Learning and Teaching via Digital Education Platforms during the Coronavirus Pandemic, Covid-19 Students' and Faculty Members' Perspective, Helwan University (Obstacles, Solutions)

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Abstract: The aim of this research was to identify the students and faculty member's perspective on the digital education or E-learning experience (using E-platforms) during the Coronavirus pandemic. The researcher used the descriptive method, Data was collected from 440 students and 120 faculty members from faculty of physical education, Helwan university. The results of the research revealed that students and faculty members are disadapted to E-learning/teaching (online platforms/e-platforms), and they are dissatisfied with this online experience (teaching/learning via e-platforms), and that educational attainment through the use of digital education platforms is more difficult, and that learning through the digital learning environment leads to poor participation and interaction with colleagues compared to face-to-face learning (traditional education), and encountered technical problems with the platforms provided by universities (connecting to the platform, signal loss, delayed viewing of messages, the sound was not clear), and difficulty of work as a result of the practical tasks of the courses that require the presentation of the practical part of the subject/course were not suitable for the Internet environment.

Keywords: *Online teaching, Online learning, Digital Education, E-platforms, Students, Faculty Members, Obstacles.*

Introduction

closures all over the world, have accelerated this digitization, triggering an urgent need for critical, up-close scrutiny of how this digitization is reshaping the worlds of education. Over the last years, such platforms have become progressively prevalent, and both global and local technology companies have become omnipresent providers of such platforms, in private as well as in in public education [8][19]. 'emergency pedagogies' that needed to be devised, often with help of both existing and newly developed digital education platforms [5][10][21].

All over the world, education is undergoing substantial changes in the wake of rapid technological developments. As our world is becoming ever more digitized, the educational sector is increasingly infused with digital games, apps, websites, social media, and learning environments. The Covid-19 pandemic, and associated measures of social distancing universities and school Furthermore, the worldwide growth and ubiquity of digital education platforms has greatly accelerated since the outbreak of the Covid-19 pandemic and the associated newly emerging

have adapted to E-learning (online platforms/e-platforms) and whether they are satisfied rather than dissatisfied with this exclusive online experience.

Finally, despite the steady rise and ubiquity of digital education platforms, however, educational research that adopts analytical study to teaching/learning digital in terms of obstacles and solution to such platforms is still limited [13][15][19][20].

Hence the idea of this study To determine the reality Digital Learning and E-platforms of the educational process and to explain the reasons that lead to the inability or inability of students and faculty members to manage and organize study subject programs in an effective manner during the educational process, with the researcher to develop some guidance or solutions that can be followed to manage and organize study subject programs in a way effective, and thus help workers and those on the educational process in general to know the needs of students and faculty members and then, according to the results of the study can help in good planning and preparing for the sports programs and subject curricula and implemented based on Scientific results.

1- What are the obstacles of online learning facing the students during their using E-platforms?

2- What are the obstacles of online teaching facing the faculty members during their using E-platforms?

3- What guidance or solutions can be used to effectively of online learning/teaching (using E-platforms)?

Methodology

Method:

Previous studies show that E-learning offers many benefits for students because this type of learning involves student-centeredness, it is more flexible [6], and it can also improve interaction with students by providing asynchronous and synchronous tools such as e-mail, forums, chats, videoconferences [3,11].

However, when using E-learning platforms there are also some elements that might be considered obstacles in students' process of learning, such as decreased motivation in students, delayed feedback or help due to the fact that teachers and faculty members are not always available at the time students may need help while learning, or feelings of isolation due to lack of physical presence of classmates [22].

According to the aspects mentioned above the researcher believe that the transition to exclusive E-learning can highly affect the educational process and students' and faculty members' perception about the use of the online environment in the process of teaching and learning, and these ideas stand at the basis of this research. The researcher considered it important, relevant, and necessary to analyze whether students and faculty members

Research Aims:

The aim of the research is to identify the student's and faculty member's perspective on the digital education or E-learning experience (using E-platforms) during the Coronavirus pandemic in order to improve and strengthen the E-learning system, with the development of solutions that can be followed to manage and organize E-platforms (learning online) in an effective manner (from the researcher's point of view).

