



# PSYCHOLOGIA PAEDAGOGIA

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# **STUDIA UNIVERSITATIS BABEŞ-BOLYAI PSYCHOLOGIA-PAEDAGOGIA**

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**S T U D I A  
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## **SOCIAL AND PSYCHOLOGICAL CORRELATES OF THE MAJOR SOURCES OF DISCOMFORT PERCEIVED BY STUDENTS IN THE COVID-19 PANDEMIC: AN EXPLORATORY STUDY ON A ROMANIAN SAMPLE**

**ÉVA KÁLLAY<sup>1a</sup>, SEBASTIAN PINTEA<sup>2a</sup>**

**ABSTRACT.** The COVID-19 pandemic has a significant impact on the physical and psychological functioning of the entire world's population. Our study has had three major aims: (1) to identify the major sources of discomfort related to COVID-19 pandemic in third year psychology students, (2) to establish a hierarchy of the major sources of discomfort, and (3) to identify possible vulnerabilities for different sources of discomfort. We used a cross-sectional study to explore more accurately the individual reactions and possible vulnerabilities, also including open-ended questions to explore perceived sources of discomfort.

Our study included 289 third-year psychology students from Babeş-Bolyai University in Cluj-Napoca, Romania ( $M=24.39$  years,  $SD=7.12$ ). All participants were assessed regarding their levels of: depression, narcissistic traits, perfectionism, perceived stress, self-esteem, intolerance of uncertainty, subjective well-being, and emotion regulation strategies.

Our results indicate significant gender and age differences: male participants reported mobility restrictions as a source of discomfort more frequently than female participants, and younger students are less concerned with restrictions regarding social relations, while older students report less emotional

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<sup>a</sup> The authors had equal contributions to this study.

problems and less concern with educational problems. Students living in urban areas report less emotional problems than students from rural areas. The results generated by our research point out certain social and psychological vulnerabilities for each perceived source of discomfort (emotion-regulation strategies, perfectionism, narcissism), can bring a valuable input in counselling and therapy for individuals who are maximally affected by the pandemic of COVID-19.

**Keywords:** COVID-19 pandemic, psychological discomfort, vulnerabilities, students

## Introduction

Due to its extremely rapid spread, by March 2020, COVID -19 was declared by WHO as being a worldwide pandemic, and the situation quickly became an extremely serious public health problem (Phelan, Katz, & Gostin, 2020; Vergara-Buenaventura, Chavez-Tuñon, & Castro-Ruiz, 2020; WHO, 2020).

Previous research indicated that the psychological reactions of the population to the implications of pandemics play a crucial role both in the physical spreading of the disease and the isolation of the infection, and may affect the individuals' functioning on the intra- and interpersonal level (Taylor, 2019). Pandemics and their implications are frequently associated with intense feelings of uncertainty and confusion regarding the infection's duration and effects on health, emotional functioning, economy, thus generating intense levels of distress, anxiety and fear in all layers of the population (Bao, Sun, Meng, Shi, & Lu, 2020; Peteet, 2020; Wang, Pan, Wan, Tan, Xu, Ho, et al., 2020). Moreover, the death of family members, friends and loved ones can be easily perceived as traumatic (Taylor, 2017).

The institution of quarantine and its *sources of discomfort* (e.g., separation from loved ones, the possible overwhelming of health-care systems, loss of freedom to travel, shortage of food and financial resources, disruptions of usual life-routines, closure of schools, changing work habits, etc.) further aggravate the initial stressors, significantly affecting the populations' emotional and mental

well-being (Brooks, Webster, Smith, Woodland, Wessely, Greenberg, & Rubin, 2020; Shultz, Espinel, Flynn, Hoffmann, & Cohen, 2008; Smith, Keogh-Brown, Barnett, 2011; Vergara-Buenaventura et al., 2020). Because quarantined and highly stressed individuals cannot always efficiently fulfill their occupational and personal duties, national economies and social infrastructures may also be significantly affected (Shultz, Baingana, & Neria, 2015). Studies investigating the short- and long-term effects of pandemics sustain that in most cases the "*psychological footprint*" would leave deeper imprints than the actual "*medical footprint*" (Shutz et al., 2008; Taylor, 2019). In other words, the psychological impact and afferent cost might exceed the medical ones.

Naturally, literature has investigated risk and protective factors in face of such extended adversities as pandemics. Thus, negative emotionality (neuroticism), trait anxiety, intolerance of uncertainty, unrealistic optimism, emotion regulation (Huang et al., 2016; Lauriola et al., 2018; O'Bryan & McLeish, 2017; Rosser, 2018; Shepperd, Waters, Weinstein, & Klein, 2015; van Dijk et al., 2016) all proved to be subjacent factors that are significantly involved in the individuals' reactions towards extended adversities.

An increasingly large number of studies have indicated that the psychological consequences of the COVID-19-generated crisis are multiple: increasing depressive symptoms, anxiety, PTSD, insomnia, lowered levels of well-being, confusion, etc. have been reported in studies conducted all over the world during the COVID-19 pandemic (Fernández-Abascal & Martín-Díaz, 2021; Gao, Zheng, Jia, Chen, Mao, Chen, et al., 2020; González-Sanguino, Ausín, Castellanos, Saiz, López-Gómez, & Muñoz, Liu, Zhu, Fan, Makamure, Zheng, & Wang, 2020; Ntella, Giannakas, Giannakoulis, Papoutsis, & Katsaounou, 2020; Zhu, Sun, Zhang, Wang, Fan, Yang, et al., 2020).

Furthermore, there is a plethora of research investigating the effects of the COVID-19 pandemic on different populations (e.g., general population, children, older adults, medical staff), and different areas of functioning (intimacy in couples, economy, mass media, etc.) (Anwar, Malik, Raees, & Anwar, 2020; Eurostat, 2020; OECD, 2020a, b; Fegert & Schulze, 2020; ILO, 2020; Mercier, Arquizan, & Roubille, 2020; Panzeri, Ferrucci, Cozza, & Fontanesi, 2020; Williamson, 2020; Yang, Li, Zhang, Zhang, Cheung, & Xiang, 2020). However, there is a reduced number of studies investigating the impact of the present

COVID-19 pandemic on the psychological functioning of university students, although this is a vulnerable population to mental health problems (Blanco, Okuda, Wright, Hasin, Grant, Liu, et al., 2008) especially if we take into consideration the fact that these youngsters have to simultaneously face the transition from adolescence to adulthood (Husky, Kovess-Masfety, & Swendsen, 2020).

In normal, non-pandemic life conditions, emotional and mental well-being are strongly related to students' academic achievements and success (Esch, Bocquet, Pull, Couffignal, Lehnert, Graas, Fond-Harmant, & Ansseau, 2014; Fletcher, 2010), also affecting motivation, implication, concentration, social relationships, etc. (Unger, 2007). Research also indicates that due to developmental characteristics, adolescents and young adults may be seriously affected not only by the inherent life-threatening aspects of different highly-stressful situations, but also by the resulting social restrictions as well (Fegert & Schulze, 2020). Thus, it became extremely important to investigate the specificities of psychological reactions due to the COVID-19 pandemic in student populations (Cao, Fang, Hou, Han, Xu, Dong, & Zheng, 2020).

Previous research conducted in non-pandemic life-situations indicated that high levels of *perfectionism* (on all three dimensions: self-oriented, other oriented and socially prescribed perfectionism) may obstruct the healthy adaptation processes to stressful situations (Hewitt & Flett, 2001; Fry & Debats, 2009; Smith, Sherry, Gautreau, Mushquash, Saklofske, & Snow, 2017). Perfectionism was defined as a personality trait in which the person strives to achieve extremely high standard performances, and evaluates the results of his/her and others' achievements in an excessively critical way (Flett & Hewitt, 2002).

Similar results were produced by research investigating *narcissistic traits* (a "pervasive pattern of grandiosity (in fantasy or behavior), a constant need for admiration, and a lack of empathy" (American Psychiatric Association, 2013), especially in the younger generations (Bradlee & Emmons, 1992; Kasser & Ryan, 1996; Dickinson & Pincus, 2003; Sherry, Gralnick, Hewitt, Sherry, & Flett, 2014; Twenge & Campbell, 2007). Optimal levels of self-esteem have been shown to have protective effect in adjustment and adaptational processes (Friedlander, Reid, Shupak, & Cribbie, 2007; Mooney, Sherman, & Lo Presto, 1991).

Furthermore, literature indicated that specific stress related reactions (depressive and anxious symptoms) may be traced back to a cluster of several types of *emotion regulation strategies* ("what people think after having experienced a negative or traumatic event" (Garnefski, Kraaij, & Spinhoven, 2001, p. 7) (Garnefski, van den Kommer, Kraaij, Teerds, Legerstee, & Onstein, 2002). For instance, positive refocusing, positive reappraisal, acceptance, putting into perspective have been considered as adaptive strategies, while rumination, catastrophizing, other blame with reduced levels of emotional well-being (Carver, Scheier, & Weintraub, 1989; Nolen-Hoeksema, Parker, & Larson, 1994; Sullivan, Bishop, & Pivik, 1995; Tennen & Affleck, 1990). Consequently, our study has three major objectives:

- a. To identify the major sources of discomfort related to COVID-19 pandemic in third year psychology students
- b. To establish a hierarchy of the major sources of discomfort
- c. To identify possible vulnerabilities for different sources of discomfort

The design of our study is cross-sectional. In order to explore more accurately the individual reactions and possible vulnerabilities, and to go beyond the limits imposed by the limitations of closed-ended questions, we added also a qualitative component, in which, by using several open-ended questions, we gathered free answers and performed a thematic analysis upon them.

## **Method**

### **Participants**

The reasons why our study involved only students of psychology are manifold: first of all, since both authors teach at the department of psychology, through extensive discussions with them, we became familiar with their major sources of discomfort, and considered that including open-ended questions could better explore their perceived sources of discomfort. Secondly, since our students have both theoretical and practical formation during their formative

years, which strongly determine the quality and depth of their knowledge-base, we considered that the investigation of this population is highly important. In this way we would have obtained relevant information which could further on significantly contribute to the development of specific prevention and intervention strategies, through which we could offer our students better conditions in such challenging times to enhance their overall psychological well-being and academic performances.

Using G\*Power 3.1.9.4, with  $\alpha= 0.05$ ,  $1-\beta= 0.85$  and an effect size  $r= 0.18$ , the minimum number of participants generated was  $N= 271$  for a two-tail test. Our study included a convenience sample of 289 participants, third-year psychology students from Babeş-Bolyai University in Cluj-Napoca, Romania. The minimum age of the participants was 20 years, while the maximum 58, with a mean age of 24.39 years ( $SD=7.12$ ). Of the 298 participants 39 were male (13.5%), and 250 female students (86.5%). Participants were assessed in April-May 2020 during the lockdown in Romania. The collection of the data has started after the investigators have obtained the agreement of the Ethical Committee of Babes-Bolyai University, Cluj-Napoca, Romania (Nr. 6643/11.05.2020). After providing informed consent, participants completed an on-line questionnaire packet that took 45 minutes to fill.

## Instruments

**Demographic variables** were: age, gender, residence and marital status.

**Depression tendencies** were measured with the Beck Depression Inventory-II (BDI, Beck, Rush, Shaw & Emery, 1979; Romanian adaptation David & Dobrea, 2012). The BDI is a 21-item, multiple-choice format inventory, designed to measure the presence of depression in adults and adolescents. Each of the 21 items assesses a symptom or attitudes specific to depression, inquiring its somatic, cognitive and behavioral aspects. By its assessments, single scores are produced, which indicate the intensity of the depressive episode. Scores ranging from 0 to 9, represent normal levels of depression, 10-18= mild

to moderate depression; 19-29=moderate to severe depression, scores above 30=severe depression. Internal consistency indices of the BDI are usually above .90. For the present sample, the internal consistency for the BDI was .85.

**Narcissistic traits** were measured with 16-item Narcissistic Personality Inventory (NPI-16, Ames, Rose, & Anderson, 2006; translated and adapted into and Romanian by the authors) derived by the authors from the long, 40-item NPI scale (Raskin & Hall, 1979). The test consists of sixteen pairs of statements, and for each pair subjects should select the one that they feel best reflect their personality. The NPI-16 is a short measure of subclinical narcissism, presenting a good face, internal, discriminative, and predictive validity (Ames et al., 2006). The internal consistency of the NPI-16 for the present sample was .81.

**Perfectionism** was measured with the 45-item self-report Multidimensional Perfectionism Scale (MPS, Hewitt & Flett, 2002; translated and adapted into Romanian by the authors). The MPS contains three sub-scales: self-oriented perfectionism (SOP) (e.g., *"One of my goals is to be perfect in everything I do"*), other-oriented perfectionism (OOP) (e.g., *"Everything that others do must be of top-notch quality"*), and socially-prescribed perfectionism (SPP) (e.g., *"I find it difficult to meet others' expectations of me"*). Responses are given on a 7-point Likert scale, from 1 (strongly disagree) to 7 (strongly agree). The psychometric properties of the scale (reliability and validity) were found across studies to be very good (Hewitt et al., 2003). Cronbach's alpha for the present sample ranged from .74 to .87.

**Stress** was measured with the Perceived Stress Scale (PSS, Cohen, Kamarck, & Mermelstein, 1983; translated and adapted into Romanian by the authors). The PSS measures the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The PSS is a 14-item self-report questionnaire, with answers being rated on a 5-point Likert scale (0-never, 4-very often). Cronbach's alpha for the present sample was .81.

