A mixed methods research approach to investigate undergraduate students' perceptions of changes enforced due to COVID-19

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Abstract

This paper presents an empirical mixed methods research investigating undergraduate students' experiences of the changes that occurred at a mid-sized public Greek university during spring semester 2019-2020 due to COVID-19. The research followed a multilevel embedded sequential explanatory design including a participant selection model which came in accordance with the results of the preceding Multiple Correspondence and Hierarchical Cluster Analyses. A contribution of this paper to mixed methods research is the combination of mixed methods paradigm with multivariate data analysis methods.

APPENDIX A

Survey Questionnaire

Q. 1: When face-to-face education suddenly stopped on March 10, I felt:

(At a 5-point Likert scale: 1 strongly disagree 2 disagree 3 neutral 4 agree 5 strongly agree)

1.1 Anxious

1.2 Uncomfortable

1.3 Insecure

1.4 Disappointed

1.5 Isolated

1.6 Irritated

1.7 Surprised

1.8 Sad

1.9 Other

Q. 2: When it was announced that after March 26 teaching and learning would take place exclusively online, I felt:

(At a 5-point Likert scale: 1 strongly disagree 2 disagree 3 neutral 4 agree 5 strongly agree)

2.1 Anxious

2.2 Uncomfortable

2.3 Insecure

2.4 Disappointed

2.5 Isolated

2.6 Irritated

2.7 Surprised

2.8 Sad

2.9 Other

Q. 3: The week before synchronous online education began, what did I do? (Please select all that apply)

3.1 I was indifferent

3.2 I searched the Internet for more information

3.3 I studied the information that our University sent to all students

3.4 I asked my peers to explain the procedure

3.5 Other

Q. 4: When synchronous online education began: (Please select all that apply)

4.1 I participated from the start without any problems

4.2 I participated from the start but I eventually stopped

4.3 I didn't participate in the beginning but I gradually did

4.4 I didn't participate at all in online education

4.5 Other

Q. 5 (open-ended): Please provide reasons for choosing the respective alternative in previous question 4.

Q. 6: In order to prepare for and adapt to online education I was supported by:

(At a 5-point Likert scale: 1 strongly disagree 2 disagree 3 neutral 4 agree 5 strongly agree)

6.1 My digital skills

6.2 The instructions sent by email by the University Computer and Network Center

6.3 The information I found on the Internet

6.4 The instructors of my courses

6.5 Peers – friends

6.6 Other

Q. 7: During the synchronous online education, I felt:

(At a 5-point Likert scale: 1 strongly disagree 2 disagree 3 neutral 4 agree 5 strongly agree)

7.1 Anxious/stressed about how to use the platform

7.2 Happy/joyful when I managed to participate without any problems

7.3 Satisfied/efficient when I managed to use the platform with ease

7.4 My fears calmed down as the process and courses progressed

7.5 Bored

7.6 Other

Q. 8: In my opinion, the main advantages of synchronous online compared to face-to-face on campus education were:

(At a 5-point Likert scale: 1 strongly disagree 2 disagree 3 neutral 4 agree 5 strongly agree)

8.1 Lower costs in time and money getting to class

8.2 Ease of participating in class from my personal space

8.3 Multitasking capability of online platforms

8.4 Ease of use of online platforms

8.5 Higher interaction with my instructors

8.6 Higher interaction with my peers

8.7 I participated more in class dialogue

8.8 I asked more questions in class

8.9 More subject experts were invited to class

8.10 Creative activities were realized – not possible in face-to-face education

8.11 Increased student participation in online classes

8.12 Other

Q. 9: In my opinion, the main disadvantages of synchronous online compared to face-to-face on campus education were:

(At a 5-point Likert scale: 1 strongly disagree 2 disagree 3 neutral 4 agree 5 strongly agree)

