EMERGENCY REMOTE LEARNING AND MOROCCAN STUDENTS' INTEREST IN ONLINE INSTRUCTION POST PANDEMIC

Khalid Bourrouk, Faculty of Letters and Human Sciences - Sais, Sidi Mohamed Ben Abdellah University, Fez, Morocco, Email: Bourroukkhalid@gmail.com

Ashley Nicole Jackson, Liberty University, Lynchburg Virginia, USA, Email: Ashleynjackson22@gmail.com

Abstract. The purpose of the study is to investigate the effect of emergency remote learning on students' interest in receiving online classes as part of the post-pandemic education paradigm in Morocco. Through non-probability snowball sampling, a total of 143 Moroccan students enrolled at Sidi Mohammed Ben Abdellah University Fez, Morocco participated in the study by completing a 21-item questionnaire. The instrument consisted of demographic questions and items relying on a seven-point Likert scale. Convenience, cost, and students' self-regulated learning were identified as dimensions of emergency remote learning experience. Moreover, the scales were analyzed for internal consistency and were shown to comply with the required standards. Using Pearson product-moment correlation and multiple linear regression, convenience and self-regulated learning were found to be significantly associated with students' interest in online learning. However, cost was not a significant predictor. Hence, the study concludes that after experiencing online education amidst the Covid-19 pandemic, Moroccan under-graduate students have developed an interest in the incorporation of online instruction as one of the constituents of the Moroccan post-pandemic education model. Implications and suggestions for policymakers based on the findings of this study are discussed. Moreover, limitations of the study and recommendations for future research are addressed.

1. INTRODUCTION

The immediate transition to online learning owing to the Covid-19 pandemic has undoubtedly brought major disruptions in education. A few days after the first Covid-19 case was confirmed by the Moroccan Ministry of Health on March 2nd, 2020, the Ministry of Education mandated immediate school closures and decided to pivot into substituting face-to-face with online education to ensure the minimization of infection risk among students, teachers and their communities. Educators were obligated to adapt to the unprecedented circumstances despite their lack of professional preparedness. It is important to acknowledge that Moroccan teachers demonstrated remarkable willingness to cope with the new instruction delivery system and used their own private resources to help sustain the engagement and motivation of students while studying remotely. According to Almutairi et al. (2021), professors embarked upon their online teaching journey with limited experience or awareness of internet resources.

Although teachers and educators in Morocco were aware of the fact that migrating classes from off-line to online was not particularly an ideal situation, they understood it was the only rational alternative available to pursue studies while ensuring the safety and health of everyone involved in the education process. However, they immediately stumbled upon a series of enormous challenges. First, the lack of reliable internet connection, preventing students from attending classes and, thus, crippling students' progress. Second, a large number of Moroccan students did not own tablets or computers to allow for proper and productive homeschooling experience. Third, several students lacked the technical skills of effective technology use. As a result, students resented this form of education.

Previous studies have concentrated extensively on the impact on the immediate shift to online learning on students' academic performance, motivation, and affect; nevertheless, whether or not students have developed an interest in online learning

Corresponding Author

Khalid Bourrouk, Faculty of Letters and Human Sciences - Sais, Sidi Mohamed Ben Abdellah University, Fez, Morocco,

Email: Bourroukkhalid@gmail.com

as a consequence of their lived experience with emergency remote learning remains unexamined. To address this significant gap in the literature, the purpose of the study is to investigate the impact of emergency remote learning on students' openness and interest in receiving online classes as part of the post-pandemic education paradigm in Morocco. In particular, emergency remote learning experience was approached in terms of its perceived convenience, cost, as well as students' self-regulated learning strategies. Ultimately, the current study aims to provide evidence-based insights for decision-makers to capitalize on the opportunities presented by online instruction delivery system, rather than dispense with form of education after the pandemic.

This paper is structured in the following manner. It begins by laying out the distinctions between emergency remote learning and online learning. Next, evidence from the literature regarding students' perceived convenience and cost of online education. Furthermore, the concept of self-regulated learning is explained. Subsequently, the methodology adopted in this study is detailed. Moreover, the results obtained in this study are presented. This paper ends by discussing the implications of the main findings of this research. Finally, research conclusions are highlighted.