**Self-esteem** was measured with Rosenberg's (SES, Rosenberg, 1979) 10-item Self-Esteem Scale. The scale is comprised of 10 statements, each focusing on general feelings, perceptions of the self. Participants are asked to answer each statement on a four-point Likert scale (1=agree not at all, 4=agree completely). The SES demonstrated high levels of reliability and validity. Cronbach's alpha for the present sample was .85.

**Intolerance of Uncertainty** was assessed with the 12-item version of the Intolerance of Uncertainty Scale (IUS-12) (Carleton et al., 2007). The IUS-12 permits the calculation of total scores, as well scores on the Prospective Anxiety and the Inhibitory Anxiety Subscale. Participants are asked to answer the 12 items on a five-point Likert-type scale (1=not at all characteristic of me; 5=entirely characteristic of me). Total scores range from 12 to 60. The IUS-12 demonstrated a high internal consistency in undergraduate samples (IUS-12:  $\alpha=.91$ , Carleton et al., 2007). Internal consistency of the IUS-12 in the current sample was also high ( $\alpha=.92$ ).

**Subjective well-being** was assessed with the 5-item WHO well-being questionnaire (WHO Collaborating Centre in Mental Health, 1999), scale that focuses the assessment of positive affective states. Items are rated on a 6-point Likert scale from 0 (not present) to 5 (constantly present). Scores are summed, with raw scores ranging from 0 to 25. Then the scores are transformed to 0-100 by multiplying by 4, with higher scores meaning better well-being. Cronbach's alpha for the present sample was .78.

**Emotion regulation strategies** were measured with the Cognitive Emotion Regulation Questionnaire (CERQ) (Garnefski, Kraaij, & Spinhoven, 2002; Romanian adaptation, Perte & Tincas, 2010). The CERQ is a self-report questionnaire designed to measure cognitive coping strategies, assessing what people think after confronting specific negative events, or to assess the way people generally react after confronting negative events. The scale is comprised of nine sub scales: self-blame, acceptance, rumination, positive refocusing, re-focus on planning, positive reappraisal, putting into perspective, catastrophizing, other blame, each subscale containing four items. Subjects have to indicate on a five-point Likert scale (almost never – to – almost always) the frequency

with which they use the specific cognitive emotion regulation strategy. The internal consistency of the subscales for the present student population range from .74 to .89.

**Sources of discomfort in the COVID-19 pandemic** were measured by an open-ended question, allowing each participant to mention three major sources.

### Data analysis

When analyzing qualitative data, we performed a categorization process depending on specific source of discomfort mentioned by each participant. When analyzing quantitative data, for the univariate analysis, we used absolute and relative frequencies (percentages), while for the correlation analysis we used several correlation coefficients, according to the type of scale variables were measured. For the relationship between categorical variables we used the phi contingency coefficient while for the associations between categorical and interval scales, we used the point biserial coefficient (Cohen, 2001).

## RESULTS

The descriptive characteristics of our sample are presented in Table 1. Most of our participants are females from an urban environment and not married.

**Table 1.** Descriptive characteristics of the sample

Participants characteristics	n	%
Gender		
Male	39	13.5
Female	250	86.5
Residence		
Urban	236	81.7

Participants characteristics	n	%
Rural	53	18.3
Marital status		
Single	131	45.3
In a relationship	130	45.0
Married	22	7.6
Divorced	6	2.1
Participants characteristics	M	SD
Age	24.39	7.12

Qualitative data referring to the participants' attitudes, feelings, and thoughts regarding the COVID-19 pandemic and its implications were obtained by asking them to enumerate the most important aspects of the thus-created situation that produces the most discomfort for them. This information was further coded and resulted in the major sources of discomfort as presented in Table 2.

**Table 2.** Illustrations for each source of discomfort

Sources of discomfort	Examples
1    Restrained mobility	I cannot go outdoors, I cannot get out, My liberty of movement is restrained, Traveling restrictions, I am trapped in one place, Staying at home all day long
2    Health threats	I am worried about my family health, I am worried about my health, The risk of getting ill, Fear of not contracting the virus, I am worried about the health of mankind
3    Educational problems	The schools are closed, Uncertainty about the exams, The online format of teaching and learning, Low concentration in online courses, Lack of motivation, Procrastination, I cannot keep up with online learning

<b>Sources of discomfort</b>	<b>Examples</b>
4 Restrained social relations	Lack of socialization, Lack of social relations, I cannot meet my friends, I miss human interaction, I am not with my folks, The distance from my beloved ones
5 Restrained leisure activities	Lack of sport activities outdoor, I cannot go out on holydays, Walking in the mountains, I miss swimming
6 Problems encountered in the medical system	I am worried that the medical system will collapse, The unprepared health system, The situation of the hospitals, I am worried about the health sector, The medical system is not ready, The situation of medical doctors and nurses
7 Emotional problems	Feeling of uncertainty, I feel anxious, I feel stressed by the pandemic, Boredom, Loneliness, The panic is installing, Hysteria and chaos, Panic, stress, agitation, General fear, I feel confused, Fear of death, General panic
8 Economic implications	Economic instability, The destruction of economy, I am worried about my income, Limited stocks of products, Economic stagnation, Economic crisis, Lack of money, Unemployment
9 Increased control from the authorities	I don't like to fill a form in order to get out, The control/filters from the police, I don't like that my body temperature is checked when entering into a store/institution, Too many rules, Too much control
10 Mass-media confusion	The stressful effect of television, The manipulation in mass-media, The anxiety generated by mass-media, Too much news about COVID-19
11 Population's negative attitudes	People do not respect the rules, People's lack of responsibility, People's egoism, insensitiveness, injustice, People's lack of precaution, People's ignorance, People are always unsatisfied

In order to ensure consistency and construct validity of coding, the coding criteria were jointly developed by the authors. Next, the coding was performed by both authors. All disagreements were resolved through mutual consensus.

We continued our investigation with establishing the hierarchy for reported sources of discomfort in COVID-19 pandemic. Data were treated as multiple responses. Consequently, the unit of analysis is the response and not necessarily the participant and implicitly, the total number of responses (n) exceeds the number of participants (N).

**Table 3.** Hierarchy for reported sources of discomfort in COVID-19 pandemic

Rank	Source of discomfort	n	%
1	Restrained mobility	188	65.1
2	Restrained social relations	173	59.9
3	Emotional problems	143	49.5
4	Educational problems	102	35.3
5	Economic implications	48	16.6
6	Health threats	33	11.4
7	Population's negative attitudes	33	11.4
8	Increased control from the authorities	31	10.7
9	Mass-media confusion	28	9.7
10	Restrained leisure activities	23	8.0
11	Problems encountered in the medical system	10	3.5

Results presented in Table 3 show that the most frequent sources of discomfort reported were restrained mobility (65.1%), restrained social relations (59.9%) and subjective/emotional problems (49.5%), while the less frequently reported were mass-media confusion (9.7%), restrained leisure activities (8%), and problems encountered by the medical system (3.5%).

In the next step, we tested the correlation between the perceived sources of discomfort and the main socio-demographic characteristics of the participants.

**Table 4.** Socio-demographic correlates of perceived sources of discomfort

Rank	Source of discomfort	Gender (0=female, 1=male, Contingency coefficient phi)	Age (Point-Biserial correlation coefficient)	Residence (1= urban, 0= rural Contingency coefficient phi))
1	Restrained mobility	.120*	-.010	.140*
2	Restrained social relations	-.014	.148*	.001
3	Emotional problems	.111 <sup>a</sup>	-.243**	-.174**
4	Educational problems	.075	-.158**	.086
5	Economic implications	.034	-.032	.040
6	Health threats	-.075	.000	.090
7	Population's negative attitudes	-.067	.056	-.050
8	Increased control from the authorities	-.040	.043	-.029
9	Mass-media confusion	.092	.077	.049
10	Restrained leisure activities	-.027	.061	-.056
11	Problems encountered by the medical system	-.110 <sup>a</sup>	.037	.030

Note: <sup>a</sup>  $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , N= 289

As Table 4 shows, male gender is significantly ( $p < .05$ ) or marginally ( $p < .10$ ) correlated with restrained mobility and subjective/emotional discomfort (higher probabilities of mentioning these two sources of discomfort compared to female gender). Also, problems encountered in the medical system are more frequently mentioned by women. All the above correlations have rather low intensities. As far as age is concerned, younger participants seem to have higher probabilities of mentioning educational and economic problems, while older participants report more frequently restrained social relations as a source of discomfort. Taking into account also their residence, the results show that urban residents are significantly more affected by restrained mobility but less

affected by subjective/emotional problems. It is also worth mentioning that all significant correlations had rather low magnitudes.

Further on, we tested the correlation between the perceived sources of discomfort and the emotional regulation strategies used by participants. Results are presented in Table 5.

**Table 5.** The point-biserial correlations between perceived sources of discomfort and emotional regulation strategies

Sources of discomfort	CERQ								
	Self-blame	Acceptance	Rumination	Positive re-focus	Refocus on planning	Positive reevaluation	Put into perspective	Catastrophizing	Others blame
Restrained mobility	-.021	-.134*	-.023	.005	-.037	-.045	-.026	.040	.089
Health threats	.130*	.067	.079	-.099	-.016	-.078	-.028	.102	-.048
Educational problems	-.009	.130*	.075	-.059	.064	.014	.021	.008	-.074
Restrained social relations	.059	.019	.041	-.074	-.003	-.047	-.014	.059	-.021
Restrained leisure activities	.020	.098	.031	.056	.088	.095	.114	-.048	-.012
Medical system problems	-.027	.037	.017	-.027	.073	.081	.049	.004	-.049
Emotional problems	.078	-.062	.107	-.124*	-.114	-.154**	-.133*	.121*	.069
Economic implications	.083	.084	.000	-.044	.022	.014	.025	-.062	.023
Increased control from the authorities	-.095	-.114	-.136*	.058	.016	.034	.066	-.058	.054
Mass-media confusion	-.118*	.030	.006	.127*	.022	.109	.130*	-.073	.007
Population's negative attitudes	-.056	.049	.006	.123*	.035	.055	.047	-.027	-.042

Note: \* $p < .05$ , \*\*  $p < .01$ , N= 289

As Table 5 shows, higher levels of self-blame are associated with higher probabilities of reporting health threats as sources of discomfort ( $r_{pb}=.130$ ,  $p<.05$ ) and lower probabilities of reporting mass-media confusion ( $r_{pb}=-.118$ ,  $p<.05$ ). Higher acceptance is associated with low probability of mentioning restrained mobility ( $r_{pb}=-.134$ ,  $p<.05$ ) and higher probability of mentioning educational problems ( $r_{pb}=.130$ ,  $p<.05$ ). Higher levels of rumination are associated with lower probability of mentioning increased control on the behalf of the authorities ( $r_{pb}=-.136$ ,  $p<.05$ ). Higher levels of positive refocusing are negatively associated with emotional problems ( $r_{pb}=-.118$ ,  $p<.05$ ) and positively associated with mentioning mass-media confusion ( $r_{pb}=.127$ ,  $p<.05$ ) and population's negative attitudes ( $r_{pb}=.123$ ,  $p<.05$ ). Higher levels of positive reevaluation are negatively associated with lower probability of mentioning emotional problems ( $r_{pb}=-.154$ ,  $p<.05$ ). Higher levels of putting into perspective are associated with higher probabilities of mentioning mass-media confusion ( $r_{pb}=.130$ ,  $p<.05$ ) and lower probabilities of mentioning emotional problems ( $r_{pb}=-.133$ ,  $p<.05$ ), while higher catastrophizing correlates with higher probabilities of mentioning emotional problems ( $r_{pb}=.121$ ,  $p<.05$ ).

We also tested the correlations between the perceived sources of discomfort generated by COVID-19 pandemic and the personality traits measured. Results are presented in Table 6.