Research Questions:

learning/teaching facing the students and faculty members during their using E-platforms.

Open Questionnaire: The open questionnaire was presented to 30 students, 20 faculty members from faculty of P.E for girls, University of Helwan.

- **Open survey results (Results of the open questionnaire):** The researcher unpacked the results of the open questionnaire and analyzed the vocabulary/phrases (problems) related to the obstacles to learning/teaching via the Internet during using E-platforms, The researcher found that the sum/total of these vocabulary/phrases or problems are represented in the following axes or obstacles (for both students and faculty members forms):

- - Programs and courses.

- - The nature of education/teaching.

- - Knowledge, information and concepts.

- - Sharing, interaction and collaboration.

- - The nature of communications and capabilities "physical, human, network, spatial".

- **Questionnaire obstacles of online learning/teaching during use E-platforms: (Appendix 2,3)**

A - axes of the questionnaire:
After identifying the axes (which were derived from the results of the open questionnaire), the researcher presented these axes to 5 experts (Appendix 5) , And the percentage of agreement was calculated for each of the proposed axes of the obstacles: online learning/teaching during use E-platforms, as shown in Table (1):

The researcher used the descriptive method in the survey method in order to suit the nature, objectives and research questions.

Society and Research Sample:

The population for the study was selected in a non-probabilistic way (The research sample was chosen randomly) and was comprised of 440 students, 120 faculty members from faculty of P.E for girls, University of Helwan in 2020/2021 from total of ٢٠٠٦ female students and 212 faculty members, The average age of faculty members sample was 38.41, with Std. deviation of 11.25, and the average years of experience was 11.59, with Std. deviation of 4.25, and the average age of the students research sample was 20.94, with Std. deviation of 2.04.

1- Interview:
Interviews were conducted with some students and faculty members in order to collect the data that can be used to develop a general overview of the design of the questionnaire.

2- Questionnaire:
Design of an open questionnaire: (Appendix 1)
   The questionnaire included one open question to both students and faculty members:
- What are the obstacles of online learning that you face during using E-platforms? (the problems and obstacles during using digital education platforms from students' perception)
- What are the obstacles of online teaching that you face during using E-platforms? (the problems and obstacles during using digital education platforms from faculty members' perception)
In order to identify all the problems related to the obstacles of online

Table (1)
Percentage of experts' agreement on the axes of the questionnaire on the obstacles of online learning/teaching during use E-platforms

Numb.	Axes (Constraints/obstacles or problems)	Number of times agreed	Rate the agreement%
1	Programs and courses	5	100 %
2	The nature of education/teaching	5	100 %
3	Knowledge, information and concepts	5	100 %
4	Sharing, interaction and collaboration	5	100 %
5	The nature of communications and capabilities "physical, human, network, spatial"	5	100 %

B - Vocabulary/phrases of Questionnaire obstacles online learning/teaching during use E-platforms:

Through all of the results of the open questionnaire and personal interview and survey reference to previous studies, books and scientific references: (Aboagye et al., 2020; Alsaaty et al., 2016; Claudiu et al., 2020; Dhull, 2017; Galy et al., 2011; Nazarlou, 2013; Sadeghi, 2019; Sun et al., 2020; Survey, 2020; Tagoe, 2012) [1,2,4,7,9,12,14,16,17,18], the researcher developed a number of vocabulary/phrases that reflects the problems of handicaps of online learning/teaching that facing the students and faculty members during their using E-platforms, the number of problems related to students were in the initial image (40) problem spread over a number (5) axes, , while the number of problems related to faculty members in its initial form was (28) problems distributed over (5) axes, as shown in tables 2,3(appendix 6).

Questionnaire application:

The questionnaire was applied to the basic study sample of (440) students and (120) faculty members, from December 29, 2020 to January 15, 2021. The number of problems related to students were in the final form image (38) problem spread over a number (5) axes, while the number of problems related to faculty members in its final form was (26) problems distributed over (5) axes, as shown in table (4, 5) and appendix (2,3).