2. EMERGENCY REMOTE LEARNING VERSUS ONLINE LEARNING

Online education has existed for decades and has been established as a legitimate and valid form of instruction delivery system; nevertheless, it only existed as one of the options for students to pursue their education. However, during the Covid-19 pandemic, carrying out classes online was the only way for teachers to deliver their lessons and for students to learn safely. As noted by Craig (2020), the world has been engaged in emergency remote learning, which is essentially different from online education. Shisley (2020) asserts that online education differs significantly from emergency remote learning particularly in terms of design. Online course designers follow distinct conceptual and philosophical elements to devise courses that are envisioned from the beginning to be delivered online, whereas emergency remote leaning is merely an alternative form of instruction delivery where course materials were initially designed for face-to-face delivery but forced into an online format due to the circumstances.

In addition, the development of online lessons requires a substantial amount of planning, determination and forethought. It takes several months to prepare engaging lessons that sustain student attention while studying without the physical presence of an instructor (Schultz & DeMers, 2020; Hodges et al., 2020; Bozkurt & Sharma, 2020). Online courses typically take six to nine months to develop, prepare and plan a complete online course before it is ready for delivery (Hodges et al., 2020). In the case of emergency remote learning, teachers were required to immediately transition into online teaching without adequate prior planning and with very limited training. Hence, emergency remote learning is only adopted temporarily to solve an immediate and pressing problem. It would be entirely unfair to expect satisfactory outcomes in an absence of basic components of what constitutes a rigorous online learning experience. Hasty attempts to fit content into an online format will further exacerbate the misconception that online education is of lesser value in comparison with its counterpart, namely in-person in-struction (Schultz & DeMers, 2020).

Furthermore, students who opted for online education are prepared with sufficient technical skills and technical equipment such as computers and access to reliable internet connection to go about their learning, unlike students experiencing emergency remote learning who may lack access to computers and stable internet (Hodges et al., 2020). Thus, it is vital to consider the differences that help eliminate the blurry lines between online education and emergency remote learning while evaluating the learning outcomes and experiences of students during the pandemic.

3. EMERGENCY REMOTE LEARNING: CONVENIENCE AND COST

Given the globale nature of the Covid-19 pandemic, several studies have been conducted worldwide in order to investigate the attitudes of students towards their experiences with emergency remote learning. Studies measured students' experiences with online classes mainly in terms of convenience, cost and satisfaction. Convenience was regarded one of the distinctive advantages and strengths of online education prior to and

during the pandemic (Mukhtar et al., 2020; Jaggars, 2011). Convenience means that students are able to access course materials from anywhere, learn at their own pace, and go back and review lessons multiple times to ensure full comprehension of a concept. Scrambling on a congested road in the middle of a peak hour and riding a fully loaded bus or train just to arrive in class on time was no longer necessary (Daroedono et al., 2020). Through synchronous learning, students were still able to access course materials from the comfort of their home or any location of their choice. Asynchronous classes afforded further convenience and flexibility, allowing students to study during the time they are most productive (Muthuprasad et al., 2020).

Daymont et al. (2011) found that convenience was the main factor for students opting for online education. Fatonia et al. (2020) demonstrated that the comfortable learning environment, the substantial decrease of travel time and the easy interactions with teachers and classmates via chatrooms were viewed as important upsides of online learning. Bali and Liu (2018) suggested that even though face-to-face learning was perceived more satisfying, some students opted for online classes due to its convenience and flexibility of time in the case of asynchronous learning. Shim and Lee (2020) revealed that South Korean college students who took part in their study noted a number of factors that enhanced their online experience during the lockdown such as the ability to learn in personalized environment and attend classes from any location, eliminating the hassle of commuting to school every day.

Furthermore, online learning during school closures was relatively less expensive in that transportation, food and housing costs were significantly reduced or even eliminated for some students. McPherson and Bacow (2015) affirm that the relatively low cost is among the crucial factors for choosing online education. Deming et al. (2015) suggest that online education may "bend the cost curve" in conventional higher education. Bali and Liu (2018) point out that several students have preferred online learning for its costeffectiveness. In the context of the Covid-19 pandemic, Agarwal and Kaushik (2020) found that online learning was feasible, cost-effective and should be incorporated in post-pandemic education. Another study carried out by Koirala et al. (2020) who examined the perception of nursing students in Nepal towards online classes during covid-19.

