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REAL-LIFE SITUATIONS: TOWARDS A WELL-MANAGED VIRTUAL MATHEMATICS CLASS

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ABSTRACT

The study explored the integration of real-life situations in the development of IDEA lesson exemplar in Mathematics. The respondents were Mathematics teachers of a public school. The researcher utilized a qualitative design. The results revealed that real-life situations are not evident in the first part of the introduction stage. The teacher-participants do not start their discussion of the lesson by citing real-life situations that are related to the lesson. It's in the second part of the introduction stage that these mathematics teachers have used real-life situations. Realistic situations are most apparent in the Development stage. The teacher-participants utilized this section to guide the learners in understanding the lesson. Students learn best when they can relate the word problem with their own experiences. In the Engagement stage, these mathematics teachers present more sample problems that depict actual happenings. This teaching technique helps learners to a better understanding of the lesson by solving these word problems. Lastly, the teacher participants include word problems that represent factual

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stories in the Assimilation stage. In this last part of the lesson, students learn the connection of the lesson to their real-life events.

Keywords: *real-life situations, well-managed, virtual, Mathematics class*

INTRODUCTION

One and a half billon students around the world were engaged in remote learning at the height of the COVID-19 pandemic in March 2020. Some students were able to access the Internet to do so, but not all. The majority of students around the world, who have access to smartphones, are able to use these as learning devices. Others are more fortunate and have tablets, laptops or desktops. Their instructors, some with no previous experience of teaching online or at a distance, discovered new approaches to teaching and learning and imaginative work was undertaken to overcome the very real challenges this current reality gives rise to (UNESCO, 2021).

While some students returned to campus and in-person learning, "back to something resembling normal" may not occur until some point in 2021 or later, but not before. Faculty are exploring what online teaching reality means for them. What is the new pedagogy of online teaching at scale really like? What does engaged learning look like in this new environment? How can online learning produce outstanding learning experiences?

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The unprecedented COVID-19 outbreak has caused the face to face engagement of students and teachers within the school to be put off. However, the school closures did not hinder the continuity of education and for every school to still attain its mission and vision which is to provide quality education to every Filipino learner. The Department of Education rather has adopted the different types of distance learning where learning takes place between the teacher and the learners who are geographically remote from each other during instruction. It was settled that learning through printed modules is the most preferred distance learning method in consideration of the learners in rural areas where internet is not accessible for online learning while other modalities were being implemented by other schools.

Recently, the education system has faced an unprecedented health crisis (i.e., COVID-19 pandemic) that has shaken up its foundation. Thus, various governments across the globe have launched a crisis response to mitigate the adverse impact of the pandemic on education. This response includes, but is not limited to, curriculum revisions, provision for technological resources and infrastructure, shifts in the academic calendar, and policies on instructional delivery and assessment. Inevitably, these developments compelled educational institutions to migrate to full online learning until face-to-face instruction is allowed. The current circumstance is unique as it could aggravate the challenges experienced during online learning due to restrictions in movement and health protocols (Gonzales et al., 2020; Kapasia et al., 2020). Given today's uncertainties, it is vital to gain a nuanced understanding of students' online learning experience

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in times of the COVID-19 pandemic. To date, many studies have investigated this area with a focus on students' mental health (Copeland et al., 2021; Fawaz et al., 2021), home learning (Suryaman et al., 2020), self-regulation (Carter et al., 2020), virtual learning environment (Almaiah et al., 2020; Hew et al., 2020; Tang et al., 2020), and students' overall learning experience (e.g., Adarkwah, 2021; Day et al., 2021; Khalil et al., 2020; Singh et al., 2020). There are two key differences that set the current study apart from the previous studies. First, it sheds light on the direct impact of the pandemic on the challenges that students experience in an online learning space. Second, the current study explores students' coping strategies in this new learning setup. Addressing these areas would shed light on the extent of challenges that students experience in a full online learning space, particularly within the context of the pandemic. Meanwhile, our nuanced understanding of the strategies that students use to overcome their challenges would provide relevant information to school administrators and teachers to better support the online learning needs of students. This information would also be critical in revisiting the typology of strategies in an online learning environment as cited by Barrot et al (2021).