Table (4)
Topics and problems of the students questionnaire in its final form

Numb.	Axes (Constraints/obstacles or problems)	Number of Vocabulary/phrases (problems)
1	Programs and courses	7
2	The nature of education/teaching	12
3	Knowledge, information and concepts	3
4	Sharing, interaction and collaboration	3
5	The nature of communications and capabilities "physical, human, network, spatial"	13
Total		38

Table (5)
Topics and problems of the faculty members questionnaire in its final form

Numb.	Axes (Constraints/obstacles or problems)	Number of Vocabulary/phrases (problems)
1	Programs and courses	6
2	The nature of education/teaching	6
3	Knowledge, information and concepts	3
4	Sharing, interaction and collaboration	3
5	The nature of communications and capabilities "physical, human, network, spatial"	8
Total		**26**

Results and Discussion

Table (6)
Responses of the students research sample to the questionnaire online teaching during use E-platforms

Numb.	Vocabulary/phrases	Chi-Square	percentile
	Programs and courses:		
	During digitally learning, I find that:		
1	- More theory than practical tasks (The content of the theoretical electronic lectures is more than the practical tasks)	28.45	45.7%
2	- More practical tasks than theory (The practical tasks of the electronic lecture content are more than theoretical)	26.54	40.2%
3	- The same amount of theory and practical tasks (The content of theoretical electronic lectures is equal to practical tasks)	25.74	14.1%
	During digital learning, I find that preparing assignments and study requirements for courses takes:		
4	- Less time	30.47	4.3%
5	- More time	26.79	90.4%
6	- Nor less time, nor more time	19.87	5.3%
7	I find that submitting projects, requirements, and assignments via E-platforms is more difficult in a digital education environment	22.36	79.5%
	The nature of education/teaching:		
8	Learning through the digital learning environment helps me to be self-reliant	15.77	75.4%
9	Learning through the digital learning environment leads to weak social relations with my colleagues	21.18	55.7%
10	I am bored because I am constantly in front of my electronic device when I use the digital learning environment	26.57	59.7%
11	My use of the digital learning environment gives me the opportunity to show my talents and abilities	27.51	23.5%
12	The lecturer is obligated to give breaks during the electronic lectures	19.66	52.8%
13	The lecturer is obliged to follow the schedule of electronic lectures (classes start or end at the specified hours)	20.37	25.7%
	To what extent is the Internet environment suitable for education and training at the university level:		
14	Suitable (satisfied)	21.95	16.3%
15	Somewhat conducive (satisfied/Suitablei n a small extent)	21.78	25.3%
16	Not suitable (not satisfied)	22.46	58.4%

Numb.	Vocabulary/phrases	Chi-Square	percentile
	If you have the possibility to choose, you would prefer:		
17	Use of online learning	24.55	7.4%
18	Face-to-face learning (traditional education)	23.67	55.2%
19	Combine online and face-to-face learning	21.79	37.4%
	Knowledge, information and concepts:		
20	I find that educational attainment through the use of digital education platforms is more difficult (processing and understanding information is more difficult in the digital education system)	19.65	74.8%
21	Learning through the digital learning environment requires sufficient knowledge of information and concepts related to the use of technology	24.97	96.5%
22	Learning through digital learning platforms led to my acquiring new information and concepts that I did not know before about the digital learning environment.	30.57	90.7%
	Sharing, interaction and collaboration:		
23	Participate in a positive way when using digital learning platforms	29.73	49.8%
24	Using the digital learning environment leads to positive communication and participation with the faculty member	18.12	40.8%
25	Learning through the digital learning environment leads to poor participation and interaction with my colleagues compared to face-to-face learning (traditional education)	22.21	84.6%
	The nature of communications and capabilities "physical, human, network, spatial":		
26	I own an electronic device through which I can use digital learning platforms	20.63	88.6%
27	Communication takes place in an audio and visual way when using digital education platforms	21.38	32.8%
28	I'm having internet issues when trying to use digital learning platforms (I'm having difficulties trying to connect to the platform)	22.94	89.8%
29	My use of digital education platforms saves the financial aspects that were spent on study materials compared to before I used them	22.48	79.6%
	Among the difficulties encountered while using the digital learning environment:		
30	Losing signal during videoconferences (during video lectures)	25.42	32.9%
31	Delayed visualization of messages communicated on the platform	28.49	22.5%
32	The sound is not clear (there are interruptions)	27.63	44.6%
	Among the methods that were used during learning through the digital learning environment:		
33	Audio conference	26.41	56.8%
34	Videoconference	26.97	4.7%
35	Documents posted on the platform (Word, Pdf, PowerPoint)	22.48	25.1%
36	Forum discussions	23.76	4.6%
37	Chat discussions	21.68	4.7%
38	URL addresses (to other web sources)	22.38	4.1%