**Table 6.** The point-biserial correlations between perceived sources of discomfort and personality traits (narcissism, perfectionism, self-esteem)

Sources of discomfort	Personality traits				
	Narcis-sism	Self-oriented perfectionism	Others-oriented perfectionism	Socially-prescribed perfectionism	Self-esteem
Restrained mobility	.121*	.019	.019	-.013	.095
Health threats	-.050	-.056	-.055	-.045	.017
Educational problems	.072	.016	.002	-.099	-.025
Restrained social relations	.103	.017	.053	.065	.023

Sources of discomfort	Personality traits				
	Narcissism	Self-oriented perfectionism	Others-oriented perfectionism	Socially-prescribed perfectionism	Self-esteem
Restrained leisure activities	.091	.079	.030	.009	-.099
Medical system problems	-.076	.088	-.015	-.026	-.039
Emotional problems	-.028	-.060	-.040	-.012	.086
Economic implications	.004	.069	.067	.168**	-.005
Increased control from the authorities	-.005	-.025	-.021	-.027	-.020
Mass-media confusion	-.006	-.011	.008	.078	-.050
Population's negative attitudes	-.130*	-.061	-.076	-.073	-.050

Note: \* $p < .05$ , \*\*  $p < .01$ ,  $N = 289$

**Table 7.** The point-biserial correlations between perceived sources of discomfort and subjective reactions (perceived stress, depression, anxiety, well-being)

Sources of discomfort	Subjective reactions				
	Perceived stress	Depressive symptoms	Prospective anxiety	Inhibitory anxiety	Well-being
Restrained mobility	-.003	.028	.047	-.011	.029
Health threats	.101	.050	.027	.053	-.073
Educational problems	.005	-.086	-.088	-.146*	.020
Restrained social relations	-.032	-.009	-.050	-.052	.019
Restrained leisure activities	-.072	-.051	-.033	-.014	.044
Medical system problems	-.080	-.012	-.015	.001	.041
Emotional problems	.201**	.189**	.151*	.173**	-.219**

Sources of discomfort	Subjective reactions				
	Perceived stress	Depressive symptoms	Prospective anxiety	Inhibitory anxiety	Well-being
Economic implications	.072	.067	.007	.036	-.090
Increased control from the authorities	-.027	-.002	.072	.086	-.040
Mass-media confusion	-.136*	-.044	-.022	-.022	.115
Population's negative attitudes	-.053	-.047	-.027	.039	-.017

Note: \* $p < .05$ , \*\*  $p < .01$ ,  $N = 289$

According to Table 7, mentioning emotional problems, was significantly associated with higher levels of perceived stress ( $r_{pb}=.201$ ,  $p < .01$ ), higher depressive symptoms ( $r_{pb}=.189$ ,  $p < .01$ ), higher prospective and inhibitory anxiety ( $r_{pb}=.151$ ,  $p < .05$  and  $r_{pb}=.173$ ,  $p < .01$ ) and with lower levels of well-being ( $r_{pb}=-.219$ ,  $p < .05$ ). Meanwhile, mentioning educational problems was associated with lower inhibitory anxiety ( $r_{pb}=-.146$ ,  $p < .05$ ) and mass-media confusion was associated with lower perceived stress ( $r_{pb}=-.136$ ,  $p < .05$ ).

## Conclusions and discussions

The COVID-19 pandemic generated health-threat, large number of casualties, uncertainty, social isolation, cessation of several professional activities, and the produced economic problems (at the personal and social level), led worldwide to significant, escalating psychological problems, which quickly became an extremely serious public mental health problem (Phelan, Katz, & Gostin, 2020; Vergara-Buenaventura, Chavez-Tuñon, & Castro-Ruiz, 2020; WHO, 2020). Research indicates that in such situations is crucial to identify the associated dysfunctional psychological reactions and the vulnerabilities of the population, in order to assist authorities and health care services to intervene in their amelioration with well targeted strategies (Taylor, 2019). The COVID-19 generated also a plethora of research investigating the effects of the pandemic on different populations. Nevertheless, the number of studies investigating the

impact of the present pandemic on the psychological functioning of university students is extremely scarce, although this is a particularly vulnerable population to mental health problems especially if we take into consideration the fact that they have to face the transition from adolescence to adulthood (Husky, Kovess-Masfety, & Swendsen, 2020). In students, emotional and mental well-being are strongly related to their academic achievements (Esch, Bocquet, Pull, Couffignal, Lehnert, Graas, Fond-Harmant, & Ansseau, 2014; Fletcher, 2010), affecting motivation, implication, concentration, social relationships, etc. (Unger, 2007). Students may also be seriously affected not only by the inherent life-threatening aspects of the situations, but also by the resulting social restrictions which may seriously block face-to-face socialization and consolidation of the subjacent abilities (Fegert & Schulze, 2020). Thus, it became extremely important to investigate the specificities of psychological reactions caused by the COVID-19 pandemic in student populations (Cao, Fang, Hou, Han, Xu, Dong, & Zheng, 2020).

Consequently, our research intended to investigate the relationship between intrapersonal protective and risk factors as cognitive emotion-regulation strategies, self-esteem, narcissism, perfectionism, and reactions to adversity, as perceived stress, depressive symptomatology, intolerance of uncertainty, and subjective well-being. Our study had three major objectives: (1) to identify the major sources of discomfort in third year psychology students; (2) to establish a hierarchy of the most important sources of discomfort, and (3) to identify possible vulnerabilities for different sources of discomfort.

Next, we will discuss the implications of our results separately, based upon each category of factors taken into account.

*Gender differences.* Our results show several gender differences. First, men report mobility restrictions as a source of discomfort more frequently than female participants. One explanation of this difference may be attributable to the gender differences regarding the perceived seriousness of COVID-19 as a health problem, revealed by Galasso et al. (2020), and also regarding the agreement and compliance with the governmental restrictions. Analyzing data from eight countries, the authors found that men perceived COVID-19 as less of a threat compared to women and also proved less agreement with the overall restrictions. Consequently, if COVID-19 is less of a threat for men, the mobility

restrictions imposed by the government are less justified for them and a source of discomfort of higher importance. Also, other studies found that women are generally more favorable to government interventions (Edlund & Pande, 2002; Ingelhart & Norris, 2000) and more risk averse than men (Crosson & Gneezy, 2009) which could also explain why women are less subjectively affected by mobility restrictions. Also, we found that women are more concerned with the problems encountered in the medical system, which could be explained by the fact that women are more likely socialized to become caregivers (Gallaso et al., 2020) and more sensitive to the quality of caregiving services.

*Age differences.* As far as age is concerned, our results show that younger students are less concerned with restrictions regarding social relations, while older students report less emotional problems and less concern with educational problems. The first result is in line with studies such as Vega et al. (2020) who found on a Spanish sample that younger participants were less affected by preventive measures and towards the need of staying home than adults and older adults. An explanation for this result could be the fact that younger people are more familiar with communication technologies and consequently are compensating the physical distance with more intense social interaction in the virtual environment. As far as the second result is concerned, its direction is in line with other studies showing that older people had more optimistic outlook and better mental health, at least during the early stages of the pandemic (Bruin, 2021). Other studies also found that younger adults had lower perceived coping efficacy with COVID-19 stressors than older adults, and also lower positive affect and higher negative affect (Klaiber et al., 2021). Older students could also report less emotional discomfort because they are more likely to have stable relationships and implicitly more social support which generate more emotional equilibrium. Regarding the third result, older students might report less concern with educational problems because most of them are already working, so their jobs are not necessarily affected by the educational program they are currently following. Also, most of the older students already have a first bachelor degree and they are currently studying to get the second one, and consequently, they are not largely affected by the interference of pandemic restrictions with the educational process.

*Residence.* Our results show that students living in urban areas report less emotional problems than students from rural areas but they are more affected by mobility restrictions. As far as emotional problems are concerned, the differences could be explained by differences in functional coping strategies, with advantages for urban residents (Shannon et al., 2006). As far as mobility restrictions are concerned, previous studies that compared COVID-19 attitudes and behaviors between rural and urban residents from China, indicated that rural residents were less likely to perform preventive behaviors, more likely to hold a negative attitude toward the effectiveness of performing preventive behaviors, and more likely to have lower levels of information appraisal skills (Chen & Chen, 2020) and also had a lower level of health literacy (Yue et al., 2020). Also, surveys on American population show that residents from rural areas believed to a higher degree that the threat of COVID-19 had been blown out of proportion, that the coronavirus is less of a threat to public and personal health and proved less concern about hospital resources (Boyle & Dayton, 2020). Even if in our study we have both rural and urban residents, the particularity of our sample is that both categories include only students. In other words, for this particular case, with higher educated participants, the fact that urban residents are more affected by mobility restrictions could be explained by the fact that cities offer a larger set of opportunities for entertainment and loisir, so the frustrations generated by mobility restrictions are higher than in rural areas. Also another explanation could be the fact that in urban areas, at least in Romania, the large majority of people are living in small building-block apartments and severe mobility restrictions left them with very few options of moving and exercise. On the other hand, for rural residents, living in houses with backyards and having daily homesteading activities, mobility restrictions had a lower impact.

*Emotion regulation strategies.* Literature indicates that emotion regulation strategies are strongly related to different aspects of mental health, especially depression and anxiety (Aldao et al., 2010; Aldao & Dixon-Gordon, 2014; Garnefski & Kraaij, 2006, 2007; Gross & Jazaieri, 2014; Liu & Thompson, 2017). More specifically, the habitual use of emotion regulation strategies as planning and positive reappraisal favor adaptation, while the frequent use of strategies

as such catastrophizing, other blame, self-blame and rumination malfunctioning in face of adversity (Balzarotti, Biassoni, Villani, Prunas, & Velotti, 2016; Garnefski & Kraaij 2007; Legerstee et al., 2011). Thus, the use of adaptive emotion regulation strategies becomes crucial in critical life conditions as COVID-19 pandemics (Restubog, Ocampo, & Wang, 2020).

Our results indicate that those participants who reported higher levels of self-blame feel that their physical health is more threatened than those who use significantly less this emotion regulations strategy. This result is consistent with the findings in the literature, which indicate that attributional styles specific to self-blame predispose individuals to more emotional ill-health (e.g., depression) (Anderson, Miller, Riger, Dill, & Sedikides, 1994). They consider that they are responsible for what most of the things that happen to them, and oftentimes overestimate their role in the way things resolve in time. Consequently, it is not surprising that those participants in our study who habitually use self-blame also experience less confusion induced by mass-media. This may be due to the fact, that due to their specific attributional style these individuals attribute more importance to their role in the unfolding of events than to information coming from other agents (in this case mass media).

Our results also indicate that those who report higher levels of acceptance are less affected by restrained mobility, but more affected by educational problems. The first part of this result is in line with previous findings which show that one's capacity to accept and become reconciled with the implications of a negative situation present higher levels of optimism and self-esteem, and lower levels of anxiety (Garnefski, Kraaij, & Spinhoven, 2001). The higher level of distress regarding educational problems may be due to the fact that in situations in which the person considers that he/she should have more control (in this case the educational trajectory), acceptance may attain a passive connotation which may negatively impact one's adaptive processes. In this situation, we consider to emphasize that literature frequently considers specific emotion regulation strategies as being adaptive or maladaptive without considering their adaptive value reported to the specificity of the context. Sometimes, a situation is extremely complex, requiring a more nuanced use of a blend of different emotion regulation strategies. Thus, it is more productive to immerse

the interpretation regarding the adaptiveness of these results after considering their role in the specific situation than a priori considering a strategy as being adaptive or maladaptive without investigating the requirements of the environment (Aldao, 2013). Regarding rumination, our results also reflect those who ruminate more are less affected by the control exerted by the authorities. Even if literature *a priori* considers that rumination is maladaptive, research also indicates that when rumination may also include self-reflective components, which in certain situations may confer to it an adaptive role (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008).

Next, our results indicated that those who habitually use positive refocusing are less affected by emotional problems. These results are similar to those of previous studies, which indicate that the capacity to mentally disengage from one aspect of a negative problem and refocus on a positive aspect of it is adaptive and in the short run reduces negative affectivity (Endler & Parker, 1990). However, this emotion-regulation strategy used for a prolonged period of time may impede efficient adaptation (Garnefski et al., 2001), conclusion that is also reflected by our results in which these individuals are more affected by the confusion created by mass-media regarding the unfolding of the Pandemics, its implications, etc., as well as by the opinion of other people. In line with previous results are our findings in which those who habitually use positive reappraisal are less negatively affected by the negative events in the pandemics (Garnefski et al., 2001; Garnefski, Teerds, Kraaij, Legerstee, & van den Kommer, 2004). The same holds to our findings in which those who use the strategy of putting into perspective are less affected emotionally (Garnefski et al., 2001). This was expectable, since putting into perspective the individual minimizes the implications of the event by comparing it to the implications of other, apparently more important events (Allan & Gilbert, 1995). Finally, those participants who habitually used catastrophizing were also more affected emotionally reflects the numerous similar findings in the literature (Garnefski et al., 2004; Nolan-Hoeksema et al., 2008; Sullivan, Bishop, & Pivik, 1995).

*Personality characteristics – narcissism and perfectionism.* With regard to personality characteristics our results indicate that those participants who report higher levels of narcissistic traits are more affected by restrained

mobility and less affected by the negative attitude of the population. Recent research indicates that even during Pandemics, individuals with narcissistic traits were found to refuse to comply more frequently to the rules imposed (Nowak, Brzóska, Piotrowski, Sedikides, Żemojtel-Piotrowska, & Jonason, 2020; Zajenkowski, Jonason Leniarska, & Kozakiewicz, 2020). These findings are probably associated with both the narcissistic persons' self-centeredness, entitlement, need for admiration and approval (Urbonaviciute, & Hepper, 2020). When these needs are not met by their environment, narcissists may be emotionally affected (e.g., depressive symptomatology, anger, emotional discomfort). In the same time, since narcissistic individuals are characterized by reduced levels of empathy (Campbell & Foster, 2007; Hepper, Hart, & Sedikides, 2014; Kernberg, 1985), it is not surprising that they are not affected by the attitude of others, be those negative or positive. This result may also be interpreted in the light of their reticence to abide to authorities (Nowak et al., 2020; Zajenowski et al., 2020).

Our research also indicated that those participants who attained higher levels of socially prescribed perfectionism are more affected by economic problems. This result may be traced back to their characteristics that these individuals have a constant need to obtain others' approval, thus they have to constantly display a perfect image of themselves (Curran & Hill, 2017). A plethora of research indicates that perfectionism is a basic component of narcissism, and both may be strongly related to consumerist and materialistic values, strong orientation towards financial issues (Beck, Freeman, & Davis, 2004; Rothstein, 1999; Twenge, 2013; 2014).

