eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

A Phenomenological Study on the Lived Experiences of Secondary Teachers in the Hybrid Classroom During the Covid-19 Crisis

Dr. Myrna P. Mandigma¹

¹ Informatics College - Manila myrnamandigma8@gmail.com

Received: 19- June -2023 Revised: 02- July -2023 Accepted: 10-August-2023

Abstract

The study focused on the lived experiences of secondary teachers in a hybrid classroom during the Covid-19 crisis in the state of Arizona and other states in the United States of America where many schools began implementing hybrid classrooms. With schools redesigning instruction during that time, hybrid classrooms with students attending a physical school on certain days and spending a few days remotely for online learning synchronously became the option for continuous learning.

Data were collected from 15 participants through one-on-one semi-structured interviews that were done either face-to-face or via Zoom video conferencing. This study was anchored on Husserl's phenomenological approach. Coding through thematic analysis was employed to generate codes and themes. There were five themes that emerged as a result namely 1) Effective Virtual Learning and Purposive In-Person Classes; 2) Virtual Online Programs Support Hybrid Learning; 3) Challenges in Hybrid Learning Engagement; 4) Needs Assessment is Given Prior to Hybrid Learning; and 5) Open Opportunities to Improve Hybrid Learning. These themes led to the development of a framework at the secondary level of the educational system which apparently emerged from the different categories that were interwoven based on comparative analysis of the data. The emergent framework towards Improved Hybrid Learning may be proposed for schools to further improve their hybrid classroom implementation at the secondary level of education. In general, it may also be beneficial to school administrators, policymakers, educational consultants, teachers, and future researchers even beyond the pandemic, since technology and hybrid learning is here to stay.

Keywords: Hybrid Classrooms, Lived Experiences, Needs Assessment, Virtual Online Programs.

1. Introduction

A. Background

"Since the epidemic prevented millions of children from attending school, now is the time to improve the protection of the right to education by reestablishing fairer, more equal, and robust educational systems, according to Human Rights Watch senior education researcher Elin Martinez. Fixing systemic flaws that have long prevented schools from being open and welcoming to all children" should be the goal, not simply going back to how things were before the outbreak."

Before the COVID-19 pandemic, the student-to-teacher ratio in the state of Arizona stood at around 23.5 for every teacher, which is comparatively higher than the national average of 16:1. This number may not be accurate, as the ratio of 23.5 takes into account special education classes, which are known to have significantly smaller class sizes. This number is especially alarming considering that the national classroom capacity is 68%, whereas Arizona schools' 23.5:1 student-to-teacher ratio is at maximum capacity [33].

This large student-to-teacher ratio harms education quality by restricting engagement in class, presenting a lack of resources for students, and preventing proper aid and attention. Through the literature, the overarching pattern that appeared was high student-to-teacher ratios curbed the efficacy of education. Additionally, the relatively large student-to-teacher ratios illustrate Arizona's education quality as lower-class sizes would enhance student engagement and spark more interest, rendering learning more effective as individualized instruction would be allowed [33]. Given the ratio's prominence, one can gauge the efficacy of schools in Arizona and identify potential solutions to achieve a higher quality of education. However, the COVID-19 pandemic upended daily life and

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

challenged the ability of many institutions to function. Before the pandemic, Arizona, during the 2018 - 2019 fiscal year, spent about \$7.96 billion on education, which is approximately \$8,905 per student (Arizona Office of the Auditor General, 2020). Due to the pandemic, Arizona gained an additional 3.6 billion.

Nevertheless, these figures were not enough when on March 2020, the pandemic affected schools and higher education communities all over the world [38], and the number of learners not attending schools or universities because of COVID-19 was soaring [36]. Covid-19 caused significant disruption to teaching and learning activities at all levels [39]. The education of an estimated 90% of the world's school-aged children was disrupted [37].

The whole educational system, from elementary to tertiary level, collapsed during the school lockdown periods across the globe [22]. In general, schools entered the pandemic ill-prepared to deliver remote education to all students equally, according to Human Rights Watch (2021). The inability of most governments to address prejudice and inequality in their educational systems over a prolonged period, as well as their failure to guarantee the availability of essential government services like reliable, affordable power for houses and easy access to the internet, led to the collapse. This condition forced teachers to make the transition in the way they teach from face-to-face learning to online learning [29]. Similarly, teaching and learning at higher education institutions worldwide had to move online quickly [15]. Teachers are now faced with the demand to shift from the traditional to the modern means of instruction, known as virtual teaching [17]. During the COVID-19 pandemic, online learning has been vigorously pushed as a viable alternative to traditional face-to-face instruction [11].