The value of Chi-Squar at a significance level of 0.05 = 5.991

It is clear from Table (6) the statistical characterization of the responses of the student research sample about the reality of online learning while using electronic platforms, that the value of Chi-Squar is statistically significant for all questionnaire items.

Table (7)

Responses of the faculty members research sample to the questionnaire online teaching during use E-platforms

Numb.	Vocabulary/phrases	Chi-Square	percentile
	Programs and courses:		
1	The practical tasks of the courses that require the presentation of the practical part of the subject/course were not suitable for the Internet environment (there are difficulties when teaching practical courses through digital learning platforms)	19.36	92.7%
2	There is a weakness in training programs that aim to help faculty members reshape and adapt their teaching style and the way they interact with students in the online environment.	18.47	85.4%
3	There is a weakness in the training programs for qualifying and preparing faculty members to deal with digital education platforms	15.94	81.6%
4	The use of digital learning platforms in the educational process leads to the dispensation of the paper book	16.47	74.9%
5	Teaching via digital education platforms helps increase the experience of a faculty member when preparing electronic educational materials	16.64	89.3%
6	I find it difficult to convert a paper course into an electronic	13.87	71.5%
	The nature of education/teaching:		
7	I find that teaching through digital learning platforms is better than using face-to-face teaching (based on the traditional method)	14.55	18.4%
8	I find that teaching through digital education platforms takes into account the needs of students, their own abilities, and the individual differences between them	16.74	11.5%
9	I give students more time to complete assignments and study requirements during digital learning	15.58	16.8%
10	There is an increase in the tasks, roles and teaching load on a faculty member when teaching using digital learning platforms	16.25	84.7%
11	I see that teaching via digital education platforms helps enrich the educational process anytime and anywhere	16.47	50.4%
12	Teaching through digital education platforms helps in developing flexible teaching methods and methods	16.92	69.4%
	Knowledge, information and concepts:		
13	I have a good level of information and concepts related to the use of technology, which makes it easier for me to deal with digital education platforms (the availability of the faculty member's experience in using educational technology)	15.64	55.4%
14	Teaching through digital learning platforms helps me to present all the information and concepts of the course in the specified time	16.45	52.3%
15	Teaching through digital learning platforms led to my acquiring new information and concepts that I did not know before about the digital learning environment	15.34	84.6%
	Sharing, interaction and collaboration:		
16	While doing the electronic lectures, I felt that there was a proper interaction with the students in the online environment (there is interaction between the faculty member and the students when using digital learning platforms)	13.23	30.4%
17	Students are obligated to attend or enter the digital education platforms (the request is obligated to attend when teaching electronic lectures through digital education platforms)	16.47	35.4%
18	Teaching through digital learning platforms creates an educational environment rich in participation and interaction with students compared to the traditional learning environment	16.69	16.2%
	The nature of communications and capabilities "physical, human, network,		

