

EDU WORLD 2022**Edu World International Conference Education Facing Contemporary World Issues****HUMAN RELATIONS IN THE DIGITAL ERA OF THE
EDUCATIONAL PROCESS**Marina Stoian (a)*, Helmuth Köber (b)
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Abstract

This paper examines a group of students from the Technical University of Civil Engineering Bucharest in order to observe how interpersonal relationships have evolved in the education process in the construction domain over the past two years. The paper studies the interpersonal relationships of the students nowadays after a period of online-only learning, compared to previous relationships, their impact on the learning outcomes, and the evolution of their physical, mental and emotional health in this context. The study includes questionnaires addressed to final year bachelor students and master's students, which analysed: how their life as students has changed, how their collegial relationships have evolved, how their performance in the learning process has been influenced in relation to relationships by the digitisation of educational systems. The quality of outcomes in the educational process was and is strongly influenced by the quality of our interpersonal relationships. Social relationships are closely related to professional success, to good learning performance, to good physical, mental and emotional well-being. The study analysed the consequences of the digitisation of educational systems, with online-only learning leading to reduced social interaction or even social isolation of most students. The progress of science/technology, knowledge, digitalization, robotics, artificial intelligence will increasingly change people, their psyche and social relationships and the educational process as a whole. All this is a challenge in adapting to change, finding balance and keeping it.

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1. Introduction

The quality of outcomes in the educational process was and is influenced by the quality of our relationships. Digitising educational systems by reducing social interactions or even social isolation leads to psychological problems. Interpersonal relationships and the human need for attachment influence our health, the quality of our lives, our professional success and progress.

The study in this paper is dedicated to students, future graduates in constructions. The paper follows how students' lives, collegial relationships, how learning performance has been influenced by human relationships through the digitalization of educational systems.

2. Problem Statement

This paper aims to analyse the evolution of inter-human relations in the educational process in the field of construction today compared to the past years. This is a topical issue in the present, in the context of the need to adapt to new changes and the ability to adapt in the future.

The main research objectives of this paper are:

- i. Analysing the opinions of a group of students to determine how they are adapting to new changes in the educational process caused by online-only teaching methods;
- ii. The influence of digital technology on human relations;
- iii. The role of quality human relations in the educational process.

3. Research Questions

A group of 100 students of the Technical University of Civil Engineering of Bucharest (UTCB), from the last year of bachelor studies, and master students was analysed in order to observe the evolution of human relationships in the educational process over the past two years. These students worked in a construction company during summer practice or in parallel with their studies.

The paper presents three case studies on the interdependence between communication, digital technology and interpersonal relationships in the educational process.

For the first case study, a series of students of the Technical University of Civil Engineering of Bucharest was considered, with three groups from one specialization and a fourth group from another specialization. They all attended the course in the same lecture hall. They all met in class, week after week. Each group in the seminar class received the same topics for the knowledge exam on different days. The results of the exam and the communication between students were analysed.

For the second case study, students received a questionnaire consisting of 40 questions. Their answers were analysed. The most representative questions were:

A. How well do you feel you know your colleagues (names, collaborations, friendly discussions)?
- 10%; 30%; 50%; 70%; 90%.

B. Do you appreciate your relationships with colleagues?
- they are of interest; they are friendly; they are of a good nature; they are reliable; they are helpful.

C. How do you feel in the absence of physical social relationships?

- sad, angry, depressed; indifferent; comfortable, efficient; it doesn't bother me.

D. What is your most important goal in life?

- to have a happy family; to become famous; to be a good professional; to get rich financially; to travel; to have many good social relationships, friendships.

E. How are your relationships with others?

- you speak only through real-time digital audio video or messaging (virtual distancing);

- you socialize with friends, family, colleagues physically daily;

- you socialize with friends, family, colleagues physically weekly;

- you socialize with friends, family, colleagues physically monthly;

- you rarely socialize with friends, family, colleagues.

F. If you had to invest now, how would you invest your time and energy?

- in education, refresher courses, specialisation courses; in volunteering for a better world; in fun; in traveling; in time invested with loved ones.

G. What kind of relationships do you have with colleagues?

- I have harmonious, trusting, friendly relationships; I don't have harmonious, trusting, friendly relationships; I am generally single; I rarely have harmonious, trusting, friendly relationships; I have only relationships of interest and obligation.