Major Changes in the Way Students Are Taught

What is clear is major changes, in the way we teach post-secondary students, are triggered by the sudden immersion of many into online learning as a result of COVID-19 and the new technologies that increase flexibility in, and access to, post-secondary education. Indeed, we

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can already see institutions exploring the implications of these developments for program and course delivery beyond the pandemic.

In looking at what is being learned and the implications for students, faculty, staff, and institutions, we highlight:

- Several key developments in online learning and how they impact our understanding of pedagogy;
- More than 100 examples of applications of these developments in innovations in colleges and universities in Ontario, across Canada, and internationally, selected from Contact North | Contact Nord's Pockets of Innovations Series on teachonline.ca; and
- Seven questions for you to consider about the implications of changes in pedagogy and student learning.

This consideration of how technology is changing the way we teach and learn, leading to the emergence of a new pedagogy, continues to be the most popular feature on teachonline.ca since its posting in 2012, drawing in an average of 100 new and returning readers every week. This revised and updated 2020 version is intended to offer new angles and resources to readers and inspire new approaches.

We also developed two other resources to support the exploration of the emerging pedagogy, including: a webinar series featuring experts from around the world and an "Ask An

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Expert" resource where readers pose questions about teaching and learning and Contact North | Contact Nord research associates provide responses.

As the literature documenting examples of success in online learning during the pandemic emerges. But before we explore the specifics, it is helpful to understand context. The current and sudden exposure of so many to online teaching as a result of the pandemic accelerated developments already occurring.

The key purpose of this research is to study the practices of mathematics teachers in strengthening the pedagogy on online learning in the pandemic time. This would focus on the different life situations that can be used in teaching mathematics. It will also look on the most prevalent methods that teachers used in teaching mathematics. Although the researches about online learning seemed to burst in the pandemic time, the researcher have seen that no study parallel to this had been conducted. The results of this study will be expected to help strengthen the pedagogy on online learning.

Technology is becoming an increasingly important part of teaching in higher education. Universities are shifting more and more from traditional lecture-based courses to online teaching in order to remain competitive and to provide more flexible learning opportunities for students. However, although advanced technology appears to offer enormous scope for developing engaging and interactive environments, the traditional lecturer-centred knowledge transmission models still prevail (Taylor & Maor, 2016). In spite of the trend towards online teaching, many

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higher education faculty members are not using this technology and they are unsure of what to do with it if they did (Conard, 2017). On the other hand, technology may be used but the pedagogy may remain traditional.

Developing and providing university courses online is complex and challenging and its success depends not only on the use and availability of appropriate technology, but also on an underlying pedagogy that ensures high quality learning experiences. Although there is a growing body of research in the field of online learning and examples of good practice can be found (Salmon, 2018), universities still have some way to go in developing highly interactive and collaborative online courses. Therefore, whilst attention is given to developing online technologies, more attention needs to be given to the pedagogy that will enhance quality online learning (Hendriks & Maor, in press). To this end, this paper examines the fit between online pedagogy and technology. We argue that a social constructivist approach to teaching and learning will enable lecturers to create high quality, interactive online learning environments (Hara, Bonk & Angli, 2018; Garrison, et al., 2019). This, however, requires an integration of relevant technology and constructivist pedagogy.

Online learning is not a new concept for all of us. It has been in the market for a very long time. But it is evolving constantly. The worldwide e-learning market is growing significantly. Online learning has revolutionized the pedagogy of the learning process. Students can start the learning process from anywhere in the world and progress at their own pace. Different apps have

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been introduced which teachers are using to engage students and satisfy their individual needs. Social media is also playing a vital role in educating students and teachers both can use it for networking, sharing ideas, assessing each other's work etc.

Each of the world's regions has its own idiosyncrasies in terms of the factors that drive the e-learning market. In Asia, for example, Government-funded projects related to literacy development in rural areas are a major driver for the introduction of E-Learning. In the Middle East, governmental plays a critical role in the dissemination of E-Learning material as educational methods. This is directed not only at students, but also at employees in the public sector.

In African countries, in general, the introduction of mobile technologies and the use of social networks are major drivers to change.

The U.S. and Western Europe markets are the most mature, with the biggest instances of E-Learning adoption ranging from K-12 solutions to business-related training- (Docebo Report, 2017).