*Subjective emotional reactions.* Regarding subjective reactions, those participants who reported higher levels of distress also reported significantly higher emotional problems, which obviously is explicable by the overlap between similar concepts (distress and different emotional problems, positive and negative) (Eysenck & Fajkowska, 2017; Goodwin, 2015). Less is explicable for why those who reported higher levels of distress report less confusion produced by the mass-media. It is possible that those who are more distressed pay less attention to the flux of information, or their attention is driven to other aspects of the situation (e.g., concentration on the problems in their proximity). This aspect has to be investigated by future studies.

Inhibitory anxiety, one of the major component of intolerance of uncertainty refers to the distress caused by the uncertainty that impedes action or experience. Thus, our results that indicate a strong relationship between inhibitory anxiety and emotional problems may be due to the fact that restrained action and experience may induce negative affectivity by reducing the individual's chance to obtain interaction and positive feedback from others (Coyne, 1989). Finally, in our study subjective well-being is negatively associated with emotional problems, finding that reflects trends in the literature (Lee, 2020; Winefield, Gill, Taylor, & Pilkington, 2012).

### **Limitations**

Beyond the findings explained here, our study has also several limitations for which the authors take full responsibility. First, our study is cross-sectional and does not bring direct evidence to prove that the concepts named here as vulnerabilities for certain sources of discomfort are actually antecedents of such subjective evaluations. Second, we are aware that our study includes a large number of variables which means a possible escalation for the probability of false positive results. We tried to compensate this disadvantage by focusing the analyses not just upon statistical significance, but also upon effect sizes. Another methodological limit is that when measuring sources of discomfort, we allowed for brevity's sake each participant to mention only three major sources. We are aware that without such a constraint, the frequency of each source and implicitly their hierarchy could have been different from the one found in our analysis.

### **Future direction for research**

Based upon the experience of this study we recommend for future studies to transform the sources of discomfort identified here in items with close options of response, and including them in more complex predictive models which could bring evidence also for the chronological order of the vulnerabilities, through multiple mediation models.

Finally, we consider that the results generated by our research that point out certain social and psychological vulnerabilities for each perceived source of discomfort, can bring a valuable input in counseling and therapy for individuals who are maximally affected by the pandemic of COVID-19 and ultimately smoothing the transition toward normality.

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## FOSTERING SCHOOL ENGAGEMENT IN CHILDREN FROM DISADVANTAGED COMMUNITIES

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**ABSTRACT.** In the last two decades, most of the Romanian mitigate programs aimed at reducing school dropout, have often focused only on remedial activities. However, keeping students in school for as long as possible involves increasing their school engagement, and therefore developing dimensions that target social and emotional skills is strongly recommended. In the present study, 130 primary and secondary school students from disadvantaged backgrounds, participated for 8 months in remedial and personal development activities, whose medium-term goal is to reduce school dropout. Using scales from the BASC<sup>3</sup> and ASEBA<sup>4</sup> psychological test batteries, we were able to capture significant effects of the intervention in reducing emotional problems and increasing students' adaptability to school-specific tasks, even though the pandemic imposed several restrictions on activities. The collected data revealed two important outcomes. First, they confirmed the effectiveness of a complex, multilevel program, which can develop the socio-emotional abilities of children at risk of dropping out of school. Second, they help us to highlight several factors that can predict its effectiveness. We consider that these empirical data constitute a solid foundation based on which similar future programs can be designed and implemented.

**Keywords:** school dropout, school engagement, social and emotional competencies, disadvantaged communities

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<sup>3</sup> BASC - Behavior Assessment System for Children-2

<sup>4</sup> ASEBA - Achenbach System of Empirically Based Assessment

## Introduction

At the beginning of 21st century, one of the biggest problems faced by many educational systems is students' disengagement from school. In 2016, OECD (Organization for Economic Cooperation and Development) reported that more than 27% of the adolescents evaluated from 72 countries felt disaffected from school. Twenty-six percent of the pupils said they skipped at least one class in the last two weeks before the evaluation, and 20% reported missing the entire school day at least once. In Romania, 87.8% of the evaluated adolescents reported they *feel like an outsider (or left out of things) at school*, and 15.6% said they *feel awkward and out of place in their school* (OECD 2017). We also know that in our country, school dropout has a high rate (15.8%, according to Eurostat in 2020) and almost 50% of the students older than 15 years old have paid jobs, before or after school (OECD, 2017). These data can support the need for schools, government, NGOs and educational stakeholders to get involved in an active process to reduce school dropout. Given the fact that student disengagement seems to grow as students advance in the school system (Lam et al., 2015) and can be more severe for males, minority, and low-income students (Martin, Way, Bobis, & Anderson, 2014), we believe that prevention might be an important key in this matter. Prevention is the process through which students can be equipped with abilities/skills that can function as protective factors in the future, and this is an important aspect that should be acknowledged by teachers, school counselors, school leaders, etc. Taking into account all these aspects, regarding school drop-out, it becomes essential to find solutions that will help keep students in school for as long as possible. There are, of course, several reasons: a. Empirical studies have repeatedly shown that engagement in academic activities is a prerequisite for learning and information retention (Shernoff, Ruzek and Sinha, 2016); b. student involvement is one of the robust predictors of academic achievement (Green et al., 2012). c. if we can increase student engagement, this might be the key to preventing early school leaving (Archambault, Janosz, Fallu, & Pagani, 2009). And as we know, young people who drop out of school are more likely to be unemployed, earn low wages, face poverty and social exclusion, and rely heavily on public services (Rumberger, 2011).

School engagement refers to a multifaceted concept with interrelated and mutually supportive dimensions as behavioral, emotional, and cognitive engagement (Fredericks, Blumenfeld, & Paris, 2004; Pino-James et al., 2019). The first dimension refers to the degree to which students get involved in-class activities (e.g. following the rules), the second one refers to the positive and negative emotions derived from classwork, and cognitive engagement is related to the effort to complete classroom tasks, to process information. Although studies in this field are not always consonant with the definition of the concept of school engagement, in recent years a special emphasis has been placed on identifying the factors that could support it. Thus, the climate in which the classes take place, the trusting relationship that the teacher has with the student, the emotional and cognitive support, the good relations with classmates, fostering competence and autonomy, the support from the family and the school, all these are indicators that can support the student's commitment in the educational process (e.g. Furrer and Skinner, 2003; Brown, 2004; Skinner & Pitzer, 2012; Patall et al., 2017).

Based on these records, we considered it appropriate to develop school engagement in the case of children at risk of high school dropout. Based on the long collaboration between the Romanian Patriarchate, the World Vision Romania Foundation, Babes-Bolyai University, and the Consult Plus company, in 2019 the foundations of a new project were laid. It aimed to reduce school dropout through an intervention program that integrated two types of activities: a. Remedial activities - aimed at recovering academic deficits; b. group or individual counseling activities - which aimed at developing social and emotional skills designed to support the child in the effort to meet school challenges. The intervention proposed in the project was a wide one and brought together several ways of intervention: 1. a training program for teachers and school counselors who took on the counseling of children to develop their socio-emotional skills; 2. counseling activities addressed to parents of preschool children; 3. remedial and psycho-educational activities addressed to preschoolers, primary and secondary school students. Because most of the studies mentioned in the introductory section had students as a target group, for this paper we have extracted and will present only the results of the intervention designed for primary and secondary school students.

## Aims of the study

The purpose of this research was to evaluate the impact that the *School for all - access to quality education for preschoolers, schoolchildren, and teachers* project, carried out in several rural communities from Cluj County had on the social and emotional development of students from the target group. The project was accomplished within the project POCU / 74/6/18/104571 *School for all - access to quality education for preschoolers, schoolchildren and teachers from the Nord-West Region*" with the core purpose to prevent school dropout. Also, we aimed at exploring several social and demographic correlates of school engagement, to check the effectiveness of the program.

Because in this research project, the group of participants was selected based on certain specific criteria, all objectives were strictly related to the intervention group. Specifically, we aimed to prove that at the end of the program students who have benefited from the activities included will record improvements in adaptability, social skills, learning abilities, affective problems, anxiety problems, and ADHD problems.

## Measurements

The battery of psycho-pedagogical tests used in our investigative approach consisted of several scales that evaluated the 5 categories of "academic activators" according to DiPerna, Volpe, and Elliot (2002). Due to the restrictions generated by the COVID 19 crisis, in both evaluation moments, these instruments were completed online. These constraints have forced us to choose only those tests that had a teacher report form. Moreover, this criterion was also important because the participants selected to participate in the intervention come from disadvantaged backgrounds, with very low access to technology (PC, laptop, iPad), but also with low digital skills (difficulties in filling in google forms documents). Thus, we chose the BASC-2-TRS test batteries (Behavior Assessment System for Children-2- Teacher Rating Scale, Reynolds & Kamphaus, 2004, translated and adapted by Mitrofan N, Ion A. & Iliescu D. in 2011) and ASEBA -TRF (Achenbach System of Empirically Based Assessment- Teacher Report Form, Achenbach & Rescola, 1991, translated and adapted by Dobrean et al. in 2007). This complex psychological battery is validated in the Romanian population.

From the BASC assessment system, we used the scales of adaptability, social skills, and learning skills, and from ASEBA, the scale of emotional problems, anxiety problems, and ADHD problems scale.

The questionnaires include items evaluated on a 3 or 4 points Likert scale, with which allowed their transposition in the google forms application to be completed online.

## **Participants**

The participants in this research project were selected based on the POCU project requirements. Namely, we have included children from disadvantaged backgrounds, from families with low socioeconomic status, with parents working abroad and living in rural areas from Cluj County. Although at the beginning of the program (pre-intervention stage), teachers filled in evaluation forms for 117 primary school students and 132 secondary school students, at the end of the intervention only 36 primary and 94 secondary school children could be fully evaluated. A large number of students left the program due to the changes determined by the pandemic situation, which made it impossible for them to participate in all the project activities, because of the lack of internet access or technology. In the primary school sample ( $N=36$ ) there were 17 girls and 19 boys with an average age  $M=8.7$  ( $SD= 1.22$ ). In the secondary school sample ( $N=94$ ), there were 44 girls and 50 boys (39%) with an average age  $M= 13.19$  ( $SD= 0.94$ ).

## **Procedure**

After the initial assessment was completed, the students in the target group participated in a series of activities, specific to their age. These group activities took place online and face-to-face, for about eight months. Every week, the project team carried out one hour of remedial education activities on Romanian language and mathematics, one personal development activity, and one school counseling activity. Using stories and games, these last categories of activities were adapted to the child's needs and focused on self-knowledge, social-awareness, emotional development, emotion regulation, social development, communication skills, etc. Depending on the individual needs identified, some

of the counseling activities were performed individually. At the beginning of the pandemic situation, the activities were performed using WhatsApp video calls (for group and individual activities), and for secondary-school children, later on, in some schools, teachers used Google Classroom. The participants were invited to discuss different topics about who they are, what are their abilities, how they see themselves and what others think of them. Using "Forming, storming, norming, performing" framework (Tuckman, 1965), students have learned to work together, accept and trust each other and so, they became more involved in role play activities and teamwork, they were more willing to express their point of view in debates and art activities. During the intervention, teachers and counselors used therapeutic stories and games, thematic play, expressive writing, drawing, painting etc.

## Results

To assess the effect of the intervention on the competencies proposed for evaluation, we compared the results obtained by the participants in the two moments of the intervention. Because in the case of the BASC questionnaire, the items differ according to age, we have decided to perform a separate analysis of the data. Both in the case of 7-11-year-old students (table 1) and in the case of 11-15-year-olds (table 2), the intervention had the expected effects on several outcomes.

**Table 1.** The change for the main outcomes in the primary school sample

Outcomes	Pre-intervention		Post-intervention		<b>t</b>	<b>p</b>	<b>D</b>
	M	SD	M	SD			
Adaptability	16.69	3.29	7.94	5.54	-1.43	0.161	0.48
Social skills	16.83	4.15	17.47	5.1	-0.74	0.461	0.25
Learning skills	13.47	4.87	15.22	4.82	-2.14	0.039	0.72
Affective problems	4.58	3.16	3.41	2.83	2.71	0.010	0.91
Anxiety problems	2.77	2.02	1.11	1.08	6.45	0.001	2.18
ADHD problems	5.33	4.05	3.25	3.04	3.96	0.001	1.33

*Note*, N=36

As can be seen in the table 1, the results confirm statistically significant changes for the majority of the dimensions evaluated, namely: learning skills ( $t = -2.14$ ,  $p < 0.05$ ), affective problems ( $t = 2.71$ ,  $p = 0.010$ ), anxiety problems ( $t = 6.45$ ,  $p < 0.01$ ) and specific problems for ADHD ( $t = 3.96$ ,  $p < 0.01$ ). As far as the magnitude of these changes is concerned, the only moderate change ( $d = 0.72$ ) was recorded for learning skills, while for the other 3 outcomes, the magnitude of change was large (varying from  $d = 0.91$  for affective problems to  $2.18$  for anxiety problems).