Numb.	Vocabulary/phrases	Chi-Square	percentile
	spatial":		
19	I'm having internet issues when trying to use digital learning platforms (I'm having difficulties trying to connect to the platform)	17.58	75.4%
	Among the difficulties encountered while using the digital learning environment:		
20	Losing signal during videoconferences (during video lectures)	17.96	31.7%
21	Delayed visualization of messages communicated on the platform	16.94	26.7%
22	The sound is not clear (there are interruptions)	17.66	41.6%
	While doing electronic lectures I used:		
23	The e-learning platform provided by the university only	15.63	85.9%
24	Use of any electronic platforms	16.31	14.1%
25	The use of digital education platforms leads to savings in financial costs compared to the traditional system	15.96	40.6%
26	Teaching through digital education platforms helps in the multiplicity and diversity of means of communication between a faculty member and students	19.47	66.1%

The value of Chi-Squar at a significance level of 0.05 = 5.991

It is clear from Table (7) the statistical characterization of the responses of the student research sample about the reality of online learning while using electronic platforms, that the value of Chi-Squar is statistically significant for all questionnaire items.

As for the first question, which states: What are the obstacles of online learning facing the students during their using E-platforms? Where the answer is clear by discussing the following:

It is seen from the table (6) that the students research sample on the axis of (Programs and courses) phrases views ranged percentage of them between 14.1%: 90.4% in the two phrases/statements (3,5), respectively. and the axis of (The nature of education/teaching) phrases views ranged percentage of them between 7.4%: 75.4% in the two phrases/statements (17,8), respectively. and the axis of (Knowledge, information and concepts) phrases views ranged percentage of them between 74.8%: 96.5% in the two phrases/statements (20,21), respectively. and the axis of (Sharing, interaction and collaboration) phrases views ranged percentage of them between 40.8%: 84.6% in the two phrases/statements (24,25), respectively. and the axis of (The nature of communications and capabilities "physical, human, network, spatial") phrases views ranged percentage of them between 4.1%: 89.8% in the two phrases/statements (38,28), respectively.

And in general, phrases/statements that whose percentage is higher than 75% are the words/phrases/statements (5,7,8,21,22,25,26,28,29) where the percentage came from 75.4 % : 96.5 % .

This refers to the difficulty of learning as a result of that submitting projects, requirements, and assignments via E-platforms is more difficult in a digital education environment, as it indicates that preparing assignments

and study requirements for courses takes more time according to the sample responses 90.4%, and that educational attainment through the use of digital education platforms is more difficult 74.8%, and that learning through the digital learning environment leads to poor participation and interaction with colleagues compared to face-to-face learning (traditional education) 84.6%.

Larger number of students mention that online learning is much more difficult than offline learning, and that processing information is more difficult in the E-learning system, and presenting seminar projects online is more difficult in the online environment.

Students consider that the most appropriate way to carry out the teaching-learning process is the traditional method, face to face..

Students who responded to the questionnaire believe that exclusively online learning does not have beneficial effects on assimilating and processing information 74.8%, that it is more difficult to study and be focused online, and that teaching is also harder 78.3%. Furthermore, students also consider that presenting seminar projects is harder online 79.5%.

This study is in line with other studies. (Claudiu et al., 2020; Galy et al., 2011; Tagoe, 2012) [4,9,18] which suggest that students consider that the online educational process has less value than the traditional process.

As for the second question, that states: What are the obstacles of online teaching facing the faculty members during their using E-platforms? Where the answer is clear by discussing the following:

It is seen from the table (7) that the faculty members research sample on the axis of (Programs and courses) phrases views ranged percentage of them between 71.5%: 92.7% in the two phrases/statements (6,1), respectively. and the axis of (The nature of education/teaching) phrases views ranged percentage of them between 11.5%: 84.7% in the two phrases/statements (8,10), respectively. and the axis of (Knowledge, information and concepts) phrases views ranged percentage of them between 52.3%: 84.6% in the two phrases/statements (14,15), respectively. and the axis of (Sharing, interaction and collaboration) phrases views ranged percentage of them between 16.2%: 35.4% in the two phrases/statements (18,17), respectively. and the axis of (The nature of communications and capabilities "physical, human, network, spatial") phrases views ranged percentage of them between 14.1%: 85.9% in the two phrases/statements (24,23), respectively.