Technology is changing the way we teach and, most importantly the way students learn so the method and practice of teaching is called "pedagogy".

What Triggers this new pedagogy?

Innovative university and college teaching staff is motivated by the changes in society, student expectations, and technology to re-think pedagogy and teaching methods.

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Key Elements Contributing To the Development of This New Pedagogy

As teachers become more familiar with digital technologies for teaching and learning, pedagogical challenges and strategies are emerging. The developments mentioned below impact on the teaching structure and learning process: (Contactnorth, 2019).

1. *Blended learning*

   In blended or hybrid learning, classroom time is reduced, but not eliminated, with the rest of the time being used for online learning. In the 'flipped' classroom, the teacher may record a lecture or provide access to videos, readings, learning objects, quizzes, and other resources which students work through prior to coming to class. Classroom time is spent on discussions between the students and teacher - (Contactnorth, 2018).

2. *Collaborative approaches to the construction of knowledge/building communities of practice.* From the early days of online learning, there has been an emphasis on enabling learners to gain knowledge through questioning, discussion, analysis of resources from multiple sources, and instructor feedback. The students used social media to share experiences, discuss theories and challenges, and learn from each other. The teacher's role is to act as a guide, facilitator, and assessor of the learning - (Contactnorth, 2019).

3. *Use of multimedia and open education resources.* Digital media, YouTube videos, TED talks, Khan Academy and, open educational resources (OERs) enable teachers and students to access and apply knowledge in a wide variety of ways in the form of short

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lectures, animations, simulations, or virtual worlds. Even now text books are incorporating video and audio clips, animations and rich graphics and becoming more interactive. These electronic texts are, of course, accessible via mobile smartphones, tablets, e-readers and other mobile devices - (Contactnorth, 2018).

4. *Increased learner control, choice, and independence* - Through smart phones and video cameras students can access content, free of charge, from multiple sources via the Internet. They can collect digital examples and data that can be edited, stored and used in student work - (Contactnorth, 2017).
5. *Anywhere, anytime, any size learning*- Mobile learning, with smart phones, tablets and other devices, is the basis of the anywhere, anytime learning provided through online learning - (Contactnorth, 2017).
6. *New forms of assessment* - Peer assessment involves students in the review of each other's work, providing useful feedback that may be used in revision of documents and a better understanding of issues. Learning analytics are being developed to make this tracking of student learning as demonstrated through their digital activities easier and more scalable. Such analytical feedback to students can be continued throughout a course, resulting in early diagnostics that enable learners to focus on areas of weakness before a final assessment. (Contactnorth, 2017).

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7. *Self-directed and non-formal online learning* **-** There are a few learners who are fully capable of managing their own learning. Recent developments such as massive open online courses (MOOCs) provide many more potential learners with support and encouragement for self-directed or non-formal learning. Computerized marking and peer discussion and assessment provide learners with support and feedback on their learning - (Contactnorth, 2017).

This study is anchored on Kolb's Experiential Learning Theory. This theory defines learning as "the process whereby knowledge is created through the transformation of experience. Knowledge results from the combination of grasping and transforming experience" (Kolb 2016: 41). The learning process is portrayed as an idealized learning cycle or spiral where the learner "touches all the bases" - experiencing, reflecting, thinking, and acting. Immediate or concrete experiences are the basis for observations and reflections.

At the core of experiential learning is action. Rather than merely thinking about abstract concepts, learning-by-doing involves a direct encounter with the phenomenon being studied. It utilizes actual experience with the phenomenon to validate a theory or concept. Several authors suggest that ideas cannot be separated from experience; they must be connected to the learners' lives in order for learning to occur (Boud, Cohen & Walker, 2017; Gass, 2017; Keeton & Tate, 2016). Lewis & Williams (2017) suggest that the twentieth century has seen a move from formal, abstract education to one that is more experienced-based. The most renowned advocate of this

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concept was John Dewey (1938). He emphasizes that there must be a relationship between experience and education. Dewey stresses that there is to be a having which is the contact with the events of life and a knowing which is the interpretation of the events. A learning experience does not just happen; it is a planned event with meaning and with experiential learning the meaning is reaffirmed by the learners. In this study, the theory highlights the importance of integrating real life situations in teaching Mathematics based on the experiences of the learners so that they can easily grasp the concepts in this subject.