**Table 2.** The change for the main outcomes in the secondary school sample

<b>Outcomes</b>	<b>Pre-intervention</b>		<b>Post-intervention</b>		<b>t</b>	<b>p</b>	<b>D</b>
	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>			
Learning skills	12.43	.84	17.22	7.48	-9.18	0.001	1.90
Adaptability	15.52	.57	18.29	4.42	-8.32	0.001	1.72
Social skills	12.36	6.77	17.07	5.80	-8.58	0.001	1.78
Affective problems	3.84	3.49	2.18	1.99	6.63	0.001	1.37
Anxiety problems	1.40	1.94	0.31	0.64	6.25	0.001	1.29
ADHD problems	8.13	7.78	4.28	6.05	6.70	0.001	1.39

*Note*, N=94

As table 2 shows, there is a significant change for all outcomes: learning skills ( $t = -9.18$ ,  $p < 0.01$ ), adaptability ( $t = -8.32$ ,  $p < 0.01$ ), social skills ( $t = -8.58$ ,  $p < 0.01$ ), affective problems ( $t = 6.63$ ,  $p < 0.01$ ), anxiety problems ( $t = 6.25$ ,  $p < 0.01$ ) and ADHD problems ( $t = 6.70$ ,  $p < 0.01$ ). As far as the magnitude of change is concerned, all changes recorded a large magnitude (from  $d = 1.29$  to  $d = 1.90$ ).

### ***Correlates of change***

As mentioned above, the aim of our investigation was mainly to measure the effects of the intervention on the emotional and behavioral components of school engagement. Besides the investigation of our hypotheses, we wanted to identify potential correlates of the change in the outcomes, that might become relevant for future similar projects. To quantify the individual change, the

difference between post and pre-intervention was calculated for each participant involved in both stages of the study. We analyzed as potential correlates of change, variables such as gender, age, ethnicity, parental status, family size (number of children in the family), and attendance in the project activities.

### **Gender**

The data revealed that for primary school students, there are significant gender differences in the effectiveness of the intervention for social skills, emotional problems, and anxiety problems (table 3), in such a way that the intervention is more effective for girls than for boys. Also, even if for the other outcomes gender differences regarding the mean change were not significant, the tendency of the results is similar, with larger changes for girls.

**Table 3.** Gender differences in the mean change (post-pre intervention) for both primary and secondary school samples

Effectiveness upon	Primary school sample (N=36)					Secondary school sample (N=94)				
	Boys		Girls			Boys		Girls		
	M	SD	M	SD	t	M	SD	M	SD	t
Adaptability	.22	5.77	2.28	4.57	-1.18	2.78	3.08	2.76	3.44	0.30
Social skills	-1.28	6.30	2.56	2.64	-2.38*	5.05	5.56	4.28	5.04	0.69
Learning abilities	.33	5.88	3.17	3.22	-1.79	5.73	6.53	3.28	7.02	1.74
Affective problems	-.17	2.55	-2.17	2.26	2.49*	-1.75	2.46	-1.54	2.40	-0.40
Anxiety problems	-1.06	1.30	-2.28	1.56	2.54*	-1.11	1.66	-1.04	1.72	-0.19
ADHD problems	-2.28	3.89	-1.89	2.30	-.36	-4.67	5.88	-2.83	5.03	-1.60

Note, \*\* p< 0.01, \* p< 0.05

As far as the secondary school sample is concerned, also in table 3, we can observe that there are no significant gender differences regarding the 6 outcomes that were analyzed. In other words, for the secondary school sample, the intervention was equally effective for boys and girls.

### ***Age***

Regarding the age, the results revealed that for secondary school students, age is a significant correlate only for the effectiveness of the intervention on learning skills (table 4), in the sense that the effectiveness of the intervention increases with the age of the students.

**Table 4.** The correlations between age and the change (post-pre intervention) for both primary and secondary school samples

Change in	Age	
	Primary school sample (N=36)	Secondary school sample (N=94)
Adaptability	.19	.16
Social skills	-.10	.10
Learning abilities	.26	.27**
Affective problems	.06	.13
Anxiety problems	-.12	.07
ADHD problems	-.03	-.12

Note, \*\* p< 0.01, \* p< 0.05

In the case of primary school children, even if age does not correlate significantly with the effectiveness of the intervention, for any of the measured aspects, it can be observed that the magnitude of the correlation with the learning abilities is very similar to the one found for secondary school children. The reason why this value was not significant is the relatively small sample of primary school children, and implicitly the low statistical power.

### ***Ethnicity***

Another potential correlate of change that was investigated was ethnicity. Results are presented in table 5.

**Table 5.** Ethnical differences in the effectiveness of the program (ANOVA)

Effectiveness upon	Primary school sample				Secondary school sample			
	Romanians		Hungarians		Rroma		Romanians	
	M	SD	M	SD	M	SD	M	SD
Adaptability	-1.00	5.46	1.18	4.1	3.38	5.20	2.89	3.75
Social skills	-1.83	6.21	2.18	4.69	1.62	3.78	5.29	6.20
Learning abilities*	-1.08	5.05	5.45	3.24	1.23	4.09	4.69	7.15
Affective problems	-.42	2.23	-2.36	2.62	-.85	2.67	-1.87	2.52
Anxiety problems*	-1.92	2.02	-1.82	1.60	-1.31	.95	-1.56	1.96
ADHD problems*	-.75	2.45	-2.36	1.75	-3.08	4.25	-3.62	5.78

\*\* p< 0.01, \* p< 0.05

In the case of the primary school sample, significant differences in the effectiveness of the intervention according to ethnicity were recorded only for learning skills ( $F=7.06$ ,  $p<0.01$ ) in such a way that Hungarian students recorded the larger improvement ( $M =5.45$ ,  $SD=3.24$ ).

In the case of the secondary school sample, significant ethnical differences in the effect of the intervention were found for learning abilities ( $F= 4.38$ ,  $p<0.05$ ), anxiety problems ( $F=3.86$ ,  $p<0.05$ ), and ADHD problems ( $F=3.15$ ,  $p<0.05$ ). Thus, at the level of learning abilities, we can see that the biggest improvement occurred for Roma students ( $M =6.63$ ,  $SD=6.62$ ), followed by Romanian students ( $M =4.69$ ,  $SD=7.15$ ) and Hungarian students ( $M =0.76$ ,  $SD=4.68$ ). Analyzing the anxiety problems, the highest change was registered in Romanian students ( $M =-1.56$ ,  $SD=1.96$ ) followed by Roma students ( $M =-0.78$ ,  $SD=1.41$ ) and Hungarian students ( $M =-0.41$ ,  $SD=0.87$ ). These results could suggest the need for long-term programs addressed to Romanian students, to reduce their anxious moods. These data confirm, moreover, previous results obtained from studies conducted on children in Romania, which suggested that our students

have high-performance anxiety, and this is an important variable that predicts school dropout. In terms of ADHD problems, the larger change occurred in Roma students ( $M = -5.47$ ,  $SD = 6.15$ ) followed by Romanian students ( $M = -3.62$ ,  $SD = 5.78$ ) and Hungarian students ( $M = -1.41$ ,  $SD = 1.87$ ). From the teacher's and counselor's reports, role- play activities, playing musical instruments, expressing emotions with musical instruments and movement, the magic circle (safety circle) were the activities in which it was possible to observe the increase of the ability to inhibit the response (impulse), the increase of students' ability to concentrate on the activity etc.

### ***Family context***

Given that the students in the target group come from vulnerable backgrounds, we tried to identify whether the family context in which they spend most of their time can be related to the effect of the intervention (table 6).

**Table 6.** The family context and effectiveness of the intervention

Effectiveness upon	Primary school sample						Secondary school sample					
	Both parents		Mother		Other		Both parents		Mother		Other	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Adaptability**	-4.75	4.27	2.88	3.81	3.08	4.70	2.55	3.50	3.25	2.98	1.18	3.31
Social skills*	-3.63	6.82	1.94	2.84	1.75	5.15	2.23	3.67	6.81	4.62	1.82	7.95
Learning abilities	-.88	7.72	2.88	3.32	2.00	4.02	1.61	5.89	6.54	6.24	4.18	9.15
Affective problems	.13	4.05	-1.19	2.07	-2.00	1.71	-.87	1.71	-2.23	2.50	-1.18	3.19
Anxiety problems	-.75	2.19	-1.63	.96	-2.33	1.50	-.45	.85	-1.37	1.72	-1.55	2.70
ADHD problems*	.25	3.24	-2.50	3.33	-3.08	2.15	-2.19	2.64	-5.29	5.55	-1.73	9.30

Note, \*\* p< 0.01, \* p< 0.05

The results show that in the primary school sample the family context was associated with differences of change for adaptability ( $F=10.39$ ,  $p<0.01$ ), social skills ( $F=4.18$ ,  $p<0.05$ ), and ADHD problems ( $F=3.31$ ,  $p<0.05$ ). For adaptability, the larger improvement was recorded for children interacting mostly with others than their parents ( $M = 3.08$ ,  $SD = 4.70$ ). For social skills, a larger

improvement was observed for children interacting mostly with their mothers ( $M = 1.94$ ,  $SD = 2.84$ ). As far as the ADHD problems were concerned, the group with the larger decrease was the group interacting mostly with others than their parents.

In the secondary school sample, the data revealed that the family context was associated with differences of change for social skills ( $F = 10.97$ ,  $p < 0.01$ ), learning abilities ( $F = 5.57$ ,  $p < 0.01$ ), affective problems ( $F = 3.46$ ,  $p < 0.05$ ), anxiety problems ( $F = 3.51$ ,  $p < 0.05$ ) and ADHD problems ( $F = 4.17$ ,  $p < 0.05$ ). In the case of social skills and learning abilities, children who spend most of their time with their mother, recorded the largest improvement ( $M = 6.81$ ,  $SD = 4.62$  for social skills and  $M = 6.54$ ,  $SD = 6.24$  for learning abilities). Regarding their affective and ADHD problems, also children who spent most of their time with their mothers recorded the largest improvement ( $M = -2.23$ ,  $SD = 2.50$  for affective problems and  $M = -5.29$ ,  $SD = 5.55$  for ADHD problems). As far as the anxiety problems are concerned, children who spent most of their time with others than their parents recorded the largest improvement ( $M = -1.55$ ,  $SD = 2.70$ ).

### ***Number of children in the family***

Another factor analyzed in relation to the change in the outcomes of the intervention was the number of siblings in each family. Results are presented in table 7.

**Table 7.** The correlations between the number of children in each family and the change in each outcome of the program

Change in	Primary school sample	Secondary school sample
Adaptability	.23	-.04
Social skills	.10	.17
Learning abilities	.11	.24*
Affective problems	-.01	-.09
Anxiety problems	.06	-.07
ADHD problems	-.13	-.15

Notes, \*\*  $p < 0.01$ , \*  $p < 0.05$

As table 7 shows, in the secondary school sample, the only significant correlate of the change was recorded for the learning abilities ( $r=0.24$ ,  $p<0.05$ ). A similar correlation was obtained in the primary school sample, even if not significant (due to the small sample), with the change in adaptability ( $r=0.23$ ). In other words, children with more siblings had larger improvements in their learning abilities in the secondary school sample and larger improvements in adaptability in the primary school sample.

The project activities produced a greater leap for these children, as they started the pre-test with low values of learning skills, which means that the specifics of the remedial interventions were well thought out by the project team in relation to their needs. This is extremely informative for educational decision-makers, as it may suggest that the number of siblings may even become a predictor of school dropout (reduced learning skills leading to school failure, a dimension that causes school dropout). The data obtained here can also be used to justify the need for customized interventions for these children from large families, if we want them to have good academic results that ensure their access to high school or even tertiary education.

### ***Marital status of the parents***

Over the years, many researchers found that the structure of the family can play an important role when it comes to school performance, child adjustment to school, or graduating from high school (Sun & Li, 2008; Manning & Lamb, 2003). In our study, we also investigated a potential association between family structure (marital status of the parents) and the changes in the outcomes of the intervention program. Results are presented in table 8.

**Table 8.** The marital status of the parents and intervention effectiveness

Effectiveness upon	Primary school sample				Secondary school sample					
	Married		Other			Married		Other		
	M	SD	M	SD		M	SD	M	SD	
Adaptability	.50	5.45	.92	4.68	-.22	2.88	3.20	2.61	3.33	0.69
Social skills	1.71	5.58	1.83	3.30	-.07	4.47	4.75	5.11	6.18	0.57

	Primary school sample					Secondary school sample				
	Learning abilities	Affective problems	Anxiety problems	ADHD problems		Learning abilities	Affective problems	Anxiety problems	ADHD problems	
Learning abilities	.29	5.24	3.17	4.88	-1.58	4.03	6.64	5.61	7.12	0.27
Affective problems	-.79	2.81	-1.92	1.93	1.24	-1.31	2.07	-2.22	2.85	0.10
Anxiety problems	-1.79	1.82	-1.42	.79	-.86	-.83	1.23	-1.50	2.18	0.09
ADHD problems	-1.33	3.07	-3.58	2.87	2.11*	-4.10	5.35	-3.44	5.96	0.58

Note, \*\* p< 0.01, \* p< 0.05

In our study, the only difference in the effectiveness of the intervention depending on the status of the parents is manifested for ADHD problems in the case of primary school children.

Thus, students who have divorced parents, separated or live with one parent, have larger improvements in their ADHD problems following the intervention.

### ***Attendance in the program***

The last factor analyzed here is the attendance in the program. Results are presented in table 9.

