion and extraversion (Kukreja et al. 2021; Eom & Ashill, 2016);
- academic stress (Man et al., 2021);
- psycho-physiological factors – e.g. clothing, posture, tiredness, disposition, solitude (Naddeo et al., 2021; Liu et al., 2021; Kukreja et al., 2021; Man et al., 2021);
- external factors – e.g. noise, distractors, lack of time, financial implications, home context (Tello, 2007; Yang & Cornelius, 2004; Naddeo et al., 2021; Minkos & Gelbar, 2020).

As a summary of documentation, we understood that students' well-being suffered a decrease in quality in online education compared to classical education, but there are also some advantages and benefits that shall be maintained and leveraged in the situation of switching back to classical education, as a blended educational context may offer the conditions for an increase in the quality of learning process.

2. Research objectives

This study was constructed on the margins of the following objectives:

- i. To explore the overall status of the students' well-being in the online educational context and to compare it with the one specific to the classical education.
- ii. To identify the factors of influence on well-being, as well as on the learning process, as they are perceived by the students in the context of online education.
- iii. To verify the results obtained in documentation.

3. Hypothesis

The hypothesis set to be verified in this study is the following:

- Students' well-being is lower in online education than in classical education.

4. Theoretical Framework

Nedelcu et al. (2018) define well-being as the quality of educational life, as seen from a psychological, physiological and social perspective, being described by subjective data of students and by objective data of the educational system and context in which the learning process occurs.

Authors propose (p.188-189) four analytical dimensions that would help understanding the factors that influence the students' well-being, namely:

- Organizational factors – e.g. institutional rules, intervention of the instructors on social issues, physical space for delivery of education.
- Relational factors – e.g. instructor-student communication, conflict resolution, counseling and guidance for the students, student collaboration, educational culture, conscious and reflexive teaching.
- Didactical factors – e.g. quality of teaching, assessment and feedback, instructors' perception on the students' learning process, teamwork responsibility assignment, learning process stimulation from a cognitive and social perspective.
- Processual factors – e.g. access to teaching, tactics and methods of teaching, facilitation of instructor-student communication, instructors' training.

In the same time, individual autonomy is mentioned as a key subjective factor that influences the students' well-being, on other four dimensions (p.204-212):

- Cognitive autonomy – which is represented by the capacity of independent rationing, of controlling the own formative processes, of taking the responsibility for their quality and efficiency.
- Behavioral/ functional autonomy – represented by self-direction of behavior and actions, according to their own decisions.
- Emotional autonomy – which is represented by independence in formation and expression of feelings, self-regulation of motivation, reflexive capacity.
- Value autonomy – which means to own a set of beliefs and principles that are resistant to external influences and pressure.

By reference to our documentation, we understand that well-being is represented by a series of factors that influence the attitudes of learning, which in turn affect the process of acquiring knowledge and skills.

Well-being is dependent both on internal factors (that are specific to the students – e.g. personality, spontaneous emotional states, self-regulation and adaptation capacity, temperamental predispositions) as well as on external ones (that rely on the interaction with technology, the physical context of the educational activities, the quality of didactical materials, the interaction with instructors and colleagues, the occurrence of the online and individual learning process).

5. Methodology

Our research involved conducting an interview with open-ended questions, with the following characteristics:

- Topic of the interview: Students' well-being in the context of the online education generated by the Covid-19 pandemic.
- Hypothesis: Students' well-being is lower in online education than in classical education.
- Items: 21 open-ended questions that explored students' perceptions regarding: the online education in general, the analysis of its advantages and disadvantages, the communication, the collaboration and relationships with instructors and colleagues, the emotional state, the support and guidance received from instructors, the ability to concentrate on courses, the quality and organization of study materials, the organization of study time, the efficiency of the educational process and the satisfaction felt regarding the learning process.
- Number of participants: 6 technical students and 2 humanities students, from both undergraduate and master's university cycle.

6. Results

The formulated hypothesis (*students' well-being is lower in online education than in classical education*) is partially confirmed, for the interviewed subjects. Findings have been grouped on categories, as follows:

6.1. Emotional state

- Students feel disappointment regarding the decrease in quality of interactions in the virtual environment compared to the physical one, but also enthusiasm for the encountered challenges and for the conditions of online education.
- They report an emotional feeling of loneliness. Physical social relations were an important factor in multilateral personal development, which is no longer present in the online education.
- Some students went through depressive episodes, with anxiety, frustration and feelings of helplessness, feeling the need to resort to various methods of self-regulation (e.g. writing a journal) or external support (e.g. meetings with friends).
- Students consider themselves adapted to the online educational context. However, they consider this state of affairs only as necessary, but not also as desirable. They all stated that they want to

return to classical education, but also that there are positive aspects and benefits of online education, which they would like to maintain in the long run.