Although almost half of the respondents were not completely satisfied, they felt that online classes were convenient and should continue during the pandemic.

4. SELF-REGULATED LEARNING

While flexibility and convenience may have been among the major benefits of online learning during the pandemic, applying self-regulated learning strategies is integral for students to academically survive the pandemic. Self-regulated learning is the extent to which learners are motivationally, meta-cognitively and behaviorally active stakeholders in their own learning Zimmerman (1990). In other words, self-regulated learners set their own learning goals and seek to retain control over their behavior, motivation, cognition, and emotion in order to fulfill the demands of the circumstance (Zimmerman, 1990; Zimmerman, 2000; Pintrich, 1995). Strategies that students used during the pandemic involved preparing for class by searching online for relevant readings and videos to learn about the topic to be covered during the synchronous sessions, creating a schedule to ensure efficient time management, making a list of tasks in order of priority, and conducting self-evaluation (Yeung & Yau, 2021; Nepal & Kumar, 2020). Hence, the pandemic circumstances necessitate students' greater level of responsibility, self-discipline, self-instruction, self-monitoring and self-assessment.

5. METHODOLOGY

This section sheds light on the methodology adopted in this study. It begins by presenting the research design and stating the hypotheses. Next, the sampling procedure and participants characteristics are highlighted. Subsequently, data collection and analysis procedures are illustrated. Finally, the reliability of the scales is reported based on Cronbach's alpha coefficient.

5.1. Research approach and hypotheses

The present study uses a quantitative research design in order to examine whether the experience of online learning during the Covid-19 outbreak has led students to develop an interest in receiving online classes as part

of post-pandemic education in Morocco. Creswell (2014) asserts that quantitative research design allows the enquirer to numerically examine the association between independent and dependent variables. Hence, the current study aims to investigate the following hypotheses:

H1 *There is significant relationship between the convenience of online learning and students' interest in post-pandemic online learning.*

H2 *There is a significant relationship between the cost of online learning and students' interest in post-pandemic online learning.*

H3 *There is a significant relationship between students' level of self-regulated learning and their interest in post-pandemic online learning.*

5.2. Participants

This study targeted students enrolled at the University of Sidi Mohammed Ben Abdellah Fez, Morocco. Participants were selected using snowball sampling, which is a commonly used sampling method where respondents assist in locating other individuals who might be interest in taking part in the study. Hence, one hundred and forty four undergraduate students participated in this study. Sixty nine of them were female students, accounting for *48%* of the respondents, while seventy five were male students, which makes *52%* of the participants. The average age was twenty years old with a standard deviation of two years (*M = 20, SD=2*).

5.3. Data collection and analysis procedures

A questionnaire was the main instrument for data collection. It was designed by using Google forms Online Survey. A link to the questionnaire was distributed to participants primarily through WhatsApp. The questionnaire begins with demographic questions, including gender, age and educational level of the participants. Next, respondents were given a list of items that were measured on a seven-point Likert scale, which allowed students to indicate the degree to which each item describes their experience

with emergency remote learning during the Covid-19 pandemic and whether they are interested in receiving online classes as part of post-pandemic education. A Score of 1 indicates complete disagreement, whereas 7 shows complete agreement.

The questionnaire consisted of four scales, three of which were intended to measure the three independent variables in this study, namely convenience (*"I enjoyed not having to leave the house for school," "I liked the option of attending classes," I was able to study at my own pace," Studying at home eliminated the hassle of arriving to class on time", "I was able to choose the environment that was the most suitable for my learning."*), cost (*"Studying online reduced my financial cost," "I like that I did have to spend money of transportation/gas", "Online education eliminated my housing cost," "Studying online was generally affordable."*), and self-regulated learning (*" I improved my ability to find information by myself," I took more responsibility for my own learning," "I set goals for my learning," "I was able to set my own schedule," "I acquired knowledge according to my own learning style," "I tested myself in many ways to evaluate my learning."*). The self-regulated learning scale was developed following the theoretical perspectives of Pintrich, (1995) and Zimmerman (1990). The fourth scale was developed in order to measure the dependent variable in this study, namely students' interest in receiving online classes in post-pandemic education (*"Online education works better for me," I hope I can have the option to study online in the future," "Online education fits my life style better," "I hope teachers conduct more of their classes online in the future," "I feel optimistic about online learning after the Covid-19 pandemic."*).