The present study aimed to strengthen pedagogy in online learning modality pedagogy, particularly the use or integration of real-life situations in Mathematics classes. Specifically, it answered the following questions: (1) What is the profile of the teachers?; (2) What are the needed documents to analyze?; (3) Are real-life situations integrated or used in teaching Mathematics? If yes, which part/s of the lesson?; (4) In what ways do they use real-life situations?; (5) Are there challenges encountered? If there are enumerate and provide brief elaboration?; (6) What are the advantages of using real-life situations?; and What will be the contribution of the study?

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MATERIALS AND METHODS

In trying to answer the indicated questions above, the researcher used the qualitative research design which states that qualitative research design is a research method used extensively by scientists and researchers studying human behavior, opinions, themes and motivations.

Qualitative research methods are probably the oldest of all scientific techniques, with the ancient Greek philosophers qualitatively observing the world around them and trying to understand and explain what they saw.

While qualitative methods are sometimes assumed to be "easier" or less rigorous than quantitative ones, the fact is that information of this kind can provide a depth of understanding about phenomena that cannot be achieved in other ways.

Quantitative and qualitative are, importantly, words to describe the kind of data gleaned from an experiment and not the phenomena themselves. The kind of data we extract from an experiment depends on the experiment design and the parameters we as researchers set before beginning. Thus, external phenomena of the world are interpreted through a chosen experimental framework – whether this is quantitative or qualitative depends on the research question.

Specifically, it utilized documentary analysis. In this study, documentary analysis focused on gathering and analysis of existing seatworks, tests and lesson exemplars on online classes. It analyzed which parts contain real-life situations or experiences. Then these were analyzed

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according to the theme; summarized according to key findings and determined the contribution of the study.

The Teacher-participants provided a copy of their eight-week-IDEA Lesson Exemplar in the First Quarter, SY 2021 – 2022 and these were used for documentary analysis.

RESULT AND DISCUSSION

Two of the participants, who are made up of one female and four male teachers, have been teaching in public schools for thirteen years. Every participant is a recent college graduate with a major in mathematics. Two of them already possess master's degree units.

The Teacher-participants submitted a copy of their eight-week-IDEA Lesson Exemplar in the First Quarter, SY 2021 – 2022.

The chart below shows which parts of Lesson Exemplar where the integration of real-life situations was evident in the subject General Mathematics.

Parts of IDEA Lesson Exemplar		WEEK								TOTAL
		1	2	3	4	5	6	7	8	
Introduction	*What I Need to Know*	0	0	0	0	0	0	0	0	0
	What's New	0	3	1	0	1	1	0	1	7
Development	*What I know*	1	3	1	0	1	0	2	0	8
	What's In	2	2	0	0	0	0	1	1	6
	What Is It	2	3	1	1	4	3	3	1	18
Engagement	*What's More*	2	4	1	1	0	0	3	1	12
	What I Can Do	0	0	0	0	1	1	1	1	4
Assimilation	*What I Have Learned*	0	0	0	0	0	0	0	0	0

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What I Can Do	1	3	2	0	0	3	3	1	13
Additional Activities	0	0	0	0	0	1	1	0	2

In the Introduction part of Week 2, the integrations of real-life situations were evident. Three out of 4 General Mathematics teachers include this integration in "What's New" section.

All 4 general mathematics teachers included real-life situations in the "What's More" section of the Development part of Week 2. The chart also shows that in the same week, 3 of these teachers included such integration in "What is It" section of the Development part and the "What can I do" section of the Assimilation part.

In Week 5, the integration of real-life situations was evident since four (4) Gen Math teachers include the "What is It" section of the Development part of the lesson plan.

Overall, the integrations of real-life situations were most evident in "What is It" section of the Development part, followed by the "What can I Do" section of the Assimilation part and in the "What's More" section of the Engagement part.

However, no teachers had included such integrations in the "What I Need to Know" section of Introduction part and in "What I Have Learned" in the Assimilation part of the lesson exemplar.