And in general, phrases/statements that whose percentage is higher than 75% are the words/phrases/statements (1, 2, 3, 5,10,15,19,23) where the percentage came from 75.4 % to 92.7 % .

This refers according to the sample responses to the difficulty of work as a result of the practical tasks of the courses that require the presentation of the practical part of the subject/course were not suitable for the Internet environment 92.7%, as it indicates that increase in the tasks, roles and teaching load on a faculty member when teaching using digital learning platforms 84.7%, and that teaching through digital education platforms does not takes into account the needs of students, their own abilities, and the individual differences between them 88.5%.

Faculty members did not have the necessary technical skills and they did not manage in such a short time to adapt their teaching style, or to properly interact with students in the online environment in order to assure high standards of the teaching process.

This study is in line with other studies (Claudiu et al., 2020; Dhull, 2017; Galy et al., 2011; Nazarlou, 2013; Sadeghi, 2019; Tagoe, 2012) [4,7,9,12,14,18] which suggest that the traditional method in which faculty members used to deliver the practical part of the subject/course was no longer suitable for the online environment. Thus, because they did not manage to rapidly adapt and come up with solutions, faculty members created confusion and uncertainty among students.

As for the third question, that states: What guidance or solutions can be used to effectively of online learning/teaching (using E-platforms)? Where the answer is clear through guidances, instructions or solutions the following: (Appendix 4)

- The multiplicity and diversity of communication means between students and faculty members through the platforms.
- Providing a greater opportunity for students to view lessons and courses through the platforms.
- Providing tablets for students to enable them enter the platforms.
- The teaching style of the faculty members should be flexible to conform the new educational situation.
- Providing courses or seminars for students on how to use the platforms.
- Providing programs and courses on how faculty members design E-courses.
- Providing programs and courses on how to convert a paper course/book into an electronic course.

Based on the foregoing, in order for the teaching process to efficiently take place online, a balance between theory and practical tasks, as well as assigning tasks according to the amount of available time students have is necessary.

Conclusions

- Students and faculty members are disadapted to E-learning/teaching (online platforms/e-platforms)
- Students and faculty members are dissatisfied with this online experience (teaching/learning via e-platforms).
- Educational attainment through the use of digital education platforms is more difficult.
- Learning through the digital learning environment leads to poor participation and interaction with colleagues compared to face-to-face learning (traditional education).
- Encountered technical problems with the platforms provided by universities (connecting to the platform, signal loss, delayed viewing of messages, the sound was not clear).
- Difficulty of work as a result of the practical tasks of the courses that require the presentation of the practical part of the subject/course were not suitable for the Internet environment.

Recommendations

- Remodel and adapt faculty members' teaching style and the way they interact with students to the online environment through programs, training courses, forums and seminars.
- Maintaining balance between theory and practical tasks
- Assigning tasks (or homework) according to the amount of available time students have is necessary
- Improve and optimize the process of online teaching and learning.
- Improving faculty members' and students' technical skills in relation to E-platforms.
- Developing faculty members' training programs in relation to E-platforms.

References

1. Aboagye, E.; Yawson, J.A.; Appiah, K.N. COVID-19 and E-Learning: The Challenges of Students in Tertiary Institutions. Soc. Educ. Res. 2020, 1–8.
2. Alsaaty, F.M.; Carter, E.; Abrahams, D.; Alshameri, F. Traditional Versus Online Learning in Institutions of Higher Education: Minority Business Students' Perceptions. Bus. Manag. Res. 2016, 5, 31.
3. Anwar, K.; Adnan, M. Online learning amid the COVID-19 pandemic: Students perspectives. J. Pedagog. Res. 2020, 1, 45–51
4. Claudiu Coman , Laurent,iu GabrielT, îru, Luiza Meses, an-Schmitz, Carmen Stanciu and Maria Cristina Bularca. Online Teaching and

Learning in Higher Education during the Coronavirus Pandemic: Students' Perspective. Article at sustainability,11 December 2020.