After obtaining data from the questionnaire, a demographic analysis of the respondents was conducted. Next, a preliminary correlation analysis using Pearson product moment was performed to infer the statistical association between convenience, cost, self-efficacy, and interest in post-pandemic online learning. Then, a multiple linear regression analysis was carried out to investigate whether convenience, cost and self-efficacy (independent variables) were able to predict students' interest in post-pandemic online learning (dependent variables). An analysis of multicollinearity and autocorrelation was conducted in order to ensure that the assumptions of multiple linear

regression were not violated. Furthermore, Statistical Package for Social Sciences (SPSS) version 26 was deployed to run the reliability, correlation and regression analyses.

5.4. Reliability analysis

Prior to the official distribution of the questionnaire, it was integral to assess the reliability of the scales. The term "reliability" relates to whether the scores on an instrument are internally consistent, stable over time, and if the test administration and scoring were consistent (Creswell, 2014). The current study analyzes the reliability of scales based on Cronbach's alpha, which is widely used by researchers to establish the scale reliability, and ensure that the instrument is able to produce consistent results over time. Table 1 depicts the number of items in each scale and the Cronbach's alpha coefficients.

Table 1. Reliability analysis of the scales

Names of scales	Cronbach's alpha	Number of items
Convenience	.87	5
Cost	.87	5
Self-regulated learning	.89	6
Students' interest in post-pandemic online learning	.95	5

Looking at table 1, the questionnaire consisted on 21 items in aggregate. The convenience scale consisted of 5 items, cost was made up of 5 items, self-regulated learning comprised of 6 items, and 5 items made the students' interest scale. The Cronbach's alpha coefficients were *.87, .87, .89, .95* respectively, indicating satisfactory to high scale reliabilities.

6. RESULTS

The current study aimed to investigate three hypotheses: 1) There is significant relationship between the convenience of online learning and students' interest in post-pandemic online learning; 2) There is a significant relationship between the cost of online learning and students' interest in post-pandemic online learning; 3) There is a significant relationship between students' level of self-regulated learning and their interest in post-pandemic online learning.

Pearson product-moment correlation analysis was conducted in order to examine the association between convenience, cost, self-regulated learning, and students' interest in post-pandemic online learning. The results indicated that students' interest in post-pandemic online learning strongly and positively correlated with convenience ($r = .77, p < .05$), weakly and positively correlated with cost ($r = .25, p < .05$), and moderately and positively correlated with self-regulated learning ($r = .58, p < .05$). This shows that convenience had the highest correlation coefficient with students' interest in post-pandemic online learning. Following the correlation analysis, a multiple linear regression analysis was performed in order to examine whether interest in post-pandemic online learning could be predicted by students' experience with online learning as measured by three factors, namely convenience, cost and self-regulated learning. Preliminary analysis was performed to check the assumptions of multiple regression. In terms of multicollinearity, the variance inflation factor was less than five, showing that multicollinearity was within the conventionally accepted range. Independence of residual errors was confirmed using Durbin-Watson test and showed that no autocorrelation existed in the data ($DW = 1.91$). Furthermore, a scatterplot showed that the relationship between variables was positive, linear and did not reveal any outliers. Hence, the distribution of data respected the fundamental normality assumptions of multiple regression. The multiple regression results revealed that the model was statistically significant, $F (3,140) = 80.39, p < .001$. The model predicted 63% of the variance in students' interest in post-pandemic online learning, with an adjusted

Table 2. The effect of convenience, cost and self-regulated learning on students' interest

Coefficients							
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-1.054	.477		-2.212	.029		
Convenience	.782	.074	.647	10.503	.000	.691	1.446
Cost	.025	.064	.022	.395	.693	.885	1.130
Self-regulated learning	.331	.096	.218	3.441	.001	.651	1.535
a. Dependent Variable: Students' interest							

$R^2 = .62$.

