Remittances Review
March 2024,
Volume: 9, No: S 1,pp.41-56
ISSN : 2059-6588(Print) | ISSN 2059-6596(Online)
Received : 05 February 2024, Accepted: 31 March 2024 DOI:
https://doi.org/10.33282/rr.vx9i2.04

# The Impact of Remote and Hybrid Learning Models on Student Engagement and Academic Performance at University Level

**1:Dr Razia Anjum**

**Lecturer , Department of Psychology GC Women University Sialkot**

**razia.anjum@gcwus.edu.pk**

**2:Dr Nadia Zaheer Ali**

**Assistant Professor Department of International Relations Lahore college for Women University**

**nadia.zaheer@lcwu.edu.pk**

**3:Ms. Uzma Sarwar**

**Lecturer, Department of Psychology GC Women University Sialkot**

**Uzma.sarwar@gcwus.edu.pk**

**4:Ms. Aqsa Khalil**

**Associate Lecturer ,Department of Psychology GC Women University Sialkot**

**aqsa.khalil@gcwus.edu.pk**

**5:Ms. Naima Irfan**

**MS Scholar, Department of Psychology GC Women University Sialkot**

**naimairfan19@gmail.com**

**6: Sehar Anees**

**Institute of Agricultural Extension, Education and Rural Development University of Agriculture Faisalabad seharbajwa7033@yahoo.com**

## Abstract

This quantitative study explores the impact of remote and hybrid learning models on student engagement and academic performance at the university level. With the global shift towards remote and hybrid learning due to the COVID-19 pandemic, it is essential to understand how these models affect students' educational outcomes. The research involves a sample of 389 students from different public and private universities, encompassing a wide range of academic disciplines and socio-economic backgrounds. The primary aim of the study is to assess how the

transition to remote and hybrid learning environments influences students' engagement, participation, and academic achievements. A comprehensive survey instrument was designed for data collection, comprising sections on demographic information, experiences with remote and hybrid learning, engagement levels, and academic performance indicators. The instrument underwent a pilot test with 50 students to ensure its reliability and validity, resulting in minor adjustments. Data collection spanned three months, with the survey distributed remote and hybrid learning to maximize reach and participation. An impressive response rate of 80% was achieved, providing robust data for analysis. Descriptive statistics, correlation analysis, and multiple regression analysis were employed to analyze the data and uncover significant trends and relationships. The findings indicate that both remote and hybrid learning models significantly impact student engagement and academic performance, but the effects vary. Students in hybrid learning environments reported higher engagement and better academic performance compared to those in fully remote settings. Factors such as the quality of digital resources, interaction with instructors, and peer collaboration were found to influence these outcomes. Additionally, students' adaptability to new learning models played a crucial role in their success. This study highlights the need for universities to continuously refine and adapt remote and hybrid learning strategies to enhance student engagement and academic performance. The insights gained from this research are valuable for educators, administrators, and policymakers striving to improve educational practices in the evolving landscape of higher education.

**Keywords***: Remote and Hybrid Learning, Student Engagement, Academic Performance, Higher Education*

## Introduction

As a global pandemic, the 2019 coronavirus illness (COVID-19) was declared in March 2020 and impacted various organizational activities, including education (WHO, 2020). Schools had to close their doors to guarantee public safety and health in the middle of the epidemic. This legislation touched almost every single student on Earth. Response to this epidemic produced new teaching approaches. Academic institutions were under great pressure to adapt to the significant shift from conventional classroom learning to online and, finally, hybrid courses

(Vernadakis et al., 2012). Teachers and educational institutions all around welcomed this approach as a worldwide education system rescuer amid the COVID-19 outbreak (Zeqiri et al., 2020). The hybrid learning model is implying the combination of online resources with conventional in-person classroom training. Combining different delivery techniques helps hybrid learning to offer the most effective and efficient learning environment available (Diep et al., 2017).