**Table 9.** The correlations between the attendance of the program and the effectiveness of the program

Effectiveness upon	Primary school sample	Secondary school sample
Adaptability	.32	.14
Social skills	.15	.32**
Learning abilities	.01	.04
Affective problems	.17	-.04
Anxiety problems	.16	-.09
ADHD problems	-.22	-.05

Notes, \*\* p< 0.01, \* p< 0.05

As table 9 shows, in the secondary school sample, the only significant correlate of the change was recorded for the social skills ( $r=0.32$ ,  $p<0.01$ ). An identical correlation was obtained in the primary school sample, even if not significant (due to the small sample), with the change in adaptability ( $r=0.32$ ). In other words, children with a higher level of attendance had larger improvements in their social skills in the secondary school sample and larger improvements in adaptability in the primary school sample. Also notable, even if not significant, is the correlation between attendance and the change in ADHD problems in the primary school sample. That is, children with higher levels of attendance had larger decreases in their ADHD problems.

## **Conclusions and implications**

In the effort to reduce school drop-out and keep children in school for as much as it is possible, the most effective strategies involve preventive and corrective interventions for children at risk of dropping out of school before entering high school. These interventions require additional support (e.g. guidance, counseling), as well as actions to monitor risk factors, which allow for the correct guidance of interventions. There are aspects that the decision-makers and the people directly involved in the implementation, within this project, have capitalized on. Moreover, the intervention itself also has to aim at carrying out activities that can lead to increased school performance, involvement in school activities, and thus to the extension of the schooling period by (a) providing direct, individualized guidance and support for the fulfillment of homework, participating in-class activities; (b) participation of the student in counseling and career guidance classes which may sustain a positive attitude toward education. Therefore, we can unequivocally state that the results obtained within the project, come to confirm and complete the data seen in other similar studies found in the international and national literature. We summarize some of the most relevant: 1. gender, ethnicity, family environment are vulnerabilities that over time can lead to the phenomenon of school dropout. 2. for school students, socio-emotional and cognitive competencies develop asynchronously and

therefore an inappropriate development of them can facilitate school dropout or class repetition. 3. children with normally developed socio-emotional competencies and a high degree of adaptability are more likely to constantly participate in remedial activities. 4. the presence of parents and especially mothers in children's lives can ensure the emotional stability of children and adolescents. 5. adolescents deprived of parental involvement may develop more serious emotional and behavioral problems and are therefore vulnerable to the temptation to leave school 6. there are gender and age differences in the development of certain specific skills 7. personal and academic development activities reduce the level of anxiety experienced by school students 8. overall, the intervention implemented in the project has significant effects both in terms of socio-emotional development, but also in terms of adaptability and learning skills of children in the target group.

Obviously, in the context of any study, there are some limitations. We draw attention to the fact that not all dimensions have changed. This may be due to several factors: the small number of children left in the project and implicitly the low statistical power for some analyses, especially at the primary level (pre-test vs. post-test), changes due to the natural maturation of children and adolescents, the pandemic generated by the new coronavirus, the lack of a true control group (which was excluded for both ethical and practical reasons). However, analyzing the data objectively, there are sufficient arguments to support the existence of changes in the developmental profile of students and we are talking here about the size of the effect recorded and explained for each dimension assessed. In conclusion, the results of this study confirmed that the multidimensional intervention carried out within the project, generally led to changes according to expectations. The intervention included both remedial activities (to increase school performance) and social and emotional development activities. Initial data revealed that at the time of the first evaluation, social skills were not sufficiently developed for about half of the students. In addition, more than a third of them had serious emotional problems and noticeable skills gaps that impair the autonomous learning process. The need for interventions on these specific dimensions is sustained by the fact that socio-emotional competencies are critical for academic success, but also for professional/ personal

success. This also applies to children and adolescents who are at increased risk of dropping out of school due to disadvantaged socio-economic status, ethnic minority status, or early emotional and/or behavioral problems (Domitrovich, Durlak, Staley & Weissberg, 2017). The well-known process by which these skills are acquired is that of socio-emotional learning (SEL- social and emotional learning) (Weissberg, Durlak, Domitrovich & Gullota, 2015; Benga et al., 2018; Buzgar, Dumulescu & Opre, 2013). As such, as we have done in this case, for similar situations we consider that it is necessary to plan and implement some effective, multilevel interventions focused on cognitive, emotional, and behavioral engagement in school activities. In conclusion, we can say that the intervention has statistically significant effects that are in line with the general purpose of the project, namely to reduce school dropout, to support the education of future generations, and to take into account especially vulnerable groups.

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## **ONLINE TEACHING. OPPORTUNITIES, CHALLENGES AND RECOMMENDATIONS TO IMPROVE COLLABORATION AND QUALITY OF LEARNING**

**SERGIU MAXIM<sup>1</sup>**

**ABSTRACT.** Remote learning, also known as distance education, can be defined as teaching the students with no face-to-face contact with the teacher in class. Once the Coronavirus spread, globally imposed measures became more and more restrictive leading to a major difficulty for the educational systems: identifying fast solutions to the issue of suspending the classes and lectures in-person. The techniques of online and distance learning also needed changes to fulfill the needs of teachers and students, such as presentation, communication, asking questions and formulating answers, practicing the theory through various exercises, testing and feedback. There are several good practices popular now in online education, some of which are described throughout this article. Developing a complete set of skills in students is fundamental for facilitating the educational process and integrating them in the study and/or working groups, but also for preparing them for real life. This article presents some of the most important abilities to take into account by the educational system. However, most recommendations from instructors teaching online are presence-themed. Establishing a strong connection and feeling part of a supportive community is vital for students. Using video or Skype, video announcements instead of text, using the phone are all ways to a faster connection whenever doubts or questions arise. In addition, training and agility are on top of the priorities list: using technologies that help in achieving teaching objectives; teaching online does not mean that materials once used face-to-face are uploaded on an online platform; training is key whereas technology cannot work and there is a need for a back-up plan.

**Keywords:** learning, online, skills, technology, teaching methods, synchronous, asynchronous.

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**ABSTRAKT.** Fernunterricht, auch als Fernstudium bekannt, kann als Unterrichten der Schüler ohne persönlichen Kontakt mit dem Lehrer in der Klasse definiert werden. Als sich das Coronavirus ausbreitete, wurden die weltweit verhängten Maßnahmen immer restriktiver, was zu einer großen Schwierigkeit für die Bildungssysteme führte: schnelle Lösungen für das Problem der Auflösung von Unterricht und Vorlesungen vor Ort zu finden. Auch die Techniken des Online- und Fernunterrichts mussten geändert werden, um den Bedürfnissen von Lehrern und Schülern gerecht zu werden, wie zum Beispiel Präsentation, Kommunikation, Fragen stellen und Antworten formulieren, die Theorie durch verschiedene Übungen üben, Testen und Feedback. In der Online-Bildung gibt es mehrere vorbildliche Vorgehensweisen, von denen einige in diesem Artikel beschrieben werden. Die Entwicklung vollständiger Kompetenzen bei den Studierenden ist grundlegend für die Erleichterung des Bildungsprozesses und die Integration in das Studium und/oder die Arbeitsgruppen, aber auch für die Vorbereitung auf das reale Leben. Dieser Artikel stellt einige der wichtigsten Fähigkeiten vor, die im Bildungssystem berücksichtigt werden müssen. Die meisten Empfehlungen von Lehrern, die online unterrichten, beziehen sich jedoch auf die Präsenz. Für die Schüler ist es von entscheidender Bedeutung, eine starke Verbindung aufzubauen und sich als Teil einer unterstützenden Gemeinschaft zu fühlen. Über Video oder Skype, Videoansagen statt Text, das Telefonieren, all diese sind Wege die zu einer schnelleren Verbindung bringen, wenn Zweifel oder Fragen auftreten. Darüber hinaus stehen Training und Agilität ganz oben auf der Prioritätenliste: Einsatz von Technologien, die dabei helfen, Unterrichtsziele zu erreichen; Online-Lehre bedeutet nicht, dass Materialien, die einmal persönlich verwendet wurden, auf eine Online-Plattform hochgeladen werden; Schulung ist der Schlüssel, während Technologie nicht funktionieren kann und ein Backup-Plan erforderlich ist.

**Schlüsselwörter:** Lernen, Online, Fähigkeiten, Technologie, Lehrmethoden, synchron, asynchron.

## 1. Introduction

Over time people have been exposed to a variety of learning forms, which were vital for their survival in the world's innovative and evolutionary context. Thus, the learning process is indispensable to adaptation and change no matter its form, nature, length or intensity.

Beyond the traditional learning methods, more precisely face-to-face teaching, the modernization of virtual technologies and tools has given rise to virtual and remote learning. According to UNICEF in Europe and Central Asia (2020), there are three types of such learning: remote, online and blended.

**Remote learning**, also known as distance education, can be defined as teaching the students with no face-to-face contact with the teacher in class. This is implemented through correspondence in both written form, such as printed materials and multimedia, such as radio channels, television or online.

**Online learning** represents the education on the internet, either part of some remote learning programs or as a supplement to traditional teaching methods in class. Students' location can vary from their home to classrooms, as long as safe access to internet is provided, so that they can use the virtual technologies and applications.

**Blended learning** implies combining the face-to-face teaching methods with the online interaction by using the virtual applications. This can even include remote learning, through the methods previously mentioned.

## **Digital Trends and Covid-19 Impact on Online Teaching**

From all of the above, remote and online learning, also known as e-learning are subjects of topical interest which have developed exponentially in the past few years and continue to increase in popularity to the detriment of classical face-to-face teaching methods. That which was thought to be a temporary short-term solution, only as an individual protection measure against Covid-19 became a habit for educational institutions and the rest of the population directly or indirectly involved in the process. Once the Coronavirus spread, globally imposed measures became more and more restrictive leading to a major difficulty for the educational systems: identifying fast solutions to the issue of suspending the classes and lectures in-person.

For over a year now, online education has been facing different teaching forms and process improvements regarding the teachers' training, creation and delivery of content and students' learning. Transitioning from the traditional education to the virtual one requires multiple complex choices and the most efficient project management possible so that it allows students to be as active and involved as necessary in their own qualitative development.

Even more, remote and online learning are expected to be an irreversible change, according to multiple surveys and studies conducted between 2020-2021, among which the one coordinated by School Education Gateway (2020), the European online platform for professionals in education between 9<sup>th</sup> April – 10<sup>th</sup> May 2020. The results of 4.859 respondents, out of which 86% being teachers and school directors indicate that more than a half considers that the school practices would not be the same anymore when the schools will reopen and online/remote teaching will continue to grow in volume. More accurately, 44% of the respondents thought that school will suffer slight changes in the future, with a higher focus on online teaching than before, while 17% considered that school will be certainly different by integrating more the online teaching methods.

On the same note, CEE Multi-Country News Center (2021) published together with Microsoft an article about the accelerated digital transformation in education as a top priority industry. Considering that during 2020, in-class courses have been suspended for 1.2 billion students globally the concern that arises naturally for all teachers is related to continuing this trend even after the pandemic. Opinions seem to be divided, on the one hand because of the inadequate infrastructure and teachers' training which could deteriorate students' experience, and on the other hand because of the initiatives towards a hybrid educational model that could bring considerable benefits.

Positive examples from European countries such as Croatia, Ukraine, Latvia and Slovenia support the digital transition, the more so as multiple researches prove that online learning can be even more efficient than the traditional one. On average, students recall between 25-60% more information when done online, compared to 8-10% from the in-class teaching. Certainly, the

online teaching efficiency varies depending on group ages, nationality or students' economic and political context which calls for an extra effort from teachers to deliver and sustain an education as much qualitative as possible.

## Romanian Context

When it comes to Romania<sup>2</sup>, the digitalization of the education and training system is being debated since 2016, when the national project "România educată (Educated Romania)" was launched. Since then, a clearer vision together with a series of proposals to be implemented until 2030 was outlined on the following priorities: didactic career, equity of the educational system, professionalization of educational management, qualitative technical education, autonomy, internationalization and qualitative higher education, early childhood education, evaluation of pupils and students.

Although Romania currently has wide-ranging internet connectivity, some steps are still missing in order to ensure all resources and an integrated framework for access to quality education in the digital age. The national strategy regarding the digitalization of the education and training system **SMART-Edu** launched in public consultation in December 2020 aims to generate a Modern, Accessible School based on digital Resources and Technologies, having as priorities the following: accessibility, connectivity, digital educational ecosystem, innovation, sustainability.

According to this strategy, during 2021-2027 efforts will be made to train and develop teachers' digital skills, improve the infrastructure, stimulate and support the creation of offers and opportunities adapted to the professions of the future, encourage student-centered innovation, create Open Educational Resources (RED), increase partnerships with European and international, both public and private organizations, encourage and promote initiatives on online security, data protection, cyber hygiene, IT ethics. All of these initiatives will be possible through respecting several principles, among which equal access, equity, inclusion, learning personalization, quality, resilience and green economy.

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<sup>2</sup> <https://www.smart.edu.ro/#h.xck2kklw9ox5>

The expected result is a flexible, digitized, adaptable, qualitative education system, able to respond to challenges and generate change, together with active citizens, well integrated in the labor market and sustainable economic growth.

## Opportunities and Challenges Associated with Online Learning

It goes without saying that the inevitable, spontaneous transition of education from the physical to the virtual environment was and still is difficult, but even so there are numerous benefits once it is well managed and implemented. One of the advantages and probably the most important also is the **flexibility** offered to teachers and students. Online learning gives everyone involved the chance to organize their schedule according to the group's agenda, to balance the personal chores and other tasks, to learn at their own pace and strengthen their autonomy and sense of responsibility.

