



## IMPACT OF THE COVID-19 DISRUPTION ON UNIVERSITY STUDENTS' PERCEPTIONS AND BEHAVIOR

**Athina Charissi<sup>1i</sup>,**

**Eleni Tympa<sup>2</sup>,**

**Vasiliki Karavida<sup>3</sup>**

<sup>1</sup>Dr., Lecturer,

Department of Early Years Learning and Care,  
University of Ioannina,

Greece

<sup>2,3</sup>Assistant Professors,

Department of Early Years Learning and Care,  
University of Ioannina,

Greece

### **Abstract:**

This study aimed to investigate the impact of the COVID-19 disruption on university students, namely pre-service teachers from an Early Years Learning and Care Department in Greece. The study was conducted by the end of the third month of higher education lockdown and online shift, a period which coincides with the completion of the online courses for the spring semester and students' preparation for the long-distance exams. It was based on probing students' reflections on the impact that the COVID-19 pandemic had on their perceptions and behavior. A questionnaire with open-ended and closed-ended questions was designed and was filled in by 127 students of the specific Department online. The questions explored: (a) the degree to which the pandemic disruption experience affected students' perceptions and actions regarding their social roles, the organization of social life, and the management of personal time; (b) the skills they consider as most important in order for someone to respond more effectively to the new reality, including their learning practice and expertise; (c) the benefits and concerns they attached to the new learning and teaching conditions. The results show that the students were urged to have an immediate and quick response to the implications of the current situation due to its novel and intense character. There had been some shifts concerning students' way of thinking and acting but none of the students who participated in the study was led to perspective transformation. Findings imply the need for cultivating a learning environment that supports the practicing of strategies and the development of skills that can help learner's transformation when necessary and reinforce resilience.

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<sup>i</sup> Correspondence: email [athkouk@yahoo.gr](mailto:athkouk@yahoo.gr)

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## 1. Introduction

The emergence of COVID-19 pandemic during the first months of 2020 has been an unprecedented health crisis followed by a lockdown with serious social, economic and educational implications. Significant changes have occurred in our daily life upending our routines and challenging the way we perceive reality, feel and act. There have also been disruptions in our daily routines causing inconsistencies between our previous and current experiences.

According to the report prepared by the UNESCO International Institute for Higher Education in Latin America and the Caribbean (IESALC), the pandemic had not only immediately visible but also medium and long-term impacts for Higher Education *“both for the different actors and for the institutions and the system as a whole”* (UNESCO-IESALC, 2020, p. 6). Some of the serious immediate impacts the report highlights refer to students and the *“temporary cessation of face to face teaching at HEIs”* which has left them to deal with a completely new situation with consequences in daily life, costs and financial burdens, disruption of learning and international mobility. Not irrelevant are the consequences for the teachers who were impacted at the workplace and professional level while *“the most evident impact on teachers is the expectation, if not the demand, of the continuity of teaching activity using a virtual modality”* (UNESCO-IESALC, 2020, p. 6).

These impacts justify the experience of a crisis situation with unpredictable future implications due to the lack of references to similar crises in the past. They also prioritize the need for a deeper understanding of this experience for the university higher education sector and its actors so as to be better prepared for responding to emergency situations in the future (Karalis, 2020; Karalis & Raikou, 2020; UNESCO-IESALC, 2020).

### 1.1 The research interest

Previous research has placed emphasis on the field of higher education as an exceptional area for the promotion of critical thinking, critical reflection processes, and social skills (Charissi, 2020; Raikou & Karalis, 2016; Raikou, 2019). There are also empirical data supporting the importance of cultivating a higher education teaching and learning environment which promotes the readiness of future teachers regarding their knowledge and skills to attend to the content of learning as well as children's and families' needs even in situations characterized by unpredictable uncertainties for education like the specific pandemic (Agrawal, De Smet, Lacroix & Reich, 2020; Bevins, Bryant, Krishnan & Law, 2020; Bryant, Chen, Dorn & Hall, 2020).