H. How did you perceive the impact of online learning communication on your relationships?

- they remained the same; the interpersonal relationships improved, socialization increased; socialization and quality relationships have decreased; there was no socialization.

I. How did you perceive your health through online-only learning?

- I was sad, depressed; I felt no negative effects; I felt tired, it seemed I had less energy; I felt a sense of well-being, I had more energy; I felt loneliness, although we socialize online; I was bothered by the reduction in physical activities; I felt healthier.

J. What makes you happy?

- quality human relationships (friendship, trust, love); fame, celebrity; being healthy; travelling; sport and physical activity; fun; reading; professional work; money; other activities.

This study also analysed the differences between the answers of the students to the same questions, conducted also in 2018 on UTCB students (the analysed group being both final year and master students) and those in 2022. For example:

K. "Success in life means: a successful career; good relations with the colleagues, family and friends; fame; a good financial situation; starting a family" (Stoian & Köber, 2019b, p. 1556).

For the third case study, a short questionnaire on a day in the life of a student was carried out on the same group of UTCB students as in the first case study. The answers were then analysed. The main questions were:

1. What does a day in your life look like?

2. Do you like how a day in your life looks like? (Would you change anything? Can you? What do you need to change?)

3. How do you feel on a normal day in your life (physically, mentally and emotionally)?

4. Purpose of the Study

The article aims to analyse how students' interpersonal relationships and the educational process have evolved after almost a year and a half of online teaching and learning. The starting point of this study was the answers to the following questions:

- i. How does digital technology affect interpersonal relationships?
- ii. What have other research studies revealed about the importance of human relationships and how are good quality human relations cultivated in prestigious university centres?

4.1. Digital technology and interpersonal relationships

Relations at school/work are important. “On the one hand, colleagues and superiors with team spirit usually contribute to creating a good environment for performance. On the other hand, nice colleagues and superiors may determine that more time is devoted to social interactions than work” (Stoian & Köber, 2019a, p. 1564).

According to the book "Digital Dementia" by Manfred Spitzer (2020), doctors in South Korea, a country with very advanced information technology in the world, have recorded at today's young people “increasingly frequent disorders of memory, attention, concentration, as well as emotional flattening and general opacity, due to the use in excess of the digital environment, computer games, internet” (p. 232).

In January 2022, the School Inspectorate of the Municipality of Bucharest (2022) informed “the management of all educational units in Bucharest on the existence of several cases of suicide threats preferred by minors fond of online games on the Roblox-platform, following the closure of accounts by the administrator” (p. 2). The information was transmitted to parents and teachers. Attention was drawn in this way to young people's dependence on virtual relationships.

The progress of science, knowledge, technological progress, digitization, holograms bring great benefits to humankind, but we need to look at changes in the educational process, adaptation to change, impact on human relationships and on the human psyche. What will human relationships be like in the future? How will people change mentally, physically, emotionally? Some people are optimistic about these changes in human relationships, others on the contrary.

Albert Einstein once said: “I dread the day when technology will be more important than human relationships. There will be a generation of idiots in the world” (Holdeman, 2013, p. 1).

For example, the holographic projection neural translator uses technology that allows you to be anywhere you want and speak through your hologram, in any internationally spoken language you want. This is one of the latest mixed reality capture technologies.

4.2. The importance of human relationships

A Harvard study of adult development, from adolescence to old age, is the longest study of adult life ever conducted. For 75 years, the lives of 724 men were followed to see what keeps them happy and healthy Year after year they were asked about their work, their home life, their health. 60 of these men are still alive and taking part in the study, over 90 years old, and now the study is continuing with the more than 2000 children of these men. The study begins in 1938, with a group of male Harvard students, who

after graduation mostly went off to war in World War II, and another group of men from Boston's poorest neighbourhoods, who were part of Boston's most troubled and disadvantaged families. They became factory workers, lawyers, bricklayers, doctors, one of them became president (U.S. President John F. Kennedy), others became alcoholics, a few developed schizophrenia. The study was performed through questionnaires and discussions held with the children of these men. The medical records from their doctors were analysed. The main conclusion was that “good relationships keep us happy and healthy” (Waldinger, 2015, pp. 5-39).