5. Decuypere, M., & Vanden Broeck, P. Time and educational (re-)forms—Inquiring the temporal dimension of education. Educational Philosophy and Theory, 52(6), 602–612. https://doi.org/10.1080/00131857.2020.1716449 [Taylor & Francis Online], [Web of Science ®], [Google Scholar], 2020.

6. Dhawan, S. Online Learning: A Panacea in the Time of COVID-19 Crisis. J. Educ. Technol. Syst. 2020, 49, 5–22.

7. Dhull, P.I.; Sakshi, M. Online learning. Int. Educ. Res. J. 2017, 3, 32–34.

8. Emiliano Grimaldi & Paolo Landric. Introduction: Critical studies of digital education platforms, Department of Social, Human Sciences and Cultural Heritage, CNR-IRPPS, Fisciano (SA), Italy https://orcid.org/0000-0001-7933-9848View further author information, Volume 62, 2021 - Issue 1: Critical studies of digital education platforms, Pages 1-16, 09 Feb 2021.

9. Galy, E.; Downey, C.; Johnson, J. The Effect of Using E-Learning Tools in Online and Campus-Based Classrooms on Student Performance. J. Inf. Technol. Educ. 2011, 10, 209–230.

10. Lewis, S. The turn towards policy mobilities and the theoretical-methodological implications for policy sociology. Critical Studies in Education, 1–16. https://doi.org/10.1080/17508487.2020.1808499 [Taylor & Francis Online], [Web of Science ®], [Google Scholar], 2020.

11. Marinoni, G.; Van't Land, H.; Jensen, T. The Impact of COVID-19 on Higher Education around theWorld. International Association of Universities. Available online: https://www.iau-aiu.net/IMG/pdf/iau_covid19_ and_he_survey_report_final_may_2020.pdf (accessed on 14 August 2020).

12. Nazarlou, M.M. Research on Negative E_ect on E-Learning. Int. J. Mob. Netw. Commun. Telemat. 2013, 3, 11–16.

13. Pluim, C., & Gard, M. (2018). Physical education's grand convergence: Fitnessgram®, big-data and the digital commerce of children's health. Critical Studies in Education, 59(3), 261–278. https://doi.org/10.1080/17508487.2016.1194303 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]

14. Sadeghi, M. A Shift from Classroom to Distance Learning: Advantages and Limitations. Int. J. Res. Engl. Educ. 2019, 4, 80–88.

15. Selwyn, N. Data entry: Towards the critical study of digital data and education. Learning, Media and Technology. 2015, 40(1), 64–82. https://doi.org/10.1080/17439884.2014.921628 [Taylor & Francis Online], [Web of Science ®], [Google Scholar]

16. Sun, L.; Tang, Y.; Zuo, W. Coronavirus pushes education online. Nat. Mater. 2020, 19, 687.

17. Survey on Online and Distance Learning—Results. Available online: https://www.schooleducationgateway. eu/en/pub/viewpoints/surveys/survey-on-online-teaching.htm (accessed on 14 August 2020).

18. Tagoe, M. Students' Perceptions on Incorporating E-Learning into Teaching and Learning at the University of Ghana. Int. J. Educ. Dev. Using Inf. Commun. Technol. 2012, 8, 91–103.

19. Van Dijck, J., Poell, T., & De Waal, M. The platform society: Public values in a connective world. Oxford University Press. [Crossref], [Google Scholar] 2018.

20. Williamson, B. Digital education governance: An introduction. European Educational Research Journal. 2016, 15(1), 3–13. https://doi.org/10.1177/1474904115616630 [Crossref], [Web of Science ®], [Google Scholar]

21. Williamson, B., Eynon, R., & Potter, J. Pandemic politics, pedagogies and practices: Digital technologies and distance education during the coronavirus emergency. Learning, Media and Technology, 45(2), 107–114. https://doi.org/10.1080/17439884.2020.1761641 [Taylor & Francis Online], [Web of Science ®], [Google Scholar], 2020. Yusuf, N.; Al-Banawi, N. The Impact of Changing Technology: The Case of E-Learning. Contemp. Issues Educ. Res. 2013, 6, 173–180.