The present study was triggered by the intense effects that this pandemic caused in education and the everyday life of higher education students globally. In our concern, a special emphasis should be laid on the different ways in which actors of various contexts experienced the situation and dealt with it. These findings may enrich the dialogue for the day after, namely the consequences and implications that the new

conditions imply for the future (Toquero, 2020). Consequently, this study focused on deepening our understanding of how pre-service teachers from an Early Years academic context in Greece experienced this situation and responded to it.

So far, in Greece, two studies that were conducted by researchers from Early Childhood Education Academic background have emphasized, the first one, students' emotions upon the closure of universities and during the first (2 months) crucial period of online shift including new teaching conditions (Karalis & Raikou, 2020) and the second, a proposal of a planning and evaluation of educational programs model in situations that threaten the educational system or organization (Karalis, 2020). Other research data about the immediate effects of the lock down and quarantine, in Greece, on higher education students' mental health emphasize on an increased need for support services and strengthening academic environments (Kaparounaki, Patsali, Mousa, Papadopoulou, Papadopoulou & Fountoulakis, 2020; Konstantopoulou & Raikou, 2020). This study was conducted by the end of the third month of higher education lockdown and online shift, a period which coincides with the completion of the online courses for the spring semester and students' preparation for the long-distance exams. It was based on probing students' reflections on the impact that the COVID-19 pandemic had on their perceptions and behavior. More specifically, it was intended to highlight possible changes that students, mainly pre-service teachers from an Early Years Learning and Care Department in Greece, have experienced during COVID-19 quarantine and lockdown to adapt to the new reality more functionally. These findings may be useful for a long-term appreciation of the knowledge and skills necessary for higher education students, and teacher students in particular, in order to be better prepared to deal with crisis situations.

## 2. Theoretical framework

### 2.1 Biographical rupture, resilience, and transformative learning in the time of crisis

COVID-19 pandemic is frequently characterized as a disruptive event due to its implications already mentioned previously in this paper. Different scholars have focused on different aspects of disruptions. Anthony Giddens has used the concept of "*critical situation*" to describe disruptions of social nature while the British sociologist Michael Bury employed the term biographical disruption to describe more personal events in a person's biography such as "*the experience of chronic illness and the way in which a life-threatening illness breaks an individual's social and cultural experience by threatening his or her self-identity*" (Pranka, 2018, p. 1).

From a cultural psychological perspective, biographical ruptures refer to specific events that occur within a person's ontogeny and bring substantial change as they disrupt everyday routine and put taken-for-granted daily life under reconsideration. One of the main criteria for considering an event as biographical rupture is "*not so much how big or pertinent the event is -the event may be quite subtle- but rather the fact that the person must find novel and long-term strategies to deal with daily reality as the former routines are no longer sufficient*" (Joerchel & Dreher, 2015, p. 21).

From a transformative learning perspective, we can assume that biographical ruptures may offer the starting point for transformation because they have the potential to serve as a disorienting dilemma which coincides with the first stage of a transformative learning process. Transformative learning refers to the process by which incomplete, distorted, or stereotypical frameworks of reference -systems of assumptions and expectations, based on which we interpret reality- which have been shaped for the most part indiscriminately through our socialization, are critically re-examined and reshaped. They can, thus, become more "*inclusive, diverse, open, emotionally ready for change and thoughtful*" (Mezirow, 2007, p. 47).

The process described previously, through which a new perspective of the world is acquainted, is called perspective transformation. Personally significant experiences may trigger perspective transformation because they make us question previous assumptions, roles, and actions in order to reach more comprehensive meanings for ourselves and the world. In this way our revised assumptions and interpretations can become more reliable guides for action, being closer to our original needs (Kokkos, 2017; Mezirow, 2007). Full access to transformations is enhanced through learning environments that create opportunities that encourage learners' critical reflection on life experiences, dialogue, and active participation in dealing with problems (Liodaki & Karalis, 2013).