Hybrid learning has not attracted much acceptance. Though it is a common term in a dynamic area, teachers as much as students depend on it (Caner, 2012). A hybrid learning approach—which blends online resources with conventional classroom instruction—was designed to meet this aim. More research is needed on the effectiveness of hybrid learning and the strategies teachers could use to maximize the potential of their students. Say Ibrahim Y. K. and Cemre K.Y. (2022), hybrid learning—which blends conventional face-to--face instruction with online resources—has grown increasingly popular as new technologies develop. Its increasing prominence begs doubts on the veracity of more recent empirical research on the efficiency of hybrid learning. It refers to a type of training that students can obtain simultaneously from many digital media and that is both in-person. Hybrid learning is not going anywhere since it satisfies learning objectives in modern environments and simplifies the delivery of education. Stated differently, hybrid learning combines classroom education with more practical, hands-on experience. J. Singh and associates write the 2022 study. Declare that those with more education have to be able to get the resources they need to complete their courses from anywhere. To engage in hybrid and remote learning, students also needed a computer with audio and video capabilities as well as a dependable, fast Internet connection (Singh J. et al., 2022). Dhawan (2020) contends that asynchronous eLearning modules and videos—among other learning tools and strategies—must provide students with if training is to be successful. Studies reveal that many teachers still oppose the use of remote and hybrid learning environments for concern that their pupils would be less engaged in their education and generate inferior academic outcomes than in more traditional classroom situations. This is justified by the fact that applying remote or hybrid learning strategies makes it impossible for teachers or students to follow strict schedules (Dhawan, 2020).

## Significance of the Study

Previous research has revealed a number of factors influencing students' degree of class participation. The main focus of this work is on how distance and hybrid learning approaches affect classroom engagement and performance. Our results indicate that digital literacy, course design, resource availability, and user-friendliness define student participation. The primary objective is determining whether these elements influence students' interest and performance. This study would be a fantastic starting point for society seeking knowledge on how remote and hybrid learning environments impacted student involvement and academic performance. Though remote learning has been used a few years ago, the public is mainly uninformed about it. Even if society desires greater knowledge on distant learning, it is likely that it lacks the means required to completely understand it. This, the researchers claim, will enable the study to give society more information on hybrid and remote learning. Future researchers will be more equipped to close a knowledge gap on how students engage with hybrid and remote learning thanks to the extra data presented by the above stated studies. To make matters worse, the sudden change to online and hybrid classes caused great inconvenience for the students. At first of its introduction, students struggled to adapt to the new approach of education even if they were already acquainted with it. Reading research papers such as these might help students since they offer knowledge about several approaches of remote and hybrid learning.

## Objectives of the Study

- To address the challenges and experiences confronted by students in utilizing remote and hybrid learning.
- To assess student engagement and academic performance.
- To examine the impact of remote and hybrid learning models on student engagement and academic performance.

## Research Questions

- Is there any significant relationship between the availability of resources and student engagement remote and hybrid learning?
- Is there any significant relationship between digital literacy and academic performance remote and hybrid learning?
- How to assess the impact of remote and hybrid learning models on student engagement and academic performance?

**Literature Review**

Modern technology helps every part of a nation to be much benefited. The present COVID-19 epidemic has resulted in increasing use of technical solutions. In an attempt to stop the epidemic from spreading, the Pakistani government has taken certain actions restricting social interaction. Along with the tests, numerous companies and institutions—including hotels, restaurants, colleges, and airlines—close all around the globe. Moreover, the epidemic of this disease prevented the board tests from happening. Remote and hybrid work became therefore necessary for the government to prevent things from spiraling out of control (Gonzalez et al., 2020). Remote or hybrid learning—that is, when students pick up fresh knowledge using online resources—is the term used in education (Fauzi & Khusuma, 2020). Before the epidemic started, other learning tools had been used by institutions. For showing visual materials including PowerPoint slides, film from scholarly lectures, etc., projectors have long been common equipment. Still, COVID (Gonzalez et al., 2020) has brought together many more challenges. The recent tendency toward reduced teacher participation in student work during class and tests presents one of these challenges. Students may easily turn to cheating methods when taking tests; their teacher might not even be aware of (Gonzalez et al., 2020).