As depicted in table 2, it is indicated that convenience ($B = .782, p = .000$) and self-regulated learning ($B = .331, p = .001$) were able to predict students' interest in post-pandemic online learning, with convenience being the most important influencing factor. However, although the correlation analysis revealed that there was a positive correlation between cost and students' interest in post-pandemic online learning, the multiple linear regression results showed that cost was not a significant predictor in the relationship, $B = .025, p = .693$. Hence, the first hypothesis proposing that there is significant relationship between the convenience of online learning and students' interest in post-pandemic online learning was accepted, and so was the third hypothesis stating there is a significant relationship between students' level of self-regulated learning and their interest in post-pandemic online learning. However, the second hypothesis which suggests there is a significant relationship between the cost of online learning and students' interest in post-pandemic online education was rejected based on the multiple regression analysis although the Pearson correlation coefficient indicated a weak positive relationship.

7. DISCUSSIONS

The immediate shift to online education, one must note, has substantially disrupted the education paradigm all over the world; however, the impact of the Covid-19 outbreak on post-pandemic education is expected to be more significant. The body of research pertaining to emergency remote learning has already been rapidly growing over the past two years. Previous studies in the literature placed a large emphasis on students' perception and level of satisfaction with the effectiveness of online learning during the pandemic. Past research also focused on examining the impact of emergency remote learning on students' academic perfor-mance, motivation, affect and technology acceptance. However, whether students are interested in the continuance of online learning after the pandemic had not been examined. Therefore, the current study sought to fill this gap in the literature by investigating whether the emergency remote learning experience has led students to develop an interest in the incorporation of online classes as part of the post-pandemic education model in Morocco. A sample of one hundred and forty four first and second-year undergraduate students enrolled at the University of Sidi Mohamed Ben Abdellah took part in the present study. Students' experience with emergency remote learning was measured based on three predicting variables, namely convenience, cost, and self-regulated learning.

It was hypothesized that convenience would affect students' interest in receiving online classes after the pandemic. The results indicated a significant association between the two variables. This was not particularly surprising since the ability to choose a personalized environment and attend classes from anywhere without the hassle of commuting everyday just to arrive on time have been considered important advantages of online learning (Daymont et al. 2011). This finding is consistent with previous research which found that convenience was a major factor for students choosing online education (Shim & Lee, 2020; Fatonia et al. 2020; Muthuprasad et al., 2020).

It was also hypothesized that cost would significantly impact students' interest in post-pandemic online learning. This hypothesis was based on the assumption that online learning would substantially reduce transportation, food, and housing expenses as indicated by previous studies (Agarwal & Kaushik, 2020; McPherson & Bacow, 2015; Goldin et al., 2015). However, this study indicated that cost was not a significant predictor of students' interest. This was rather surprising since there is a substantial evidence in the literature that show cost to be significantly associated with students opting for online education (Agarwal & Kaushik, 2020; McPherson & Bacow, 2015; Goldin et al., 2015). In the context of Moroccan students, the housing cost takes up the biggest chunk of their budgets, particularly for those who must relocate to another city where they go to university. It is possible that most students who participated in this study live in Fez, which is where the University of Sidi Mohammed Ben Abdellah is located. Therefore, the elimination of the housing cost due school closures was irrelevant for many of them. In addition, while switching to emergency remote learning may have eliminated transportation and housing expenses for some students, having access to reliable internet and electronic devices, which is not inexpensive, were still necessary requirements for students to purse their education during the Covid-19 pandemic.

Another hypothesis that was proposed in

this study stated that the level of self-regulated learning would enhance students' experience with emergency remote learning and, hence, significantly influence their interest in post-pandemic online learning. In line with this hypothesis, it was found that self-regulated learning was able to significantly predict students' interest in receiving online classes as part of the post-pandemic education model in Morocco. This finding supports previous research which demonstrated that Self-regulated learning was one of the prominent predicting variables that helped improve students' experience with online learning during the pandemic (Nepal & Kumar, 2020; Yeung & Yau, 2021; Kosycheva et al., 2021). Students who are equipped with sufficient and efficient self-learning strategies, including setting clear learning goals, managing time effectively, seeking help when needed, and self-evaluating learning and progress were better able to cope with the unfavorable learning conditions. Those students were more likely to be interested in the incorporation of online learning after the pandemic.