Perspective transformation is being realized through ten stages: (1) a disorienting dilemma; (2) self-examination with feelings of guilt or shame; (3) recognition that one's discontent and the process of transformation are shared and that others have negotiated a similar change; (4) exploration of options for new roles, relationships, and actions; (5) a critical assessment of assumptions; (6) provisional trying of new roles; (7) planning of a course of action; (8) acquisition of knowledge and skills for implementing one's plans; (9) building of competence and self-confidence in new roles and relationships; and (10) a reintegration into one's life on the basis of conditions dictated by one's new perspective. (Mezirow, 1978, 1994; Taylor, 1997 as cited in Brock, 2010, p. 123). The more stages the adults may go through, the more possibilities they have to reach perspective transformation (Mezirow, 1978, as cited in Brock, 2010, p. 133).

Resilience is a conceptual construction reflecting humans' capacity to deal with adverse and stressful life situations and yet managing to adapt positively to the challenges and threats maintaining a sufficient mental and psychological health level (Goti, 2016; Hatzichristou, Lampropoulou & Adamopoulou, 2013). More specifically, resilience refers to a dynamic process of a multilevel interaction between the internal to individual and external-environmental factors as well as between risk and protective factors (Harokopaki, 2019).

According to the social-ecological systems approach, learning lays at the core of resilience while adaptive capacity is associated with flexibility, experimentation with novel solutions, and generalization of responses to broader challenges (Sharpe, 2016). The capacity and the depth or superficiality of any kind of learning are recognized as basic factors that may limit the range of adaptations in crisis situations (Sharpe, 2016). Transformative learning which describes a learning process leading to changes in our

fundamental ways of thinking, feeling, and acting may serve as a means of evolving through reflecting on life experiences and enabling behavior change for adaptation and resilience (MacLellan & Soden, 2003; Sharpe, 2016).

Several skills and coping strategies beneficial for the development of resilience, such as self-awareness, empathy, mindfulness, adaptability and flexibility, appreciation of and reflection on our experiences, development of informed action (Polizzi, Lynn & Perry, 2020), are also recognized as important prerequisites for transformative learning (Sharpe, 2016). This is because they *“help individuals make meaning, build distress tolerance, increase social support, embrace a view of our deep human interconnectedness, and take goal-directed value-driven actions”* (Polizzi, Lynn & Perry, 2020, p. 62).

### **3. Research methodology**

#### **3.1 Aims and objectives**

This study aimed to investigate the impact of the COVID-19 pandemic on university students, namely pre-service teachers from an Early Years Learning and Care Department in Greece. The research question shaped as follows: What impact is the COVID-19 disruption having on the perceptions and behavior of pre-service early years' teachers?

The specific objectives within this question were to examine: (a) the degree to which the pandemic disruption experience affected students' perceptions and behaviors regarding their social roles, the organization of social life, and the management of personal time; (b) the skills they consider as most important in order for someone to respond more effectively to the new reality, including their learning practice and expertise and (c) the benefits and concerns they attached to the new learning and teaching conditions.

#### **3.2 Participants and method**

The students who participated in this study were 127 undergraduate students from the Department of Early Years Learning and Care at the University of Ioannina. Specifically, the 39.0% (n=50) enrolled the 1st year courses, the 27.0% (n=34) enrolled the 2nd year courses, the 9.0% (n=11) enrolled the 3rd year courses, and the 25.0% (n=32) were graduates (4th year courses and under degree). Most of the students surveyed were women (97.6%), while most respondents were <21 years (58,3%). Of the remaining participants 35,4% were between 21-24 years, 4,7% between 25-39 years and 1,6% were 40+ years. Regarding their previous education, most participants (80.3%) have graduated from Secondary Education while 18.1% have entered the department after completing vocational education (Greek EPAL) and 1 participant had a master's degree.