Almost every part of the country has been affected by the surprising coronavirus epidemic. Remote and hybrid working models have proliferated as a result of an instantaneous requirement (Hashemi, 2021). Based on today's data survey, the corona outbreak has in some capacity damaged every industry. Remote and hybrid working models were utilized by many different industries including institutes to restrict the spread of the epidemic as much as possible (Hashemi, 2021.). Following the global trend of many other countries, Pakistan has embraced hybrid and remote learning policies and schedules (Hashemi, 2021). With hybrid and remote

learning, Green argues people can save money and time (Green, 2010). Though distant and hybrid learning have long been around, the expanding epidemic makes them absolutely necessary for educational institutions (Hashemi, 2021). The degree to which teachers and students find satisfaction with this kind of learning environment is the fundamental component of hybrid and distant learning that has been investigated. The quality and availability of the internet, the assessments of the courses, the relationships between teachers and students, and so on have helped to define their degree of satisfaction (Hashemi, 2021). Notwithstanding several negative aspects, hybrid and distant learning have grown respect and popularity in the country (Hashemi, 2021). This study aims to ascertain via hybrid and distance learning approaches how the COVID epidemic has impacted student performance in Pakistani institutions.

## Hybrid Learning

The COVID-19 epidemic raised visibility of hybrid learning, a fresh method of classroom instruction. Along with conventional classroom training, it includes hybrid and online learning simultaneously (Priess- Buchheit, 2020). As such, apps for video conferences such Zoom, MS Teams, Skype, and Google Hangouts gained popularity. The hybrid approach was vital in preparing everyone and ensuring no one suffered when it came time for schools to reopen (Major, 2020). Under this approach, half of the students attend conventional classroom environments while the other half engage through online or hybrid learning. The way the students are admitted to the class marks the only variation between the two groups; in one group, it is via institutional applications (Abraham et al., 2009). Students in the other group follow the same curriculum and sit for the same tests.

## Student Engagement in Hybrid Learning

If they actively engage in their own education, distance and hybrid students are less likely to feel alone and more likely to finish course work. Teachers can keep sitting through tiresome lectures knowing their pupils will pay attention. Conversely, student involvement in a hybrid classroom can manifest itself in numerous ways. Participating students try more to study and add to class discussions. But it goes beyond that and might also involve mental health and a passion of

learning. Participating students try more to study and add to class discussions. Still, it goes beyond that and could encompass things like mental health and a passion of learning. More study is needed to find the elements influencing kids' drive to learn and participate in unusual settings in order to support this possible new benchmark (Annelies Raes, 2021). Hybrid and distant learning cannot ever fully replace individual, in-person instruction. Online and hybrid courses cannot be successful without complete student participation in all learning phases. One popular approach to reach this objective is to introduce the concept of active learning, which emphasizes on students actively participating in their own education through fascinating and demanding assignments.

**Students' Academic Performance: Hybrid Learning**

Studies on academic performance have changed the fields of psychology and education for more than a hundred years (Hellas et al., 2018). Because of the global epidemic, studies on student performance in hybrid classes have surged (e.g., Bouilheres et al., 2020). Previous studies have largely concentrated on Western countries, thus El-Sayad et al. (2021, p. 528) point out that they have not taken developing nations' "different levels of economic development, technological infrastructure and different social and cultural environments" into account. Arab countries are still in early stages of adopting hybrid and distance learning when compared to Western countries (El-Sayad et al., 2021). This study therefore examines how hybrid learning impacted student performance in an Arab country, so augmenting the tiny but growing body of knowledge on the subject. There is some data suggesting that academic performance can be evaluated using both quantitative and qualitative tools (Hellas et al., 2018). Regarding external traits including working conditions, demography, education, and family history, there are no exact measurements; in contrast, evaluation marks and the probability of passing or failing a course (Hellas et al., 2018). Research aiming at looking at the effect of additional moderators sometimes employ non-quantifiable factors (Hellas et al., 2018). Our aim in doing this study was to ascertain how hybrid learning affects test results and general academic performance of students. For performance evaluation, we so focused on quantifiable, objective standards.