Therefore, the present study bears useful implications for education specialists and decision-makers in Morocco. First of all, the findings of this study bring the great news that Moroccan students have become more receptive to online education. It is not beyond the bounds of possibility that a similar globale crisis would arise that would force students and teachers to immediately shift to online education. In that case, students would be less resistant and better prepared to shift from inperson to online education. Moreover, the incorporation of some forms of online instruction such as blended learning and flipped classroom will probably characterize post-pandemic education in Morocco. However, whether or not online learning would exist as an obligation or merely an option after the pandemic, it is integral that students are prepared so as to avoid the same dreadful disruptions in education that were brought by the Covid-19 outbreak.

Hence, some suggestions are put forward to help capitalize on the opportunities afforded by online education, rather than attempt to circumvent this form of education. The first set of propositions involves preparing students for online education. First of all, the effectiveness of online education depends significantly on students' capacity of self-regulation. Hence, it is critical to help students develop efficient self-regulated learning techniques. Educators can start by helping student set their own learning goals. Besides the learning goals that teachers customarily preset for students in order to pass exams, it is important for students to learn how to develop their own vision of what constitute a learning goal. Spruce and Bol (2015) suggest that personal goal orientations impact the kind of goals students set for their learning. While this may include academic goals, such as receiving satisfactory grades, it may also be inclusive of general life-long goals that go beyond simply obtaining satisfactory grades. Educators can also focus their instruction on the teaching of time management skills. Verrell and McCabe (2015) found that time management was the most important yet underdeveloped skill in schools. Again, this does not mean that teachers should lay out a presumably perfect time management style; instead, there is a dire need for students to discover their own time management style such as knowing the specific time periods that stimulate their highest level of productivity. Additionally, effective time management enables students to avoid procrastination and time misappropriations (Wolters & Brady, 2020).

Moreover, it is important for educators to train students to evaluate their own learning and monitor their progress. This can be accomplished by introducing students to various online tools that offer free tests to ensure adequate grasp of learning materials. Manso-Vazquez and Llamas-Nistal (2015) suggest that it is critical for teachers to encourage reflection and critical thinking among their students by coaching learners through recognizing what they know visà-vis what they want to learn, and how to assess their knowledge.

In addition to preparing students, reliable internet connection must be built which is integral to a successful, pleasant and productive learning experience. The lack of a stable internet connection was one of the most common concerns among Moroccan students and instructors. Students and teachers must be able to connect to a reliable internet connection. Also, Electronic devices must be made available at affordable prices for students. Most families in Morocco will not be able to purchase laptops, tablets and cellphones if the prices are not reduced. The Moroccan government can offer special discounts on devices for students who are engaged in online education. Furthermore, adequate e-learning platforms that promote consistent connectivity between instructors and students must be developed in order to facilitate learning

remotely. Furthermore, Moroccan instructors must be provided with training opportunities on the effective strategies and techniques to develop and conduct instruction online. Such training must be delivered by online education professionals who have a practical experience designing online courses. Similarly, students must also be equipped with the technological skills that allow them to navigate various virtual learning materials and foster optimal online learning experience.

8. CONCLUSIONS

This study aimed to examine the impact of online learning experience amidst the Covid-19 pandemic on students' interest in the implementation of online learning in post-pandemic education in Morocco. The study found that after experiencing online learning for almost two years, Moroccan students have become more receptive to online education in that they have developed an interest in receiving online classes after the pandemic. This interest was predicted largely by the convenience of studying online and students' level of self-regulated learning. The study concludes that if online education is to characterize post-pandemic education in Morocco, educators should prioritize the teaching of self-regulated learning. Also, adequate technical infrastructure must be established to enhance and capitalize on the convenience and other upsides of the online learning. Additionally, electronic devices must be provided to students at affordable prices.