- There was one response according to which the predisposition to introversion was an advantage for the online educational process, as it involved less energy consumed for social interactions.
- Predisposition to extraversion generates a direct negative effect on well-being and learning process due to physical isolation.
- In online education, students felt a more pronounced academic stress than in classical education.
- The technical students did not have the support and psychological counseling from the Faculty. Instead, humanities students have benefited from psychological counseling programs offered by their Faculty, disposing of both internal and external specialists.

6.2. Interactions

- Students notice the weakening of interpersonal relationships with both instructors and colleagues. The interactions undergo a polarization, depending on the frequency they had in the physical context: frequent relationships have strengthened, while the rare ones have almost disappeared.

The interactions are strictly limited to the particular needs and interests for which they are conducted, without being able to support lateral/ occasional/ informal discussions, as the physical interactions allowed.

- Collaboration and teamwork activities saw a better allocation of roles between participants and a better assumption of responsibilities. They were characterized by an increased efficacy, but by a lower efficiency, compared to the situation of classical education.
- Collaboration in the context of online education requires more time and effort for team-level synchronization.
- Students do not feel too much support from instructors. Students from the early years – who did not have direct interactions with instructors and other colleagues – suffer the most, while evolving in a relatively emotionally hermetic environment.
- The level of acquaintance between instructors and students has decreased. Some students feel that instructors do not offer them an assessment as good as in classical education. They no longer manage to interact with instructors as naturally and personally as they did in the physical environment.

6.3. Informational content

- In the context of online education, students – especially those in their early years – fail to understand the big picture of the profile or the specialization they have chosen. Their learning process seems to suffer the most.
- Students state that they benefit all from equal rights of access to information. They enjoy a closer view of the presentation which is in front of them on the screen, while in the classroom they received information from different angles and distances.

- Moreover, students who have a busier work schedule (e.g. those who also have a job) enjoy the possibility of accessing online courses in a much higher percentage than in the context of classical education, thus benefiting from more flexibility.
- The ability to concentrate on informational content has decreased due to distracting factors, lack of direct control by the instructors and physical fatigue felt by the students.
- An advantage of the aural learning style was noticed, as the predisposition to concentration on the flow of auditory information allows other activities to be carried out easily in parallel.

6.4. Study tools and materials

- Students notice the lack of physical experimentation in laboratories, but appreciate the opportunity to discover software solutions for putting into practice the theoretical knowledge.
- Technical instructors have adapted the classroom presentation techniques, using professional design tablets to replace the classroom board so that they can easily teach in mathematical and graphical language, thus maintaining students satisfaction for the quality of information delivered in courses in the online educational context compared to the classical one.
- By switching from physical to virtual/ simulation/ modelling equipment, technical students experience difficulties in completing laboratory classes, even when instructors try to support the process by adaption of instruments.
- Humanities students encountered difficulties in usage of and adaptation to the technical tools needed to conduct online education.
- Technical students were more open and more adaptable to IT&C tools and technology.
- The existence and quality of the internet connection can be fundamental impediments to the online courses, which influence the students' well-being, the motivation for learning and the learning process itself.
- Students appreciate the openness of exploring the internet environment, the variety of study materials which exist in the online educational context and the flexibility of self-organization.
- In the same time, the way the instructors present the study materials is also important. However, students say instructors lack sometimes the ability to organize the information efficiently and attractively.

6.5. Self-regulation

- In order to successfully complete the laboratory classes, technical students claim they need to develop initiative and work autonomy, to explore themselves, to look for information and solutions to assignments, to research more than in the context of classical educational.
- Online education stimulates the work autonomy and work independence of students, leaving them the freedom to manage their own decisions regarding the adopted learning style.
- A difference between the presence and the lack of personal initiative/ autonomy in students has been noticed. Students who have a high degree of initiative fully enjoy the online education, as it allows them to organize themselves and focus on subjects they enjoy, easily dodging the ones that do not draw their attention. They enjoyed being selective and managing their own learning

efforts in online education, as the assessments seemed for them not as rigorous as those of classical education.

Instead, students with a lower spirit of initiative suffer, accusing the lack of external motivation and guidance from instructors and colleagues. They feel disoriented and need ongoing support to go through the entire academic year. The lack of physical presence in the official educational context is challenging for them because they need external support for continuous study.