In addition, **accessibility** is another important aspect, both in terms of the wide collection of courses, trainings and educational programs, as well as the location and personal comfort. On one side, the internet is full of resources adapted to the individual needs concerning knowledge and skills development. Many of the institutions holding online programs also release diplomas and certificates once students complete them. On the other side, students do not need to travel to attend the classes anymore; only an internet connection and a quiet space are enough in order for them to enjoy a complete learning experience. Even during trips and vacations, the learning process can continue through the medium of apps available online (Josep, 2021).

However, just as any other major unexpected change, the digital transformation of education comes with several challenges and barriers. **The major issues regarding online learning**, which students and educational institutions should have in mind, are related to three categories: learners, instructors, and content development. Learners' issues include their expectations, readiness, identity, and participation in online courses. Instructors' issues comprise transitioning from face-to-face to online, time management and teaching styles.

Content issues refer to the instructors' role in content development and integration of multimedia and the role of instructional strategies in content development<sup>3</sup>.

The same content previously taught in class, currently assumes a much bigger preparation effort. Furthermore, teachers who have never thought differently than in the traditional way are not at all familiar with the methods needed to change; one more reason why they need **training for designing and delivering classes on the internet**. They spend much more time for preparing and exploring the online teaching, so they would need a **smaller loading (less effective hours to teach) or some financial compensation**<sup>4</sup>. Mackey (2016) says that teaching online can require from teachers to relearn individual preferences of each student. The polls, surveys and drawing instruments could help in this sense, not only for the lessons to be more personalized and learner-centered but also for increasing the retention.

Challenges associated with the virtual groups in which differences between individuals emerge are also very important to take into consideration. One research published by Taras, V., Baack, D., Caprar, D., Jiménez, A. & Froese F. (2021) classifies these differences in two categories: personal and contextual. **Personal diversity** includes characteristics such as age, gender, language, skills, and values whereas **contextual diversity** refers to differences in the environments that the team members live in, such as the different levels of economic development and different types of institutions and political systems of their countries. Results demonstrate how the personal diversity can negatively affect team climate, while contextual diversity can positively affect task and group's performance. Numerous studies have shown that less homogeneous teams exhibit more creativity, considering more options and solutions, processing facts more carefully and succeeding in making better decisions.

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<sup>3</sup> Kebritchi, Lipschuetz, & Santiague, (2017)

<sup>4</sup> Conrad, lector de la Universitatea Berkeley din California (după O'Malley, S., 2017)

## 2. Role of Teachers and Online Teaching Methods

Not only is diversity identified between individuals studying together, but also in the content, methods and tools of online teaching which have experienced changes and improvements too along with the modernization of technology and the increasing rate of internet use, especially amongst the younger generation. Information are today at one click away, but so are sources of distraction during a class. This is why it is important for teachers to identify various methods to maintain the attention and active involvement of students for as long as possible, without endangering their well-being or the quality of the information provided.

Boettcher (cf. O'Malley, S., 2017) claims that the mental presence of the teacher is the most important one and this is not about only answering to the questions students address online, but also about the "social presence" in the online class. Even more, they need to encourage their students to be as socially present as possible in their turn too, by sharing experiences, things they have read or seen or even posting photos with them in front of the computer, etc. It is important for the students to have an idea about who their teachers are as humans.

The Community of Inquiry Model, hereinafter referred to as CoI, developed in 1999 by Garrison și Anderson (Garrison, 2017) describes three types of presence: learning, cognitive and social presence. Daspit, Mims, & Zavattaro, (2015) used the theory of positive psychology when suggesting that the CoI model includes psychological capital (PsyCap) to emphasize the students' positive motivational states. However, Salmons (2020) says that PsyCap is a distinct online presence. Social presence of learning group members is associated with the participation and social interaction level between them, therefore it is considered to be a critical variable in the learning process.

Another perspective on social presence as a theoretical concept is presented by Kenzig (2015) who considers that it can be divided in two different constructs. These are the "social presence", which refers to the degree of 'realness' of the other in the communication and the "social space" meaning the degree to which social interpersonal relationships are salient. The author also

identifies that social presence in the CoI model is actually integrating both constructs but with an emphasis on social space.

One of CoI model's limitations identified by Majeski, Stover, & Valais (2018) is the integration and understanding of the emotional presence, solely seen in terms of emotional expression. The authors believe that emotional intelligence would support a much broader role for emotional presence in learning and discuss the relationship between emotional presence and teaching presence and how the latter may foster emotional presence in learners. Students' online motivation is an essential ingredient for academic success. Motivation involves the desire to learn with self-discipline to acquire new information Mickahail (2016).

Not least, the study described by Lohr & Haley (2018) reveals the fundamental contribution of creating the social presence through the training design. In their research, the authors used an autobiographical memory exercise in an online graduate course and reached to the conclusion that communication and learning improved. Additionally, integrating the social presence encouraged an active and engaged online learning community.

## **Online Teaching Methods**

The techniques of online and distance learning also needed changes to fulfill the needs of teachers and students, such as presentation, communication, asking questions and formulating answers, practicing the theory through various exercises, testing and feedback. There are several good practices popular now in online education, some of which are described below.

### ***Synchronous Teaching and Learning***

One short definition of synchronous e-learning is the learning on the internet in real time done by an individual or a group of people through direct interaction with the instructor. This can be realized through the available technological infrastructure and tools, usually video and/or audio conferences, live chats or live speeches.

Participating to synchronous e-learning activities is necessary for students' academic results. Teachers cannot ensure that students who are on the participants list are actually following the online learning tasks. While transitioning from the face-to-face interaction in the traditional classroom to the impersonal virtual room on a screen, lots of teachers need to accept that online classes do not offer the same sense of community as the ones before. Online classes are social classes which are highly based on the **ability to communicate efficiently in group**. Fisher & Tucker (2004) affirm that the **feeling of belonging, a community** with the same interest is one of the key to success when it comes to students that interact exclusively on the internet.

Sobko, Unadkat, Adams, & Hull (2020) conducted a qualitative study in which they explored the **collaborative network learning** during a course and they analysed the speech, way of thinking and media used by students during a video conference discussion. By using a socio-cultural context regarding learning and development, the authors concluded that **synchronous online engagement and multiple digital technologies** have facilitated the construction of students' knowledge and content analysis. They define the collaborative network learning as being built by the dynamic convergence of "actors" working together towards multiple and competing goals.

### ***Asynchronous Teaching and Learning***

Compared to the synchronous learning, the asynchronous one represents learning from the same materials, but in different moments and places, students being independent one from the other in their educational process and also from the instructor's schedule. Materials used in asynchronous learning are usually written materials and/or in video/audio format, previously recorded and distributed to students.

Comer & Lenaghan (2013) approached the educators' concern regarding the usage of asynchronous online discussions instead of the face-to-face discussions. Starting from the researches on asynchronous online learning and Bloom's taxonomy, the authors introduce the **system of "original examples" and "value-added comments"** which they developed to promote stimulating, meaningful discussions in which students learn the course material from one

another. There are described several concrete methods to integrate this system and a guide for instructor facilitation. Their study proves the fact that asynchronous online discussions facilitate students' learning and can even be more inclusive than the ones face-to-face, for some people.

Asynchronous learning is attractive especially to students, because it is their choice as when, where or even if they will participate to specific courses and training programs. This opportunity presents also a risk, associated with the misbelief of many that online learning is easier than in-class learning. The risk of not attending the classes at all or that of navigating a less qualitative educational material can be prevented by a special sort of motivation, with which students would actively assume responsibility over their own educational process through asynchronous online learning platforms.

Glenn, C. W. (2016) examines specific methods to make that possible and to bring more humanity in the online environment in a way that improves retention. Some of the most important in relation to the students require paying higher attention and respectfully approaching their needs and concerns, continuously advising them with regard to their career development, promoting a culture driven by success and encouraging the students to strengthen friendships and connections.

### ***Online Teaching through Collaboration and in Small Groups***

Despite the numerous studies on social interaction within collaborative learning, there is still not enough information about the successful interactions forms in situations of collaborative learning made in front of the screens. After a meta-synthesis of 41 articles about small group work in online courses completed in 2017, Cherney, Fetherston, & Johnsen argue that there is a lack of consistent definitions within literature about student collaboration online and a lack of interdisciplinary contribution to online course small group literature. In this meta-synthesis, the authors raise awareness regarding the optimal size of an online group, ways of dividing the students in smaller groups, "free-riding" and other concepts.

Another study on the same subject was completed in 2016 and indicates that **interaction in collaborative situations is usually more related to the group, rather than the learning task.** After this qualitative case study made during a university course, Vuopala, Hyvönen, & Järvelä concluded two relevant aspects: group-related interaction has a higher frequency and is concentrated mostly on coordination of group work, such as planning and organizing group activities, whilst task-related interaction occurs more rarely and in a more rigid way, mostly in the form of comments or answers to earlier messages.

### ***Gamification***

The concept of gamification can be defined as an approach using gaming elements in contexts with no entertaining or playful nature, in order to involve people in their activities. Regarding education, including gamification methods can bring many benefits, especially maintaining the attention and active participation of students, according to authors Çakiroğlu, & Kiliç (2018).

After creating two different gamification scenarios the authors applied them within a study and its conclusions are that it is preferred for teachers to include such methods in materials design, given how students can spend hours in the virtual environment and this kind of activities can offer them satisfaction and entertainment. Games that are already online can be a suitable activity either for relaxation and detachment from everyday life or learning and practicing critical thinking, decision making abilities and discernment. In addition, the possibility for students to win points after successfully completing each game level can be thrilling and it stimulates the competition in a group, but it can also contribute to an increased focus on task and interaction with teachers.

### **3. Possible Objectives of Education**

Generally, operating based on objectives implies managing processes by following a concrete action plan with the aim of attaining the desired results, everything being well calculated, monitored and periodically evaluated in order to validate the progress and further steps. For educational institutions and industry

experts, such examples of objectives could be teaching and learning specific cognitive, non-cognitive and mixt abilities, delivering materials of high-quality, attractive, easy to process by students, creating a safe learning environment, promoting inclusion and equity.

Besides theoretical and practical knowledge about diverse professional domains and personal areas, students' education nowadays should focus to the same extent on developing specific social and collaborative skills. Many courses created for getting students ready for real life started to include competencies specific to emotional intelligence, such as self-control and discipline, conflict management, cultural awareness and inspirational leaderships.

Along with the digital transition, the educational objectives can be debated from the perspective of teachers as beneficiaries. More precisely, one relevant objective could be the improvement of digital skills through training and specific programs for teachers. Replacing the face-to-face interaction and traditional teaching forms is an objective itself, which needs a certain level of self-education and adaptation to the new trends. The best advice for teachers is to take a step back and concentrate on what matters most. Prioritizing an open, clear communication channel with both students and parents is a first essential step towards achieving the proposed goals.

## **Learning Cognitive and Non-cognitive Abilities**

As mentioned above, developing a complete set of skills in students is fundamental for facilitating the educational process and integrating them in the study and/or working groups, but also for preparing them for real life. This article presents below some of the most important abilities to take into account by the educational system.

### ***Critical Thinking***

Redmond (2014) affirms that **critical thinking** and in-depth knowledge can occur through reflective processes. Whenever students go through the four stages of cognitive presence (triggering, exploration, integration, resolution) the processes of **discussion and reflection** are important in developing deep

understanding. When instructors structure online discussions appropriately, students are able to share and document their own thinking and reflect on their contributions and the perspectives of others while developing new or deeper knowledge.

### ***Self-Directed Learning***

One of the specialized books on the **self-directed learning** theme is “*Assessment Strategies for Self-Directed Learning*”, written by Costa & Kallick (2004). While elaborating the necessary conditions for self-learning, the authors mention that instead of requiring compliance, a new **role needs to be taken in mediating and supporting others, in order to become more self-confident, more self-responsible and able to refer to their own self**. It is easier, according to the authors, to teach others to be self-directed as long as the organization supports this kind of efforts. In the fifth chapter of the book, they show the way in which teachers mediate the learning of these abilities through designing lessons, units and training activities, creating the conditions for self-directed learning, generating and intensifying reflective dialogue and serving as a model for learners.

### ***Time Management***

Time management and efficiency of solving practical tasks are a challenge for both students and teachers, especially in the online environment, where fun is just a click away and the pitfall of procrastination can be difficult to avoid. Even more, as communication is not necessarily in real time anymore, the spontaneous texts, phone calls or video calls are very common and this can generate a certain curiosity and an impulse to always stay connected.

When it comes to a **reasonable time management**, O’Malley (2017) states that teachers should not be available 24/7, neither engage themselves in 1-1 interactions with 30 students. Plus, the teacher should not respond to each and every posting written by students. When teachers do so, students start to contact them in private, when the online discussion should actually be held in between classmates.

## **Equity and Inclusion**

The concept of equity must be approached from a multidimensional perspective and adapted to two main needs of a modern society: political-institutional, through the principle of justice and theoretical-academic, by ensuring the highest possible quality of inclusion in education. By integrating the concept of equality, equity is made up of three essential pillars: equal opportunities, treatment and results. Transposed into the educational system, equity means taking into account the socio-economic, political and cultural environment of the learners and ensuring correct compensation strategies, so as to avoid any opportunity for discrimination. In this regard, Castelli, Ragazzi și Crescentini (2012) suggest the following methods to ensure equity in teaching and learning contexts:

1. Regulating the exercise of rights more strictly, particularly the right to education
2. Frequent communication and strengthened relations with the community, especially with the learners' families, for a better mutual understanding and an increased social integration
3. Development of specific expertise in terms of discrimination and integration among teachers

Morgan, Giggins, Miller, Pierce, Boone & Tandy (2016) studied different types of online teaching of **social abilities** and found out that these are efficient in identifying the behavioral issues in the online environment. Using technology creates new natural environments for social participation and new rules of interaction. Some theories suggested that students with emotional or behavioral disorders would have social difficulties in online settings. It is critical to understand the elements of diversity and the way these impact the interaction in online, but also the overall final performance of the group and individuals.