**Challenges and Benefits of Remote and Hybrid Learning**

Using hybrid, remote, and hybrid-plus learning models causes challenges. Among the most urgent problems are the need of consistent internet connectivity and suitable technology infrastructure (Picciano, 2017). Many countries, especially in rural or underprivileged areas, have limited access to technology and internet connectivity, which makes it challenging to effectively provide remote learning. Desmet et al. (2021) claim that this digital gap limits chances for particular student groups, therefore aggravating educational inequality.

The lack of grounded methods for teaching and course design that encourage participation and conversation in hybrid and online environments raises still another issue. Teachers have to modify their teaching strategies if they want to keep student enthusiasm and involvement in remote or hybrid learning environments (Algayres et al., 2022). Two modern methods of teaching that could help to keep students involved and motivated include gamification and project-based learning (Algayres et al., 2022).

Developing connections, community building, and social contact among students in distant, remote, and hybrid learning may prove difficult given the lack of physical presence and face-to-face engagement (Smoyer et al.,2020). The lack of in-person contact may affect students' sense of belonging and involvement, according to Smoyer et al. (2020). Teachers in virtual classrooms must be creative to get their students working together (Chaves, 2022).

Though there are certain difficulties, using remote, hybrid, and remote learning strategies has several advantages. Among its main benefits are the freedom and accessibility they provide to pupils (Ahmad et al., 2022). Thanks to hybrid and remote learning, students can access course materials anywhere and whenever they want, independent of the time of day or location (Ahmad et al., 2022). The fact that it lets students obtain degrees more quickly and readily helps students who are juggling schooling with other obligations like job or family especially (Ahmad et al., 2022).

The capacity to design flexible and tailored learning experiences is another benefit of remote, hybrid, and remote learning. Learning management systems and digital platforms customize their

monitoring, feedback, and resource allocation to every single student's needs and learning style (Picciano, 2017). With this tailored approach, students are more involved and better grasp the subject.

## Methodology

The research methodology employed in investigating the impact of remote and hybrid learning models on student engagement and academic performance at the university level involves a quantitative approach. The population of interest comprises students from both public and private universities, ensuring a diverse representation across institutional types. The sample size selected for this study is 389 students, chosen through stratified random sampling to ensure proportional representation from different public and private universities and academic disciplines. The instrument used for data collection is a structured questionnaire designed specifically for this study. The questionnaire includes closed-ended and Likert scale items to assess various aspects related to student engagement and academic performance in remote and hybrid learning environments. The questionnaire was pilot-tested prior to full-scale deployment to ensure clarity, relevance, and reliability of the instrument. This research adopts a quantitative nature, emphasizing numerical data analysis and statistical techniques to examine the relationships between variables. The primary objective is to gather empirical evidence on how remote and hybrid learning models impact student engagement, as well as their subsequent academic performance. To achieve this, the study will employ descriptive statistics to summarize the demographic characteristics of the sample and key variables such as engagement levels and academic outcomes. Inferential statistics, such as correlation analysis and regression modeling, will be utilized to explore the associations between variables and identify significant predictors of student performance in different learning settings. Furthermore, the research methodology includes ethical considerations such as obtaining informed consent from participants and ensuring confidentiality and anonymity of responses. Data collection will be conducted using online surveys to facilitate accessibility and convenience for participants, given the dispersed nature of university students across different campuses. The research design incorporates a cross-sectional approach, allowing for a snapshot of student experiences and outcomes during a specific period. This design enables comparisons between different learning modalities (remote,

hybrid, and traditional classroom-based learning) within the same study cohort. By employing rigorous quantitative methods, the study aims to provide valuable insights into the effectiveness of remote and hybrid learning models in enhancing student engagement and academic performance at the university level**.**