This study used a mixed-method approach. A questionnaire with closed and open-ended questions was designed. All the students who enrolled in the online courses platform for the spring semester were asked to complete online a questionnaire designed for the purposes of the study. They were specifically asked to complete the survey after reflecting on their experience of COVID-19 pandemic and the consequent shift of their

studies to online mode. The confidentiality was guaranteed through answering the questionnaire anonymously.

### **3.3 Data sources**

The questionnaire used at the online survey consisted of 27 questions in which 25 items were closed-ended questions, and two items were open-ended questions. The questionnaire was arranged in two main sections. The first section investigated students' perspective transformation (research objective a) and the development of skills and stressful events coping strategies (research objective b). The second section investigated the benefits and concerns they attached to the new learning and teaching conditions (research objective c).

To effectively investigate participants' perspective transformation, questions at the first section were inspired by King's validated instrument – Learning Activities Survey (King, 1997, 1998) which measures the 10 precursor steps of Transformative Learning, according to Mezirow's model. An adaptation of LAS in Greek has been realized within specific research studies (Gkagkanasiou, Liodaki & Karalis, 2017; Liodaki & Karalis, 2013). King is acknowledged as the researcher who developed quantitative tools for the purpose of measuring transformative learning and calibrated its occurrence (Brock, 2010).

### **3.4 Data analysis**

The closed-ended questions were collected and coded using an Excel spreadsheet to prepare the answers for data analysis. Answers to the close-ended questions were analyzed statistically using SPSS. The open-ended questions were undergone thematic analysis and were used to specify descriptively and further clarify participants' answers. More specifically, they were asked to reflect on and describe: (a) what exactly was it that happened and caused changes on their values, beliefs, points of view or expectations, and (b) which of the stressful events coping strategies proposed at the relevant question they considered as most important.

Participants' perspective transformation was evaluated according to King's instrument (1997, 1998), which provides an appropriate tool to quantitatively measure what stages of perspective transformation higher education students went through during the COVID-19 experience and online shift of their studies (Brock, 2010).

## **4. Research findings**

The findings derived from the first part of the questionnaire are presented in the tables below.

### **4.1 Perspective transformation**

Regarding the stages of perspective transformation, the students (on average) went through 3 stages. The disorienting dilemma seems to be the most common stage which students went through. Table 1 demonstrates the stages of perspective transformation

that they went through during COVID-19 disruption and their studies online shift at the whole period of their spring semester:

**Table 1: Stages of Perspective Transformation (n=127)**

Stages of Perspective Transformation	Frequency	Percentage
1.a Disorienting dilemma (about actions)	73	57.5%
1.b Disorienting dilemma (social roles)	51	40.2%
2.a Self-examination (questioned world view)	13	10.2%
2.b Self-examination (maintained world view)	17	13.4%
3. Recognized discontent shared	33	26.0%
4. Explored new roles	35	27.6%
5. Critically reflected on assumptions	3	2.4%
6. Tried on new roles	13	10.2%
7. Planned action roles	38	29.9%
8. Acquired knowledge/skills	36	28.3%
9. Built confidence	11	8.7%
10. Reintegrated to life	47	37.0%
11. None of these	2	1.6%
12. All the stages	0	0.0%

Table 1 shows that the majority of students (97.7%) went through the first stage of perspective transformation, that is, the disorienting dilemma regarding their actions (57.5%) and their ideas about their social roles, the organization of social life, and the management of personal time (40.2%). The next most common stage students went through (37.0%) corresponds to the reintegration into one's life because of conditions dictated by one's new perspective. The stages which follow refer to the planning of a course of action (29.9%) and to the acquisition of knowledge and skills for implementing one's plans (28.3%). Furthermore, 27.6% of the students went through the exploration of options for new roles, relationships, and actions, and 26.0% recognized that their discontent and the process of transformation were shared and that others have negotiated a similar change. Next, students went through the second stage, that is, self-examination with feelings of guilt or shame and the consequent decision to maintain their world view (13.4%) or self-examination with feelings of guilt or shame and the consequent decision to question their world view (10.2%). The same percentage (10.2%) applies to the sixth stage, that is, the provisional trying of new roles (10.2%). The less common stages that the participants went through were the ninth stage, that is, the building of competence and self-confidence in their new roles and relationships (8.7%), and the fifth stage that corresponds to the students' critical reflection on their assumptions (2.4%).