The real-life situations are usually used when the Most Essential Learning Competency is all about the *integrating real-life situations in each function*, specifically to the following: a) represents real-life situations using functions, including piece-wise functions. b) represents real-life situations using rational functions. c) represents real-life situations using one-to-one functions.

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d) represents real-life situations using exponential functions. represents real-life situations using logarithmic functions.

There are Most Essential Learning Competencies in General Mathematics that cannot be integrated into real-life situations, it's because the topic is intended only for solving variables and identifying whether it is a function or not. While in the submitted IDEA Lesson Exemplar of Precalculus, most of the topic is all about solving only of Conic Section and Series, it is just mentioned in Introduction the usage on real-life of each topic.

Word Problems that include real-life situations play a very important part in K-12 curriculum. They aim to develop students' logical thinking skills, and creativity. Harnessing the ability to solve math word problem skills will definitely make a huge difference in one's career and life.

CONCLUSION

Based on the analyses of IDEA lesson exemplars, the following conclusions were drawn:

1. Real-life situations are not evident in the first part of the introduction stage. The teacher-participants do not start their discussion of the lesson by citing real-life situations that are related to the lesson. It's in the second part of the introduction stage that these mathematics teachers have used real-life situations.
2. Realistic situations are most apparent in the Development stage. The teacher-participants utilized this section to guide the learners in understanding the lesson.

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Students learn best when they can relate the word problem with their own experiences.

3. In the Engagement stage, these mathematics teachers present more sample problems that depict actual happenings. This teaching technique helps learners to a better understanding of the lesson by solving these word problems.
4. The teacher participants include word problems that represent factual stories in the Assimilation stage. In this last part of the lesson, students learn the connection of the lesson to their real-life events.

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Available online at https://www.instabrightgazette.com

****

REFERENCES

Adarkwah, M. A. (2021). "I'm not against online teaching, but what about us?": ICT in Ghana post Covid-19. *Education and Information Technologies, 26*(2), 1665–1685.

Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic. *Education and Information Technologies, 25*, 5261–5280.

Carter, R. A., Jr., Rice, M., Yang, S., & Jackson, H. A. (2020). Self-regulated learning in online learning environments: Strategies for remote learning. *Information and Learning Sciences, 121*(5/6), 321–329

Copeland, W. E., McGinnis, E., Bai, Y., Adams, Z., Nardone, H., Devadanam, V., & Hudziak, J. J. (2021). Impact of COVID-19 pandemic on college student mental health and wellness. *Journal of the American Academy of Child & Adolescent Psychiatry, 60*(1), 134–141.

Contactnorth (2012). *A New Pedagogy is Emerging and Online Learning is a Key Contributing Factor*. [online]. Available from: http://teachonline.ca/sites/default/files/contactNorth/files/pdf/publications/a_new_pedagogy_is_emerging_-_and_online_learning_is_a_key_contributing_factor.pdf [accessed: 17 February 2016]

Conard, D. (2002). Deep in the heart of learners: Insights into the nature of online community, Journal of Distance Education, http://cade.icaap.org/vol17.1/conrad.html

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INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
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Available online at https://www.instabrightgazette.com

Day, T., Chang, I. C. C., Chung, C. K. L., Doolittle, W. E., Housel, J., & McDaniel, P. N. (2021). The immediate impact of COVID-19 on postsecondary teaching and learning. *The Professional Geographer, 73*(1), 1–13

Docebo (2014). *E-Learning Market Trends & Forecast 2014-2016 Report.* [online]. Available from : https://www.docebo.com/landing/contactform/elearning-market-trends-and-forecast-2014-2016-docebo-report.pdf [accessed: 17 February 2016]

Donitsa-Schmidt, S., & Ramot, R. (2020). Opportunities and challenges: Teacher education in Israel in the Covid-19 pandemic. *Journal of Education for Teaching, 46*(4), 586–595.

Fawaz, M., Al Nakhal, M., & Itani, M. (2021). COVID-19 quarantine stressors and management among Lebanese students: A qualitative study. *Current Psychology*, 1–8

Francisco, C. & Barcelo, M. (2020). Effectiveness of an Online Classroom for Flexible Learning.

Franchi, T. (2020). The impact of the Covid-19 pandemic on current anatomy education and future
careers: A student's perspective. *Anatomical Sciences Education, 13*(3), 312–315.