- The importance of personal determination in the learning process has been noted. Students say that when they certainly know their place and role in the educational context, they can manifest themselves firmly in a self-taught process. At the same time, they confirm that the reciprocal is also valid: in case of lack of a solid motivation, they can get lost, recording low learning outcomes.
- Students with a high degree of autonomy registered an increased level of motivation and enthusiasm for learning and scientific exploration, as well as a more pronounced selectivity for the informational contents.
- In the students' perception, their involvement in courses is lower than that of instructors. Students have become more selective in paying attention to courses, depending on their interests and passions for the specializations in which they prepare. Moreover, their involvement is declining in quality even if they say that online courses framework allows them equal access to the information presented by the instructor.

6.6. Physical condition

- Some students complain of fatigue and physical health problems (back pain, pain and fatigue of the eyes, headaches), caused by prolonged activity in front of the computer and lack of physical activity.
- The fatigue that students feel is mainly due to the increase in the amount of time spent in the educational process. Individual homework and assignments increased significantly, pushing students to explore their skills of autonomous work. Instructors claim that individual practice is necessary to compensate for students' lack of attention in online classes and the lack of practical/applied activities they would have had in physical classes.
- The physical context (e.g. the order in the working room, the clothing, the position adopted during the course) influences the learning process.
- For some students, the freedom to manage the physical context according to their own wishes improves the state of comfort and relaxation for the involvement in online education.

7. Discussions

- The study confirms the theoretical findings from previous studies on the subject and describes the actual dynamic of students' well-being and experiences in the online educational context.
- However, our hypothesis – students' well-being is lower in online education than in classical education – is partially true, since there are aspects that come in contradiction with it, emphasizing the existence of intrinsic motivational factors, as well as of external benefits, that positively influence the students' well-being and learning process.

- Students express their willing to switch back to traditional education, while also wishing to keep some of the specifics of the online education still in place, in order to leverage the constructive potential that they held. More so, they express their interest for a hybrid/ blended educational system that would mix the advantages of the both classical and online contexts.
- The only differences observed between technical and humanities students were reflected in terms of inclination towards IT&C technology usage and the challenges encountered in the laboratory courses.

Technical students had no problems in adaptation to IT&C technology for online education. But the laboratory courses proved to pose great challenges in terms of simulating the physical equipment necessary for training and formation of practical skills. In order to solve these problems, the students needed to improvise, to explore alternatives and to make use of their creativity.

Humanities students perceived the adaptation to the IT&C technology for online education as difficult. But they did no mention with regards to the laboratory courses.

- The study is bound to limitations due to methodological conditions, including the low number of interviewed subjects and the lack of variation in students' specializations, which shall be approached further on accordingly, in order to strongly confirm the hypothesis and the theoretical findings, to gain deeper insights related to the differences between didactic profiles, to explore more accurately the specific of each factors' variation and to create an integrated perspective on the influence that the online educational context brings on the students' learning process.
- The analysis shall also be continued by similar studies that explore the above mentioned subjects quantitatively, and be applied in multiple countries in order to extract inter-cultural insights.

8. Conclusions

Students experience an emotional imbalance in sustained online education, due to the lack of physical social interactions and to the overall tiredness generated by the high workload. At the same time, they benefit from more freedom in choosing the study topics and in managing time on their own.

As an overall consideration for the students' well-being, the balance is more inclined in favor of the negative aspects of their feelings and experiences, while they are aware of this situation and try to overcome it.

There are also exceptions, as is the case of autonomous students and of those with positive thinking, who extract and leverage the benefits of the online education. But even these ones experience a loss in the personal and social development, as a matter of the lack of physical social interactions.

Annex - Questionnaire used in the interviews

1. How do you describe the new context of online courses?
2. Since the imposition of online courses and until now, how do you feel the use of technology has affected you during the educational process?
3. What advantages do you find in online courses compared to the courses that took place in the classroom?
4. What impact does being at home have on the educational process?
5. What disadvantages do you find in online courses compared to the courses that took place in the classroom?
6. How was the online educational process for you, emotionally? What emotional states have you experienced?
7. In which way did these emotional states influenced the learning process?
8. To what extent your need for support and guidance on learning and management of emotions was insured during this period?
9. What is the difference between the emotions you feel now and the ones felt in the physical classes?
10. In terms of energy and rest, how do you feel about online classes compared to the physical ones?
11. How has the relationship with colleagues changed in the current (online) context?
12. What about the relationship with instructors?
13. How has teamwork/ collaboration changed?
14. How do you describe the (informational) communication between instructors and students and how has it evolved?
15. How would you describe (informational) communication with colleagues and how has it evolved?
16. How do you perceive now (in the online context) the efficiency of teaching activities?
17. How do you feel that your ability to concentrate has changed in the context of online education, compared to the classical educational experience?
18. How much time do you spend learning in online context compared to traditional learning?
19. What impact does this have on you?
20. What difficulties or benefits do you encounter regarding online learning materials compared to the classical education?
21. What is your level of satisfaction with online learning outcomes compared to classroom learning?

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