The people who did best were those who valued relationships with family, friends, and community. More than a century ago, Mark Twain looked back on his life and wrote: “There isn't time, so brief is life, for bickerings, apologies, heartburnings, callings to account. There is only time for loving, and but an instant, so to speak, for that...” (Waldinger, 2015, pp. 11-52).

The University of Heidelberg, founded in 1386, it is the oldest university in Germany and was the third university founded in the German Holy Roman Empire. The University of Heidelberg attracts an open-minded student body and is among the 50 top universities in the world. People from 160 nations teach and learn in the city. His Holiness the Dalai Lama was a guest speaker at a conference at Heidelberg University, where he spoke about happiness and responsibility, peace and compassion. The mayor of the city noted that it is possible to learn how to cultivate happiness and he was pleased to report that at least one pioneering school in the city of Heidelberg is teaching just that (University Studies, 2021).

5. Research Methods

5.1. Comments and results on the first case study

I gave a seminar paper to a group. Then I gave the same topics to the second group two days later. The following week the third group had a seminar, received the same topics and the fourth group, from the other specialization, received the same topics. The following week the third group (from the same specialisation as the first two groups) and the fourth group (from the other specialisation) gave their seminar paper, receiving the same topics. Surprisingly the groups of students did not collaborate with each other, even though they knew each other from the course. Each group treated the topics as if they were given for the first time.

When they received the results of the paper, I told them the situation. They were surprised; nobody expected this lack of communication. They didn't collaborate, they didn't talk to each other, even though they saw each other almost every day in class.

5.2. Comments and results on the second case study

The questionnaire showed that about 75% of the students have monotonous lives, the days resemble each other, with the same activities, the same places, the same relationships. They were not happy with their lives but they were complacent. Obstacles are mainly financial considerations, the difficulty of belonging to a group, fear of being wrong, fear of stepping out of comfort zone, fear of trying new things.

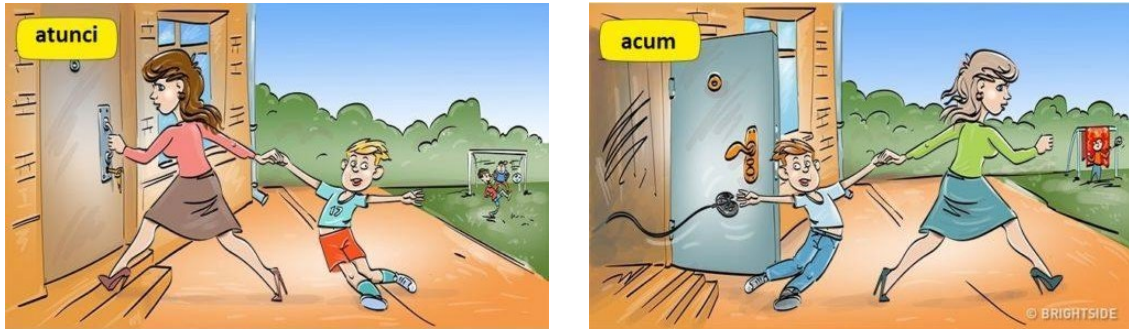


Figure 1. Changing leisure time preferences: then/now (7 images showing the differences between your childhood and theirs, 2019)

Change could be much simpler. Instead of watching TV, playing computer games, socializing only virtually, (all leisure activities declared as enjoyable by students), they could choose to reinvigorate dormant relationships, through face-to-face meetings, through new activities where they can meet and bond new relationships and friendships (see Figure 1).

5.3. Comments and results on the third case study

The students' questionnaire showed that for them now, at this age, happiness is mainly about money, fame, fun and travel (see Figure 2). More than 75% of the students said that an important goal in their life is to get rich. Another 40% of the same group of students said that another major goal in life is to become famous, to have a well-paid job with professional affirmation. A smaller but not negligible percentage, around 20%, value family and friends as bringing happiness.