At the question of whether there was a time until then during the COVID-19 disruption until then, when they realized that their values, beliefs, points of view, and expectations have changed, 94 students (74,0%) answered negatively, and 33 students (26,0%) answered positively. The students who answered positively were prompted to proceed with the following open-ended question asking them to reflect on and describe what exactly happened and caused this change. The response rate was 70.0% (23 of the

33 participants who answered positively to the previous question), and the thematic analysis revealed the following most common themes within students' answers:

**Table 2:** Students' reflection on the cause of change (n=23)

Common themes in students' answers	Frequency	Percentage
Challenged the taken-for-granted in life/ Re-examined / Changed points of view	16	69.5%
Reconsidered priorities (personally & socially)	9	39.1%
Raised awareness (about what is important in life)	8	34.7%
Experienced disruption (in expectations, dreams & hopes)	5	21.7%
Grown personally (roles, aims, objectives)	5	21.7%
Learned & Acted (to adapt, to contribute to the individual and common welfare)	3	1.3%
Felt weak	2	0.9%

#### 4.2 Important skills for responding effectively to the new reality

The analysis of the participants answers regarding the skills they consider as most important in order for someone to respond more effectively to the new reality, including their learning practice and expertise, is presented in the following table (Table 3):

**Table 3:** Students' evaluation of skills and stressful events coping strategies (n=127)

Skills/ stressful events coping strategies	Frequency	Percentage
Use of Information Technologies	105	82.7%
Continuing Education	47	37.0%
Open & Online Learning	73	57.5%
Flexibility & Adaptability	68	53.5%
Emotional Intelligence	50	39.4%
Creativity	65	51.2%
Critical Thinking	60	47.2%
Development of Coping Strategies	28	22.0%

Table 3 shows that most students (82.7%) evaluated the "use of information technologies" as the most important skill for responding more effectively to the new reality. According to their preferences, follow "open and online learning" (57.5%), "flexibility and adaptability" (53.5%), "creativity" (51.2%), "critical thinking" (47.2%), "emotional intelligence" (39.4%), "continuing education" (37.0%). Students' final preference refers to the "development of coping strategies" (22.0%). It is important to mention that despite participants' previous familiarization with the concepts mentioned in this part of the questionnaire, there was also a memorandum included explaining their meaning and attributes.

The following table (Table 4) shows the preferences of the students who chose the option "development of coping strategies" (22%) and were asked to clarify the stressful events coping strategies that they considered as most important:



**Table 4: Students' coping strategies preferences (n=28)**

Stressful events coping strategies	Frequency	Percentage
Self-care	11	39.3%
Increased ability to focus on a purpose	10	35.7%
Maintaining communication with others	9	32.1%
Practicing relaxation and managing thought/emotion	8	28.6%
Establishing a daily routine	7	25.0%
Increased ability to be present and alert	6	21.4%

The findings derived from the second part of the questionnaire are presented below:

### 4.3 Benefits and concerns that students attached to the new learning and teaching conditions

Most of the participants (94.5%) had no previous experience of any distance learning programs. From their experience of the online shift, they were mostly troubled about "technological problems related to e-learning material, internet use, telecommunications" (59.0%), and the "lack of accessibility to computers or internet that some of the students may suffer from" (48.8%). As concerns possible difficulties and obstacles related to the curriculum of distance learning, "teaching methods and techniques" come first in students preferences (51.9%) followed by "planning of activities" (46.4%), "students' assessment" (44.9%) and finally "teachers' assessment" (21.2%). It is worth mentioning that according to their answers, most students (70,1%) would prefer the traditional form of face-to-face education if that was possible while they are almost equally in favor of (49,6%) and against (50,4%) the possibility of continuing to enjoy the use of online services or programs after the lockdown.