**Data Analysis**

**Table 1:** *Respondent's Gender*

| Gender | Frequency | Percentage |
|---|---|---|
| Male | 210 | 53.98 |
| Female | 179 | 46.02 |
| Total | 389 | 100 |

The table below displays the total number of male and female respondents for this survey. The gender breakdown of the responders is as follows: 179 women (46.02%) and 210 men (53.98%). In this study, there are 7.96% more male respondents than female respondents.

**Table 2:** *Respondent's Type of University*

| Type of University | Frequency | Percentage |
|---|---|---|
| Public/Government | 195 | 50.13 |
| Private | 194 | 49.87 |
| Total | 389 | 100 |

The results given in Table 2 and Figure 4.5 indicate that 389 participants have been surveyed for this study. The percentage of respondents from public or government institutions is 50.13% (195 total), while the percentage from private universities is 49.87% (194 total), showing that the two types of universities are nearly identical.

**Table 3:** *The Correlations Between Remote and Hybrid Learning Models and Student Engagement and Academic Performance*

| Variables | Correlation |
|---|---|
| Remote and Hybrid Learning | 0.484** |
| Student Engagement | 0.433** |
| Academic Performance | 0.474** |
| Services/Facilities | 0.207 |

Table 3 shows the correlation between remote and hybrid learning models and various student outcomes. The correlation with remote and hybrid learning is 0.484, indicating a moderate to strong positive relationship. Student engagement has a correlation of 0.433, suggesting a moderate positive impact, while academic performance shows a correlation of 0.474, indicating a similarly moderate to strong positive effect. Both of these correlations are statistically significant at the 0.01 level, as denoted by the double asterisks (**). In contrast, the correlation between services/facilities and remote and hybrid learning is 0.207, indicating a weak and non-significant relationship. Overall, remote and hybrid learning models positively influence student engagement and academic performance, but have a minimal impact on services and facilities.

**Table 4:** *R square's Model Summary*

| Model | R | R-square | Adjusted R-square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.760 | 0.578 | 0.573 | 3.76604 |

You can see the degree of association between the dependent and independent variables in the R-value. Student engagement and academic achievement are the dependent variables, and the independent variables, remote and hybrid learning models, have a correlation coefficient (R) of 0.760, as shown in the R' squared Model Summary table. It follows that the dependent variable is positively and strongly correlated with the other three independent variables. According to the R-

square Model Summary table, the R-square value is 0.578. Thus, 57.8% of the independent variables are able to account for the variances in the dependent variable. This study's dependent variable can be explained by the independent variables to a degree of 57.8 percent, according to the R-squared value. But even after accounting for this, 42.2% of the variance in the results remains unexplained. To rephrase, this study failed to account for 42.2% of the additional variables that are critical for predicting student engagement.

**Table 5***: Coefficients*

| Model | Unstandardized coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std Error | Beta | | |
| (Constant) | 4.876 | 1.583 | | 3.081 | 0.002 |
| User Friendliness | 0.149 | 0.081 | 0.096 | 1.839 | 0.067 |
| Course Design | 0.517 | 0.088 | 0.325 | 5.874 | 0.000 |
| Resource Availability | -0.293 | 0.084 | -0.169 | -3.487 | 0.001 |
| Digital Literacy | 0.879 | 0.086 | 0.536 | 10.173 | 0.000 |