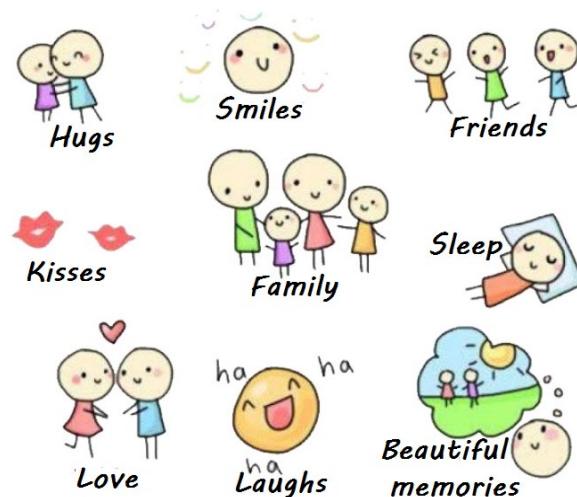


Figure 2. The best things in life are simple and free (Chakraborty, 2021)

For a good life, a prosperous future, students' perception is to work hard, to have financial support, to have luck or chance, or to have the support of people who can open doors on their professional path.

Students who feel lonely without quality social relationships, even though they want them, find that learning based on online-only communication is a hindrance for developing quality collegial

relationships. Through lack of physical socialisation they find they are less happy, which is also reflected in their intellectual performance.

6. Findings

It can be seen from the questionnaires that intellectual performance decreases in case of students who feel lonely, without quality social relationships, compared to students who have friendships based on trust. This lower intellectual performance resulted from sadness, reduced physical activities, isolation.

The questionnaires show that the choice of leisure time by students is predominantly computer, TV, film, chat and video games. In second or third place are physical socializing, nature walks, travelling or physical exercises.

Fewer trusting relationships are observed, fewer friendly relationships. Collegial relationships are mostly based on interest, conjecture. On a secondary level, there are still friendly, helpful relationships. For master's students this percentage of interest-based, casual relationships was higher. For the master students who are working, good relations at work are very important.

The main findings of the questionnaire responses were:

- Most students prefer everything computerised, without taking any notes during the course or seminar. They behave like spectators. Students who use pen and paper in class are increasingly rare.

- It often happens when the teacher makes a drawing or diagram on the board, that students wait until it is ready and then just take a picture of the drawing or diagram. During this time (while the drawing is being made on the board) many students just sit and listen to the explanations. Students taking notes during the course are quite rare.

- Many of the projects are worked only by computer, not by hand with pen, pencil, eraser; almost everything is done on the computer.

- Increasing use of digital computing for quite simple mathematical operations could be noticed. Students perceive it unpleasant if simple mathematical operations have to be performed mentally.

- During breaks between classes students' socializing is less, many of them sit on their phone, laptop or tablet quietly on the bench; quite a few go out for a coffee, juice, cigarette or an opportunity to socialize.

- If years ago there was noise and bustle in the breaks, with students eager to communicate with each other, now there is almost silence in the breaks. Only a homework assignment in a studied topic arouses interest in socialising.

- The need to button the phone during the course or seminar, no longer in the mood to do one thing, to be present, focused on the course 100%. Attention from the lecturer's presentation is easily distracted by the phone, laptop or other gadgets, thinking they can be attentive, focused and so on.

- The need to eat during class, a sandwich, a croissant or to nibble something, not to be patient until break. Years ago, this behaviour was quite rare, but with online learning for almost two years now, this habit has been formed and accentuated.

- There are series of students in which socialisation is low; especially students from different groups know each other to a rather small extent.

- Quite often students prefer sending an instant message by electronic means (e-mail, phone message, what's up, etc.), rather than talking face-to-face, even though the colleague is in the same classroom or in the next room.

- Often there is only brief socialisation between students, based on interest, few and superficial friendships.

Awareness of information received by students is a first step towards changing social relations in the educational process and beyond.

7. Conclusions

Good quality relationships, in which you feel trust, beautiful feelings, teamwork bring emotional, psychological, physical well-being, professional success, good results in the educational process. However, from the students' questionnaires, in relation to their life experience, this aspect is not yet understood and aware. Today's students socialize less physically, even student meetings take place mostly online. If in years past break meant bustle, now break is quiet. Either students go out for a cigarette, an opportunity to socialize, or they stay in class, quietly, in the classroom, on their phone, tablet or laptop.

There is less collaboration, help, friendships. Everyone is preoccupied with their own way. Less trust in others. Communication, face-to-face relationships are important for creating personal relationships and building trust with peers. The presentation of the results of the case studies to the students, partly led to an awareness of their actions, an understanding of the importance and influence of social relationships on the educational process.

"The good life is built with good relationships" (Waldinger, 2015, pp. 12-22)!

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