Following, in Tables 5 and 6, are presented respectively, the analysis of the students' answers regarding the advantages and disadvantages of distance learning:

**Table 5: Advantages of distance learning (n=127)**

Advantages of distance learning	Frequency	Percentage
Time saved on commute	102	80.3%
Money saved on commute	91	71.6%
Flexibility on learning (i.e. organization of time, space, media, material, sources, etc.)	54	42.5%
Adequate guidance and timely feedback	12	9.4%
Teacher's active participation in discussions (i.e. in real time, in forums, etc.)	39	30.7%
Active participation and cooperation with classmates (i.e. in discussions, assignments, etc.)	30	23.6%
Use of multimedia and various sources for the instruction	33	26.0%
Being more engaged in the course	28	22.0%
Confidence in passing the exams	10	7.8%
No benefit	6	4.7%

Table 5 shows that the students mostly focused on "time saved on commute" (80.3%), "money saved on commute" (71.6%), and "flexibility on learning" (42.5%). They, next,

focused on “teacher’s active participation in discussions” (30.7%), “use of multimedia and various sources for the instruction” (26.0%), “active participation and cooperation with classmates” (23.6%), and “being more engaged in the course” (22.0%). Finally, the students showed less interest in “adequate guidance and timely feedback” (9.4%) and “confidence in passing the exams” (7.8%), while 4.7% believe that they had no benefit.

**Table 6:** Disadvantages of distance learning (n=127)

Disadvantages of distance learning	Frequency	Percentage
Lack of expertise in the new technologies	55	43.3%
Disturbance of personal life	10	7.8%
Lack of experience regarding this type of education	61	48.0%
Lack of feedback	7	5.5%
Lack of interaction with the teacher	80	63.0%
Lack of interaction with classmates	60	47.2%
Lack of adequate educational and instructional material	39	30.7%
Feelings of isolation from the learning process	34	26.7%
Need for social interaction	47	37.0%
Difficulty in posing questions	26	20.5%
Difficulty in paying attention to the lesson	37	29.1%
No difficulties or obstacles	12	9.4%

The analysis of the students’ answers regarding the disadvantages of distance learning (Table 6), shows that they were mostly concerned about the “lack of interaction with the teacher” (63.0%), the “lack of experience regarding this type of education” (48.0%), the “lack of interaction with classmates” (47.2%), and the “lack of expertise in the new technologies” (43.3%). They were found less concerned about the “need for social interaction” (37.0%), the “lack of adequate educational and instructional material” (30.7%), the “difficulty in paying attention to the lesson” (29.1%), the “feelings of isolation from the learning process” (26.7%), and the “difficulty in posing questions” (20.5%). 9.4% of the students found no difficulties or obstacles in distance learning while 7.8% were concerned about the “disturbance of personal life” and 5.5% about the “lack of feedback”.

#### 4. Discussion

This section discusses the findings of the present study which aimed to investigate the impact that the COVID-19 disruption had on the perceptions and behavior of pre-service early years’ teachers from a University Department in Greece. Based on the results of the previous section, the experience of the COVID-19 pandemic as well as the consequent quarantine and lockdown functioned for most of the students (97.7%) as a disorienting dilemma, which coincides with the first of the 10 precursor steps of perspective transformation and transformative learning (Brock, 2010). This process includes the potential for those engaged in it to critically re-examine and reshape their frames of reference in a more functional way, to become more “*inclusive, diverse, open, emotionally ready for change and thoughtful*” (Mezirow, 2007, p. 47).