The preceding Coefficient Table shows that among the independent variables in this study, remote and hybrid learning was the most significant. Reason being, t-value = 10.173 and p-value = 0.000 (below alpha = 0.01) for digital literacy. As these numbers show, digital literacy is a key indicator of student involvement. The most important predictor of student involvement variation, according to the research, is digital literacy. This is due to the fact that all three of the other predictor variables—user-friendliness, course design, and resource availability—have lower beta values than this one (0.536). In addition, with a t-value of 5.874 and a p-value of 0.000 (smaller than the alpha value of 0.01), course design is the second most significant independent variable. Course design is a significant predictor of student involvement, as shown by these values. Also,

with a beta value of 0.325, course design is the second most important predictor variable for student engagement, behind only user-friendliness and resource availability. Resource availability is the least significant independent variable, with a t-value of -3.487 and a p-value of 0.001 (less than the alpha value of 0.01). This suggests that the availability of resources is a strong predictor of student engagement, as supported by the p-value. Additionally, this predictor variable contributes the third most significantly to the variability of student involvement, according to its lowest beta value of -0.169. Student participation is not defined by how easy it is to use in this study. Reason being, user-friendliness has a p-value of 0.067, which is higher than the alpha value of 0.01. In addition, among the predictors, user-friendliness has the second-lowest beta value (0.096), which means it contributes the second-lowest variability in student involvement.

## Conclusion

Finally, this chapter drew on previous studies to back up the results found for each theory. Two new discoveries were obtained: a fresh one and one contribution to this field of concern. The consequences of the research have been discussed to help one understand the relevance of the outcomes. Moreover, the advice given to solve the shortcomings of the study will help next generations of researchers. Results of this study reveal that college students participate more in hybrid and online courses. The declared aim of this study was to investigate the difficulties college students have when switching from conventional classroom learning to online and hybrid courses. All of the study's remote and hybrid learning factors are favorably connected with student participation and academic performance. Still, some factors affect college students's involvement more than others. Considering this study helps one to address the current low engagement levels among university students. The Ministry of Education and academic institutions can improve remote and hybrid learning approaches to address this problem, therefore raising the student involvement levels.

## Recommendations

Based on this study's findings, I would suggest that the most important thing to do is to adopt the hybrid model of education to make remote and hybrid learning effective and avoid its

negative effects on academic performance. This will make it easier to use both modes simultaneously. Another recommendation is that every student's video chat should be mandatory when taking remote and hybrid classes. This will prevent students from engaging in activities that could be distracting and will ensure that everyone attends class and actively participates in class. In my opinion, the remote and hybrid classes can be improved and their negative effects reduced by following these recommendations.

**References**

Abraham, A., Corchado, E. and Corchado, J.M. (2009), "Hybrid learning machines", Neurocomputing: An International Journal, Vol. 72 Nos 13-15, pp. 2729-2730.

Ahmad, N., Rashid, N., Abdullah, N., Yean, C., Sharif, S., & Rahmat, N. (2022). Exploring learners' motivations for studying from home. International Journal of Academic Research in Business and Social Sciences, 1(12). https://doi.org/10.6007/ijarbss/v12-i1/12151

Algayres, M., Timcenko, O., & Triantafyllou, E. (2022). From flipped to remote to hybrid: Transformation of a game-based flipped classroom during the Covid-19 pandemic. European Conference on e-Learning, 21(1), 10–18. https://doi.org/10.34190/ecel.21.1.715

Annelies Raes (2021), Exploring Student and Teacher Experiences in Hybrid Learning Environments: Does Presence Matter?, Postdigit Sci Educ. 2022; 4(1): 138–159, doi: 10.1007/s42438-021-00274-0

Bouilheres, F., Le, L., Mcdonald, S., Nkhoma, C. and Jandug-Montera, L. (2020), "Defining student learning experience through blended learning", Education and Information Technologies, Vol. 25 No. 4, pp. 3049-3069.