There are some limitations to this study which, in turn, present opportunities for future research. The present study was carried out with a quantitative approach. However, future research can use qualitative interviews to arrive at more indepth understanding of the research problem. Also, the study used non-probability sampling which circumscribes the generalizability of the findings. It is, thus, recommended that future researchers employ probability sampling to generate findings that can safely be generalized to the entire population. Finally, the current study targeted only students enrolled at the University of Sidi Mohamed Ben Abdellah. therefore, this study can be replicated to examine the context of students affiliated with various universities across Morocco.

Conflict of interests
The authors declare no conflict of interest.

REFERENCES

Agarwal, S., & Kaushik, J. S. (2020). Student's Perception of Online Learning during Covid Pandemic. The Indian Journal of Pediatrics, 87(7), 554-554. https://doi.org/10.1007/s12098-020-03327-7

Almutairi, F. M., Ali, N. G., & Ghuloum, H. F. (2021). A Novel Framework for Facilitating Emergency Remote Learning during the COVID-19 Pandemic. International Education Studies, 14(5), 121-134. https://doi.org/10.5539/ies.v14n5p121

Bali, S., & Liu, M. C. (2018). Students' Perceptions towards Online Learning and Face-to-face Learning Courses. In Journal of Physics: Conference Series. IOP Publishing. https://doi.org/10.1088/1742-6596/1108/1/012094

Bozkurt, A., & Sharma, R. C. (2020). Emergency Remote Teaching in a Time of Global Crisis due to CoronaVirus Pandemic. Asian Journal of Distance Education, 15(1), i-vi. http://www.asian-jde.org

Craig, R. (2020). What Students Are Doing is Remote Learning, not Online Learning: There Is a Difference. Edsurge. https://www.edsurge.com/news/2020-04-02-what-students-are-doing-is-remote-learningnot-online-learning-there-s-a-difference

Creswell, J. W. (2014). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (Fourth ed.). SAGE Publications.

Daroedono, E., Siagian, F. E., Alfarabi, M., Cing, J. M., Arodes, E. S., Sirait, R. H., & Hutabarat, R. O. (2020). The Impact of Covid-19 on Medical Education: Our Students Perception on the Practice of Long Distance Learning. International Journal of Community Medicine and Public Health, 7(7), 2790-2796. http://dx.doi.org/10.18203/2394-6040.ijcmph20202545

Daymont, T., Blau, G., & Campbell, D. (2011). Deciding between Traditional and Online Formats: Exploring the Role of Learning Advantages, Flexibility, and Compensatory Adaptation. Journal of Behavioral and Applied Management, 2, 156. https://www.semanticscholar.org/paper/Deciding-Between-Traditional-and-Online-Formats%3A-of-Daymont-Blau/e6f-c5f534852f1ba983c0d450d322800e0c70943

Deming, D. J., Goldin, C., Katz, L. F., & Yuchtman, N. (2015). Can Online Learning Bend the Higher Education Cost Curve? American Economic Review, 105(5), 496-501. https://doi.org/10.1257/aer.p20151024

Fatonia, N. A., Nurkhayatic, E., Nurdiawatid, E., Fidziahe, G. P., Adhag, S., Irawanh, A. P., & Azizik, E. (2020). University Students Online Learning System during Covid-19 Pandemic: Advantages, Constraints and Solutions. Systematic Reviews in Pharmacy, 11(7), 570-576. https://doi.org/doi:10.31838/srp.2020.7.81

Hodges, C. B., Moore, S., Lockee, B. B., Trust, T., & Bond, M. A. (2020). The Difference between Emergency Remote teaching and Online Learning. Hdl.handle. http://hdl.handle.net/10919/104648

Jaggars, S. (2011). Online Learning: Does It Help Low-Income and Underprepared Students? Com-

munity College Research Center. https://doi.org/10.7916/D82R40WD

Koirala, D., Silwal, M., Gurung, S., Bhattarai, M., & KC, V. K. (2020). Perception towards Online Classes during Covid-19 among Nursing Students of a Medical College of Kaski District, Nepal. Journal of Biomedical Research & Environmental Sciences, 1(6), 249-255. https://doi.org/10.37871/jbres115

Kosycheva, M., Victorovna, M., & Tikhonova, E. (2021). Students' Self-Efficacy and Motivation in Emergency Remote Learning. 12th International Conference on E-Education, E-Business, E-Management, and E-Learning, 157-162. https://doi.org/10.1145/3450148.3450207

Kothari, C. R. (2004). Research Methodology: Methods and Techniques (Second ed.). New Age International.