More specifically, according to the results of the first section of the questionnaire and the part which measured the 10 precursor steps of Transformative Learning, it is evident that the experience of COVID-19 quarantine provoked 57.5% of the students to challenge the way in which they usually acted, and 40.2% of them to challenge their ideas about social roles, organization of social life and management of personal time. This can be explained as the first precursor step is considered one of the most basic elements of transformative learning. It is regarded as the starting point or *“the ‘root cause»’ which triggers/motivates the student to question the already existing frame of reference”* (Gkagkanasiou, Liodaki & Karalis, 2017, p. 438). The less common stage that the participants went through (2.4%) refers to their critical reflection on assumptions accompanied by feelings of inconvenience regarding traditional expectations within their roles (5<sup>th</sup> stage). Critical reflection on assumptions is considered the second most important precursor step in fostering this kind of learning; tertiary education could play a crucial role by promoting a learning environment that supports long-term change and the practice of skills such as critical reflection and sharing of experiences (Brock, 2010).

Further analysis showed that, during the 3month COVID-19 experience and online shift of their studies, on average students went through 3 stages of perspective transformation even reaching the final stage (37.0%) which refers to the reintegration of the new ways of behaving and acting to everyday life. It is worth mentioning that two other studies (Gkagkanasiou, Liodaki & Karalis, 2017; Liodaki & Karalis, 2013) conducted in a Department of Educational Science and Early Childhood Education in Greece, within a 4year period of studies, using King’s evaluation tool, showed that their students went through 3.5 and 4.5 stages respectively. By comparison, the result of the present study (3 stages in a semester) reveals the urgent and intense character of the situation experienced by the participants. These findings are in alignment with the characterization of the COVID-19 experience as a form of biographical rupture upending everyday routine and putting the way we perceive reality, feel and act under reconsideration due to its critical personal and social implications (Pranka, 2018).

The urgent nature of this experience may, also, justify the results driven from the part of the questionnaire (first section) which explores the skills that students consider as most important in order for someone to respond more effectively to the new reality, including their learning practice and expertise. The specific results show that they were mostly focused on skills that offered an immediate and quick response to the implications of the current situation such as the use of information technologies (82.7%). At the same time, they paid less attention to the cultivation of skills with a long-term effect in dealing with crisis and life-threatening situations such as the development of coping strategies (22.0%) including self-care, increased ability to focus on a purpose, maintaining communication with others, practicing relaxation and managing thought/emotion, establishing a daily routine and an increased ability to be present and alert. In between we find open and online learning (57.5%), flexibility and adaptability (53.5%), creativity (51.2%), critical thinking (47.2%), emotional intelligence (39.4%) and continuing education (37.0%).

In accordance with the previous findings is the fact that most students (74,0%) answered negatively when asked whether there was a time during the first outbreak of COVID-19, when they realized that their values, beliefs, points of view, and expectations have changed. Although they engaged in perspective transformation, they could not reach a purposeful and conscious reflection and be led to transformative learning. According to the relevant literature, one of the most important factors acknowledged as beneficial for both the transformative learning and the development of resilience is the cultivation of several skills and coping strategies such as self-awareness, empathy, mindfulness, adaptability and flexibility, critical thinking and reflection on our experiences which enable us to develop more informed action (Polizzi, Lynn & Perry, 2020; Sharpe, 2016). It seems that this study operated as an incentive for raising students' reflection on the specific life event. A small number (23/127) of the participants (18%) even managed to further specify the determinants of the changes they experienced. The most common themes derived from students' answers refer to conditions of: (a) challenging the taken-for-granted in life, re-examining and changing points of view; (b) reconsidering priorities both at a personal and social level; (c) raising awareness about what is important in life; (d) experiencing disruption in their expectations, dreams and hopes; (e) developing a new perception about their roles, aims and objectives; (f) learning and acting in order to adapt more functionally and contribute to the individual and common welfare; (g) feeling weak.