Chaves, M. G. (2022). The community of inquiry instructional strategies impact on student satisfaction on remote learning. Recoletos Multidisciplinary Research Journal, 10(1), 191– 204. https://doi.org/10.32871/rmrj2210.01.14

Desmet, O., Crimmins, D., Seigfried-Spellar, K., & Gentry, M. (2021). Ame+cyber: Evaluating the online delivery of A holistic cyber-related talent development program. Gifted Education International, 1(38), 3–24. https://doi.org/10.1177/02614294211054361

Dhawan S. (2020), Online Learning: A Panacea in the Time of COVID-19 Crisis. Journal of Educational Technology Systems. 2020;49(1):5-22. Doi:10.1177/0047239520934018

Diep, A., Zhu, C., Struyven, K. and Blieck, Y. (2017), "Who or what contributes to student satisfaction in different blended learning modalities?", British Journal of Educational Technology, Vol. 48 No. 2, pp. 473-489.

El-Sayad, G., Saad, N. and Thurasamy, R. (2021), "How higher education students in Egypt perceived online learning engagement and satisfaction during the covid-19 pandemic", Journal of Computers In Education, Vol. 8 No. 4, pp. 527-550.

Fauzi, I., & Khusuma, I. H. S., (2020). Teachers' Elementary School in Online Learning of COVID-19 Pandemic Conditions. JurnalIqra': Kajian Ilmu Pendidikan, 5(1), 58-70. https://doi.org/10.25217/ji.v5i1.914

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. https://doi.org/10.1371/journal.pone.0239490

Hashemi, A. (2021). Effects of COVID-19 on the academic performance of Afghan students' and their level of satisfaction with online teaching. Cogent Arts & Humanities, 8(1), 1933684. https://doi.org/10.1080/23311983.2021.1933684

Hellas, A., Ihantola, P., Petersen, A., Ajanovski, V., Gutica, M., Hynninen, T. and Liao, S. (2018), "Predicting academic performance: a systematic literature review", Proceedings Companion of the 23rd Annual Acm Conference on Innovation and Technology in Computer Science Education, pp. 175-199.

Ibrahim Y. K., Cemre K.Y. (2022), Investigation of the Effectiveness of Hybrid Learning on Academic Achievement: A Meta-Analysis Study, International Journal of Progressive Education, Volume 18 Number 1, 2022]

Picciano, A. G. (2017). Theories and frameworks for online education: Seeking an integrated model. Online Learning, 21(3). https://doi.org/10.24059/olj.v21i3.1225

Major, C. (2020), "Innovations in teaching and learning during A time of crisis", Innovative Higher Education, Vol. 45 No. 4, pp. 265-266.

Priess-Buchheit, J. (2020), "Synchronous hybrid learning in times of social distancing: a report and case study on benefits, trainer's challenges, and guidelines", International Journal for Innovation Education and Research, Vol. 8 No. 10, pp. 356-364.

Smoyer, A. B., O'Brien, K., & Rodriguez-Keyes, E. (2020). Lessons learned from Covid-19: Being known in online social work classrooms. International Social Work, 63(5), 651–654. https://doi.org/10.1177/0020872820940021

Singh J. et al., (2022). Online, Hybrid, and Face-to-Face Learning Through the Eyes of Faculty, Students, Administrators, and Instructional Designers: Lessons Learned and Directions for the Post-Vaccine and Post-Pandemic/COVID-19 World. Journal of Educational Technology Systems, 50(3), 301–326. https://doi.org/10.1177/00472395211063754

Vernadakis, N., Giannousi, M., Tsitskari, E., Antoniou, P. and Kioumourtzoglou, S. (2012), "Comparison of student satisfaction between traditional and blended technology course offerings in physical education", Turkish Online Journal of Distance Education, Vol. 13 No. 1, pp. 137-147.

Zeqiri, J., Kareva, V. and Sadri, A. (2020), "The impact of blended learning on students' performance and satisfaction in south East European university", Proceedings of the Entrenova – Enterprise Research Innovation Conference, Virtual Conference, 10-12 September 2020, No. 6, pp. 233-244.