9.1 The lesson was monotonous and boring

9.2 I felt isolated

9.3 Often class interruptions due to technical problems

9.4 Fewer group activities

9.5 Less dialogue/discussion in class

9.6 Lack of physical contact with peers and instructors

9.7 Less nonverbal communication

9.8 The online platform was not easy to use

9.9 Few students monopolized the discussion in class

9.10 Other

Q. 10: During synchronous online education I faced difficulties such as: (Please select all that apply)

10.1 Too much crowded living place (noise)

10.2 I had no opportunity of being alone/ isolated

10.3 The Internet connection was not stable

10.4 I had no personal computer / shared with others in the house

10.5 I found difficulty in concentrating

10.6 I was too anxious due to confinement conditions

10.7 Other

Q. 11: During synchronous online education classes I was simultaneously: (Please select all that apply)

11.1 Talking on my phone

11.2 Exchanging messages with people outside class

11.3 Social networking

11.4 Making comments with my peers about class

11.5 Watching video/movie or listening to music

11.6 Taking pictures i.e. self-pictures

11.7 Studying other subjects

11.8 Eating/ drinking coffee

11.9 Other

Q. 12: Concerning the online courses during COVID-19 confinement semester I would prefer to be assessed:

(At a 5-point Likert scale: 1 strongly disagree 2 disagree 3 neutral 4 agree 5 strongly agree)

12.1 Online with written multiple choice questions

12.2 Online with written open-ended questions

12.3 Oral examination

12.4 Submission of an individual written assignment

12.5 Submission of a group written assignment

12.6 Other

Q. 13: Which of the following ways would you consider as reliable for identification purposes during online assessment? (Please select all that apply)

13.1 Showing personal student ID card on camera

13.2 Showing students' face on camera

13.3 Sending an e-mail with a copy of the personal student ID card

13.4 Other

Q. 14: Between the two teaching and learning modalities I prefer: (Please choose only one)

14.1 Face-to-face

14.2 Synchronous online

14.3 A combination of the two

Q. 15 (open-ended): Please provide at least three reasons for choosing the respective alternative in previous question 14.

Q. 16: Before the changes due to COVID-19 I was present in University classes on campus:

16.1 Yes, regularly

16.2 No, I didn't

16.3 None of the above

Q. 17: During synchronous online education I was present in class in general: (Please choose only one)

17.1 More than before

17.2 Less than before

17.3 The same as before

17.4 None of the above

Q. 18: I am satisfied with my University's response to the sudden changes due to the COVID-19 situation.

(At a 5-point Likert scale: 1 very dissatisfied 2 dissatisfied 3 neutral 4 satisfied 5 very satisfied)

Q. 19: I am satisfied with my Department's response to the sudden changes due to the COVID-19 situation.

(At a 5-point Likert scale: 1 very dissatisfied 2 dissatisfied 3 neutral 4 satisfied 5 very satisfied)

Socio-Demographics

QH: Age

[18, 19, 20, 21, 22, 23, 24, >=25]

QT: Department of Studies

[Balkan, Slavic and Oriental Studies - International and European Studies - Educational and Social Policy - Applied Informatics - Economics - Accounting and Finance - Business Administration - Music Science and Art]

QE: Year of Studies

[1st, 2nd, 3rd, 4th, 5th, >=6th]

QF: Gender

Male

Female

None of the above

QA: Disability issues

Yes

No

None of the above

QI: Digital skills

Low skilled (secondary education level)

Basically skilled

Standard

Advanced

I study at the Applied Informatics Department

QM: During confinement I lived:

With my parents/family/siblings

With roommate-s

Alone

None of the above

Other

QC: During confinement I owned a personal computer

Yes

No

None of the above

Other

QD: During confinement I had an Internet connection

Yes

No

None of the above

Other

QP: Online platforms that I used (Please select all that apply):

Zoom

Blue Button

Google Meet

Skype for Business

Cisco WebEx

None of the above

Other

QR: If you wish to participate in the next phase of the research with individual interviews please fill in your e-mail address (open space provided): . . .

QO: If you wish to get informed about the results of the research sometime in the future please fill in your e-mail address (open space provided): . . .

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`APPENDIX B Socio Demographics.docx` available at https://authorea.com/users/719186/articles/704219-a-mixed-methods-research-approach-to-investigate-undergraduate-students-perceptions-of-changes-enforced-due-to-covid-19

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`APPENDIX C Clustering.docx` available at https://authorea.com/users/719186/articles/704219-a-mixed-methods-research-approach-to-investigate-undergraduate-students-perceptions-of-changes-enforced-due-to-covid-19

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