Another important aspect in choosing the technologies and online teaching methods is the accessibility for students with disabilities. Ross (2019) evaluates the attitudes and perceptions of the learning management systems (LMS) in creating an attractive learning experience and, in the same article, he evaluates the possibility of using **Slack, a communication business tool** as an

additional LMS tool. The author reaches the conclusion that Slacks helps to improve students' perceptions on the online class as a real-life experience, as well as the learning results perceived from the group work.

## 4. Online Teaching Efficiency

Regardless of the pursued objective, one critical indicator is the efficiency of the processes and work done by each person in particular. As for online teaching, its efficiency depends on the technologies used, content types and design, teaching forms and styles approached by the instructors and also on communication styles, frequency and methods. Students' age is not to be neglected as a defining factor, because the younger they are, the bigger their orientation towards digital working methods will be. Even the adults used to traditional methods currently appreciate more the online tools.

### ***Multimedia Tools***

Creativity, flexibility and the usage of a wide range of collaboration and involvement tools are absolutely essential for a well-trained teacher who could promote inclusion, personalization and intelligence. For example, in Romania the digital transition has had a positive impact regarding the collaboration between teachers and instructors, thus creating lots of virtual spaces with access to open educational resources (RED). The digitaledu<sup>5</sup> platform is one such example as the core of an initiative to support significant learning activities adequate for the 21<sup>st</sup> century.

People can find here over 4.500 suggestions of learning activities and free resources, reviewed and validated by industry experts dedicated to this project. Teachers can filter their search according to factors such as curricular area, field of study, education level or activity type while materials are available in written format, video, audio, images, evaluation files or even games, applications and simulations. These kinds of platforms are suitable for both teachers and learners, being very useful and in ongoing development.

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<sup>5</sup> <https://digitaledu.ro/>

### ***Multimedia Teaching Materials***

Boettcher & Conrad (2010) allege that teaching or lecturing parts need to be removed. There is a higher need for a **mix of discussions, collaborative learning activities, video and audio files, written exercises and casual short video presentations**. Vai, an e-learning consultant and former president of English Language department at New School in New York - after O'Malley (2017) claims that the student should be engaged, therefore pages of text or an hour-long video have to be eliminated. Presenting the information should be done in **10-minute “chunks”** with **ample white spaces** and incorporating **photographs** which illustrate the written text. It is also recommended that **the titles to be colored**.

Adding to this perspective, Kizilcec, Bailenson & Gomez (2015) believe that **it is preferred for the lectures to be recorded<sup>6</sup> rather than streamed live**. In case some students have technical difficulties or struggle with internet access, they can watch the recording some other time. Lectures where teachers show their faces are more efficient than slideshows. **Slides should be interspersed with videos of the teachers.** **Videos** should be short, as the ones longer than **15 minutes** can be difficult to download and also distract the learner. For longer lessons, teachers are recommended to record two or three separate videos. Before shooting the lectures, it is suggested to **test the slides on a smartphone** in order to make sure that text is readable on a small screen also. Not least, double-checking the font sizes, colors and template design would be useful.

One study made in Russia<sup>7</sup> about learning English as a foreign language proves how children understand the material much better if the teaching method covers as much as possible the five human senses including interaction with others, while adults benefit more from their abstract thinking and appealing to their own life experiences and expectations. In plus, the same study recommends setting up a different resolution time for tasks, in order to retain students' attention depending on their age: while a 2 years old child cannot focus

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<sup>6</sup> <https://theconversation.com/coronavirus-14-simple-tips-for-better-online-teaching-133573>

<sup>7</sup> Arkhipova et al. (2018)

more than five minutes on the same thing, a teenager manages to do this for up to 20 minutes, after which he or she will get bored. Adults, on the other hand have a longer concentration span being more self-disciplined.

Nonetheless, expecting from a teacher to design video and written materials for a whole semester is not realistic, which is why it would be advised to **use some of the resources already available**. There are many one click away online materials for students and learners. Naturally, teachers need to ensure that these are **accessible** otherwise they could receive plenty of spam emails from the ones trying but failing to retrieve them. **Instructions should be clear**, given that watching a 15 minutes video can be irritating for some. One solution for this is to tell them directly the exact minute to start watching.

When providing more than two resources it is better to **label them in a simple way** according to their difficulty or importance. **Moodle, Edmodo și Blackboard** include many functions to create interactive learning activities such as quizzes. **Expectations should also be reasonable**. Whenever quizzes are created, questions and answers should be linked to clear references from the learning materials.

Kidd, W. (2012) studied the usefulness of **podcasts** as an educational tool. The author places the adoption of podcasts for teaching and learning in the context of a short history of e-learning and makes a brief review on the suggestion that e-learning and social media fit the framework of a new learner type – the digital native. According to this article, podcasts are a simple, cheap, approachable and strong way to explore learning opportunities through social media.

Additional possible reasons endorse the integration of social media in teaching such as: (1) expose learners to practices, (2) extend the range of educational environment, and (3) promote collaborative learning through social interaction. Complementing this idea, Gruzd, Haythornthwaite, Paulin, Gilbert, & del Valle identified in their study in 2018 six distinct elements that support using social media in teaching: (1) facilitation of learners' involvement, (2) teaching organization, (3) employment of external resources, (4) improving learners' concentration on the content, (5) forming practice communities, and (6) discovering resources.

### ***Multimedia Homework***

The technologies' advancement requires from the users an agile approach, which facilitates the increase of youth's digital ability. Learners often outperform teachers in their knowledge of using the internet, an additional reason why they should be allowed to use digital tools to do their homework. Although it is faster for a teacher to evaluate written exams, it might be easier for students to do a PowerPoint or video presentation because they can express themselves better in this way (King, after O'Malley, S., 2017).

In the event of written homework like doing a summary of the lectures, teachers should mention that **no serious report is required**. Making this a **mandatory assignment but without high stakes**, chances are that students will achieve better results. **A set of 15 quiz questions or a 300-word limit text** should be enough to keep students engaged for about 30 minutes. Teachers cannot verify if everyone participates in class, hence it is better to use options like **automating checking and grading features** from the learning management system in place.

### ***Virtual Communication***

**Online groups** are useful for students to discuss between themselves, help one another, etc. Teachers can post some questions as an ice-breaker to start the conversation. This thing will enable learners to take control. Sharing emotions can be helpful online too, so teachers are encouraged to tell students if it is the first time for them teaching online, ask them help in need and tell them they are doing the best they can. Whenever things seem to work out, they should be repeated because even in online, students do not like frequent changes in their learning style.

Same study from Arkhipova et. al (2018) mentioned above introduces the attitude towards making mistakes, something easily observable in communication and sociability. If children are generally sociable and do not worry too much about making a mistake, for adults things are different. Adults care if their mistakes are corrected publicly, which could make them feel anxious and avoid further public speaking opportunities. Situations when students fear making a

mistake could appear when teachers are extremely demanding which will complicate the educational process, thus it is better for teachers to avoid this kind of attitude.

Pifarré, Guijosa, & Argelagós (2014) declare that it is important for teachers to know how **blogs** work. They have studied the way blogs can be used to support collaborative interaction between students and how exactly can this process promote the creation of CoI to develop critical thinking and significant learning. Some of the things teachers should take into consideration when blogs are incorporated in teaching and learning are described in the authors' article.

Another means of communication very popular and massively applied within the population, both in education or economic environment and personal life is the email. Email conversations grant information storage and instant replies, sending documents and other multimedia materials. Dehghani, Shakery, Asadpour & Koushkestani (2013) have explored in their study two new learning approaches with multiple functions, **LExLinC și LExTreC**, in order to reconstruct linear structure and tree structure of conversation threads in email data. These proposed methods have proven to be highly effective in detecting conversation threads and also adaptable to new environments by automatically adjusting the features and their weights.

### ***Feedback and Learning Results Evaluation***

Constructive feedback and fair evaluation are utterly important but when students' progress and results are being evaluated based on written papers and projects evaluation, there is still a need to more debate over ways of keeping them engaged and helping them evolve.

The premise from which Cartner & Hallas (2020) started in their research is that there is a gap between the technology used for teaching and learning and that used in assessment. Digital technologies such as **blogs, Facebook, Twitter, podcasts and newsletters** are being increasingly incorporated in the educational process. On the other hand, evaluation is usually done only through traditional essay and frequently in written format. The authors suggest that an **alignment between digital technologies and results of course design, activities and evaluations** is necessary as a first step.

One valuable idea would be to establish a **virtual time slot after hours** to invite students to discuss any difficulties and questions they may have, but also to request feedback. The meeting should be optional and relaxing, it is mostly important for students to know they have this possibility to connect.

## 5. Recommendations for Online and Remote Learning

In conclusion, this article proposes some tips and recommendations as part of a relevant selection from all of the existing. Some general guidance for online teaching that supports everything analyzed above is proposed by Dunlap & Lowenthal in an article published in 2017. In order to encourage learners' success, **feedback** must be relevant, specific, individual and also group-related; **grading must be constant**, weekly if possible; online activity has to be interactive and funny, students should be allowed to create and post materials, look for resources, answer through video, use applications like **screencasting, Pinterest**, etc; it is good for students to have the freedom to choose activities they want; the ones that seem to be afraid must be involved; assigning roles through weekly turns and using a discussion protocol is highly recommended, as well as collaborative working projects by using **Google Docs** as an example of available tools.

In terms of interaction, public presentations and teamwork it is noted that in the traditional classroom, some students would never participate to discussions or ask questions. Usually, this is caused by either being shy or not being engaged. Online, participation is mandatory but it can be as intimidating as in the face-to-face class if students are required to speak in front of many colleagues. King (quoted by O'Malley, 2017), the academic director of the master's program in emerging media from Loyola University Maryland's recommends **dividing the online classes** of 20-30 students in **no more than 10 people** for discussions, collaboration and group activities. King says that being maximum 10 people makes it easier for them to coordinate their time and the barriers will diminish even if each one has to participate.

Probably the best to give advices about teaching online are the teachers themselves, which is why four recommendations are detailed below quoted directly from one of them, Kareem Farah (2020):

**1. Simplicity**, especially since online, students cannot rely on the fact that other pupils will help them in case they did not understand something, as it was in the traditional classroom. Misunderstandings can be prevented by simple and clear instructions. Access to **PDF documents** can help students find answers when in doubt. However, this approach requires more preparation from the teacher, ordering ideas, flexibility and conciseness in the delivery of information.

**2. A digital home base.** It can be the one provided by the educational institution, an LMS platform - Learning Management System such as Canvas or Google Classroom or it can even be an original self-created class website. The author suggests **Google Sites** thanks to its simplicity and ease of use. No matter how many online spaces are being used, it is good for students to know the home base platform where they can find all necessary information and news. **Familiarity** is the key, and students should be able to feel comfortable and go to the same place to access the same tools. As remote learning amplifies the **challenge of learners' attendance in class** and they need to take control of their own learning process, the teachers' goal should be the one of creating a clear framework that allows them to do that.

**3. Prioritizing longer, student-driven assignments.** When teaching moves to online, teachers cannot correct mistakes on the fly or suddenly pivot when kids are disengaged. For a better time efficacy and sanity, teachers need to plan projects and homework **on the long term** which allows students to get off the computer and teachers to plan the next learning units. The focus should be on students' autonomy and clarity about learning objectives and deadlines. When possible, it is suggested to **create opportunities for students to discuss what they learn with their families** and even include an **element of students' choice** to build engagement.

**4. Individual touch-points.** Human connection cultivated in traditional class is what students will miss the most. Unfortunately, little interactions in the hallways before or after class, during breaks cannot be replaced. As tempting as it may be for teachers to focus mainly on the content, what matters most is to create ways in which students could manifest their individuality. **Emails, video messages, phone calls or comments on shared documents**

can be great ways of doing this. One steady structure needs to be created and respected by everyone involved. Undoubtedly, students will appreciate this and perceive this as an investment from teachers, no matter how difficult to do it may seem. Teachers have to be indeed patient and invest some extra time so that, little by little, the engaging distance learning experience becomes fully cultivated.

However, most recommendations from instructors teaching online are **presence-themed**. Establishing a strong connection and feeling part of a supportive community is vital for students. Using video or Skype, video announcements instead of text, using the phone are all ways to a faster connection whenever doubts or questions arise. In addition, **training and agility** are on top of the priorities list: using technologies that help in achieving teaching objectives; teaching online does not mean that materials once used face-to-face are uploaded on an online platform; training is key whereas technology cannot work and there is a need for a back-up plan.

Knowing how technologies change and evolve, we must all remain open and try new things. Moreover, even the action plan for digital education for the period of 2021-2027, published by the European Union (2021) contains a broad vision of the European Commission for a "for a high quality, inclusive and accessible digital education in Europe". With two strategic priorities, the plan provides steps for the development of the digital education ecosystem by improving infrastructure, teachers and instructors, content and tools but also the development of digital skills and competencies from an early age.

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