Results from the second section of the questionnaire, investigating the benefits and concerns that students attached to the new learning and teaching conditions, showed that students were mostly concerned about practical issues related to the use of new technologies and the limitations of distance learning including an increased concern about the reinforcement of social inequalities (48.8%). In relation to the advantages of distance learning, participants mostly focused on time saved (80.3%) and money saved (71.6%) on commute. Between other disadvantages, the lack of interaction with the teacher and the lack of interaction with the classmates gained first place in the participants' preferences with 63.0% and 47.2% respectively. Finally, one of the strongest beliefs that students hold, possibly due to their experience and a deeply rooted habit, is revealed through their explicitly expressed preference (70,1%) to the traditional form of face-to-face education.

## 5. Conclusion

The findings indicate that the pandemic disruption prompted pre-service teachers from an Early Years Learning and Care Department in Greece, to challenge their perceptions and behavior based on which they used to interpret reality until the emergence of COVID-19. The specific experience operated as a disorienting dilemma concerning taken-for-granted assumptions about habitually internalized social roles, organization of social life and management of personal time. It further triggered perspective transformation, a 10 steps process leading to transformative learning. According to the results, there had been some shifts concerning students' way of thinking and acting but none of the

students who participated in the study was led to perspective transformation as defined by Mezirow and described at the theoretical framework.

It is also evident, that in order to confront the critical situation, which takes the form of a biographical rupture with personal and social implications, students showed an increased preference on the acquisition of skills with a short rather than long-term effect in dealing with crisis and life-threatening situations. Higher education lockdown and online shift was one of the novel situations that students had to adapt to. Although they acknowledge several advantages to this shift, they strongly express their preference for face-to-face learning, a preference which is in accordance with their concerns about distance education regarding the lack of interaction with the teacher and the classmates. They also seem troubled about technological problems, adequate familiarization with this type of education, teaching methods and techniques, the lack of accessibility to computers or internet that some of the students may suffer from.

We cannot ignore the fact that the urgent and intense character of the situation experienced by the students during COVID-19 quarantine and online shift affected their immediate response. However, according to the relevant literature, the capacity to gain a full insight into critical life events and engage in processes of perspective transformation and transformative learning is important to effectively deal with novel situations. It presupposes a conscious and systematic involvement in reflection, critical thinking, and dialogue as well as the development of skills which promote resilience and transformative learning. Higher education could play a significant role in cultivating a learning environment which supports the practicing of strategies and the development of skills that can help learner's transformation when necessary and reinforce a functional adaptation to biographical ruptures. Students may have in this way a holistic preparation for their personal and professional life. Pre-service teachers, in particular, may be better prepared as future teachers regarding their knowledge and skills to attend both to the content of learning and children's and families' needs even in situations characterized by unpredictable uncertainties.

### **About the Author(s)**

**Dr. Athina Charissi** is a Lecturer at the University of Ioannina, Greece (Department of Early Years Learning & Care and Department of Philosophy, Education & Psychology). She has a PhD from the Department of Philosophy, Education & Psychology, University of Ioannina, Greece, and a Master of Education from the same Department. Her basic studies are in Philosophy, Education and Psychology, with a specialization in Psychology. She is a Certified Adult Educator and participates in research projects related to the holistic development of children, parents, and teachers. Her research and publications in international and Greek conferences, as well as in scientific journals, focus on Pedagogy and Psychology, Adult Education/Lifelong Learning, Personal and Professional Development of Teachers.

**Dr. Eleni Tympa** is an Assistant Professor at the Department of Early Years Learning and Care at the University of Ioannina, Greece. Her research focus is on the healthy life style

of preschool children, the role of the story telling on the healthy life style, the pretend play and art activities and their contribution to the child's development.

**Dr. Vasiliki Karavida** is an Assistant Professor at the department of Early Years Learning & Care at the University of Ioannina, Greece. Her areas of research involve nutrition, healthy life style, education and all-round development in early childhood.

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