Manfuso, L. G. (2020). From Emergency Remote Teaching to Rigorous Online Learning. Ed Tech. https://edtechmagazine.com/higher/article/2020/05/emergency-remote-teaching-rigorous-online-learning-perfcon

Manso-Vázquez, M., & Llamas-Nistal, M. (2015). A Monitoring System to Ease Self-regulated Learning Processes. IEEE Revista Iberoamericana de Tecnologias del Aprendizaje, 10(2), 52-59. https://doi.org/10.1109/RITA.2015.2417952

McPherson, M. S., & Bacow, L. S. (2015). Online Higher Education: Beyond the Hype Cycle. Journal of Economic Perspectives, 29(4), 135-54. https://doi.org/10.1257/jep.29.4.135

Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, Limitations and Recommendations for Online Learning during COVID-19 Pandemic Era. Pakistan Journal of Medical Sciences, 36(COVID19-S4), S27–S31. https://doi.org/10.12669/pjms.36.COVID19-S4.2785

Muthuprasad, T., Aiswarya, S., Aditya, K. S., & Jha, G. K. (2021). Students' Perception and Preference for Online Education in India during Covid-19 Pandemic. Social Sciences & Humanities Open, 3(1), 100-101. https://doi.org/10.1016/j.ssaho.2020.100101

Nepal, K., & KC, S. K. (2020). Teachers' Perception of the Students' Readiness for Self-regulated Learning during the Covid-19 Pandemic. Journal of NELTA, 25(1-2), 167.

Pintrich, P. R. (1995). Understanding Self-regulated Learning. New Directions for Teaching and Learning, 63, 3-12.

Schultz, R. B., & DeMers, M. N. (2020). Transitioning from Emergency Remote Learning to Deep Online Learning Experiences in Geography Education. Journal of Geography, 119(5), 142-146. https://doi.org/10.1080/00221341.2020.1813791

Shim, T. E., & Lee, S. Y. (2020). College Students' Experience of Emergency Remote Teaching due to Covid-19. Children and Youth Services Review, 119, 105578. https://doi.org/10.1016/j.childyouth.2020.105578

Shisley, S. (2020). Emergency Remote Learning Compared to Online Learning. Learning Solutions. https://learningsolutionsmag.com/articles/emergency-remote-learning-compared-to-online-learning

Spruce, R., & Bol, L. (2015). Teacher Beliefs, Knowledge, and Practice of Self-regulated Learning. Metacognition and Learning, 10(2), 245-277.

https://doi.org/10.1007/s11409-014-9124-0

Verrell, P. A., & McCabe, N. R. (2015). In Their Own Words: Using Self-assessments of College Readiness to Develop Strategies for Self-regulated Learning. College Teaching, 63(4), 162-170. https://doi.org/10.1080/87567555.2015.1053046

Wolters, C. A., & Brady, A. C. (2020). College Students' Time Management: a Self-regulated Learning Perspective. Educational Psychology Review, 33, 1319–1351. https://doi.org/10.1007/s10648-020-09519-z

Xu, D., & Jaggars, S. S. (2014). Performance Gaps Between Online and Face-to-face Courses: Differences Across Types of Students and Academic Subject Areas. The Journal of Higher Education, 85(5), 633-659. https://doi.org/10.1080/00221546.2014.11777343

Yeung, M. W., & Yau, A. H. (2021). A Thematic Analysis of Higher Education Students' Perceptions of Online Learning in Hong Kong under Covid-19: Challenges, Strategies and Support. Education and Information Technologies, 1-28. https://doi.org/10.1007/s10639-021-10656-3

Zimmerman, B. J. (1990). Self-regulated Learning and Academic Achievement: An Overview. Education Psychologist, 25(1), 3-17. https://doi.org/10.1207/s15326985ep2501_2

Zimmerman, B. J. (2000). Attaining Self-regulation: A Social Congnitive Perspective. In Handbook of Self-regulation (pp. 13-39). Academic Press. . https://doi.org/10.1016/B978-012109890-2/50031-7