Gonzalez, T., De La Rubia, M. A., Hincz, K. P., Comas-Lopez, M., Subirats, L., Fort, S., & Sacha, G. M. (2020). Influence of COVID-19 confinement on students' performance in higher education. *PLoS One, 15*(10), e0239490.

Hendriks, V. & Maor, D. (in press). Quality of students' communicative strategies delivered through computer-mediated communications. *Journal of Interactive Learning Research.*

Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R., & Chouhan, P. (2020). Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal. India*. Children and Youth Services Review, 116*, 105194

Khalil, R., Mansour, A. E., Fadda, W. A., Almisnid, K., Aldamegh, M., Al-Nafeesah, A., & Al-Wutayd, O. (2020). The sudden transition to synchronized online learning during the COVID-19 pandemic in Saudi Arabia: A qualitative study exploring medical students' perspectives. *BMC Medical Education, 20*(1), 1–10.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue III
February 2024
Available online at https://www.instabrightgazette.com

Kormos, E. M. (2018). The Unseen Digital Divide: Urban, Suburban, and Rural Teacher Use and Perceptions of Web-Based Classroom Technologies. Computers in the Schools, 35(1), 19-31.

Hew, K. F., Jia, C., Gonda, D. E., & Bai, S. (2020). Transitioning to the "new normal" of learning in unpredictable times: Pedagogical practices and learning performance in fully online flipped classrooms. *International Journal of Educational Technology in Higher Education, 17*(1), 1–22

Salmon, G. (2002*). E-tivities; the key to active online learning*, London, Kogan Page Publication.

Singh, K., Srivastav, S., Bhardwaj, A., Dixit, A., & Misra, S. (2020). Medical education during the COVID-19 pandemic: a single institution experience. *Indian Pediatrics, 57*(7), 678–679.

Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988–2018). *American Journal of Distance Education, 33*(4), 289–306.

Salmon, G. (2019). *E-Moderating: the key to teaching and online learning*, London, Kogan Page Publication.

Suryaman, M., Cahyono, Y., Muliansyah, D., Bustani, O., Suryani, P., Fahlevi, M., & Munthe, A. P. (2020). COVID-19 pandemic and home online learning system: Does it affect the quality of pharmacy school learning? *Systematic Reviews in Pharmacy, 11*, 524–530.

Tang, T., Abuhmaid, A. M., Olaimat, M., Oudat, D. M., Aldhaeebi, M., & Bamanger, E. (2020). Efficiency of flipped classroom with online-based teaching under COVID-19. *Interactive Learning Environments*, 1–12

Taylor, P., & Maor, D. (2000). Assessing the efficacy of on-line teaching with the Constructivist On-Line Learning Environment Survey. In A. Herrmann and M. Kulski (Eds.) Flexible Futures in University Teaching.. (pp. 207-218) Perth, Australia:

Usher, M., & Barak, M. (2020). Team diversity as a predictor of innovation in team projects of face-to-face and online learners. *Computers & Education, 144*, 103702.

INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume V, Issue III
February 2024
Available online at https://www.instabrightgazette.com

Varea, V., & González-Calvo, G. (2020). Touchless classes and absent bodies: Teaching physical education in times of Covid-19. *Sport, Education and Society*, 1–15

Learning & Development Agency (2015). *New Trends in Education and learning – Online Learning* [online]. Available from: http://www.lsda.org.uk/new-trends-in-education-and-learning-online-learning.html [Accessed: 18 February 2016]

Teachonline.ca (2015). *Five Ways Online Learning is Enabling Change in Post-Secondary Education.* [online]. Available from: http://teachonline.ca/trends-directions/evolving-pedagogy/5-ways-online-learning-enabling-change-post-secondary-educatio-0 [accessed: 17 February 2016]

The Guardian (2016). *Eight smart ways to use social media in universities.* [online]. Available from: http://www.theguardian.com/higher-education-network/2016/jan/20/eight-smart-ways-to-use-social-media-in-universities

The Wall Street Journal (2015). *Daphne Koller on the Future of Online Education* [online]. Available from: http://www.wsj.com/articles/daphne-koller-on-the-future-of-online-education-1433532321