Learning providers and institutions had to rethink and reorganize learning to more online and "pandemic-friendly" models to continue learning during a pandemic after the immediate response and the virus' peak [25]. Virtual learning alone cannot supplement traditional face-to-face learning mechanisms. Returning to full in-person learning was unlikely for some time due to the threat brought about by the COVID-19 pandemic. Hence, hybrid learning was a solution to keep education going. The schools started opening partially and allowed limited students to return in-person for a partial school day for a few days a week. The blend of the traditional educational system with virtual learning was fruitful, and many developed societies benefited from it [20].

A hybrid classroom, which combines face-to-face and virtual learning, is becoming an option for delivering courses in higher-level education and a subject of growing interest in academic literature [12]. Additionally, the hybrid classroom concept aims to reduce the number of involved people in each activity by offloading some groups of people online from their homes [35]. The hybrid classroom is also designed to allow virtual and physical attendees to interact synchronously during operating sessions at the educational system's basic level.

The difference in student access to technology has had implications, including the widening social gap. From this current situation, learning about a series of variables that have made the process difficult is a must: the training of teachers and students in terms of their digital skills and capabilities, the role of technology, the need to make technologies available to learners to avoid the digital divide, and the need to adjust the role of the teacher as well as the conception of the teaching-learning process [2].

As teachers have been compelled to adopt the new teaching modality, determining teachers' technological competence has become an interesting endeavor [17]. It is hoped that the teacher can provide interesting strategies and techniques in teaching virtually to foster students' motivation and performance in this pandemic situation [41]. Indeed, opportunities have opened for teachers at the basic education level to embrace hybrid classrooms as a new environment that keeps students engaged in and out of the classroom.

The hybrid classroom, in which the learning environment includes a mix of students who are physically and virtually present was already implemented in post-secondary education even before the pandemic. However, this modality is newly implemented at the basic education level to adapt to the change in the educational system brought about by the COVID-19 crisis. Thus, research on hybrid classrooms needs to be improved at the secondary level of the educational system worldwide.

A hybrid classroom is an intentional integration of in-person and virtual learning to provide education that maximize the benefits of hybrid mode of delivery to facilitate students' learning [8]. Student engagement is necessary for a successful learning environment. Due to the adjustment in the use of information and communication technologies, a hybrid approach to teaching and learning must be adapted, the nature of this

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

involvement had to change [18]. Compared with fully face-to-face or online learning environments, implementing hybrid classroom spaces is costly, given the spaces to make all learning options available for learners [40]. The pandemic exposed teachers to facilitate learning afar from the traditional classroom. Though teachers were not proficient enough in facilitating classes in the hybrid classroom, they were forced to adopt it at short notice to keep education moving despite the pandemic.

Thus, this study employed a phenomenological framework to describe and explore the meaning of the lived experiences of secondary teachers in the hybrid classroom during the COVID-19 crisis. This study contributes significantly to the body of research on the lived experiences of secondary teachers in the hybrid classroom. Further, it leads to realizing the educational vision of making a learning environment that mirrors the successful hybrid learning system.

B. Review of Related Literature

Information and communication technologies have had great significance in the educational process. The technology-dependent learning has had relevant outcomes regarding how the classroom setting gives students interaction in that context and how school tasks are implemented [2]. Thus, online learning has become a new challenge for students and teachers in this pandemic. Students need help learning online, such as poor internet connection, lack of motivation, being easily distracted, and more stress due to the number of teachers' tasks [41]. Online learning during the pandemic requires lecturers and students to learn new things they never thought of before [10]. As a result of the move to online education during the COVID-19 epidemic, numerous studies have focused on perceived learning results and student satisfaction in this new learning environment [5].

Online mode learning needs mental, physical, and financial preparation to support their learning deficiency [24]. A specific new learning space is a synchronous hybrid or blended learning environment where on-site and remote students can simultaneously attend learning activities [26].

Technology is important, but there are many factors to take into account when creating online learning environments that effectively engage students [34]. An important factor to consider is how teachers will react to virtual instruction, especially if they are used to the traditional (face-to-face) method of instruction [17]. Similarly, the students had to adjust to the situation, which created learning challenges that obstructed learning progress [24].

Virtual learning is here to stay, and commitment, effectiveness, and empowerment of reflective practice must be emphasized [2]. Many issues are reported daily, such as internet connectivity, security breaches, and the conduct of assessments [20]. These issues are in contrast with hybrid learning, which integrates e-learning into the learning process and also has many advantages such as (1) students are more motivated to learn with the support of elearning; (2) activity and involvement students are higher because e-learning is more interactive and challenging; (3) ICT provides a very broad potential source of information; (4) ICT can visualize complex models so that it makes understanding easier; (5)ICT can perform repetitive tasks quickly and accurately (6) can display learning designs that are more creative, interactive and innovative; (7) the learning process can transcend time and space [3].

Hybrid learning is the most effective learning model for Pranatacara lectures [13]. It allows the students to learn comprehensively based on their needs anytime and anywhere. The students also experienced an increase in their ability, as well as direct criticism, suggestions, judgments, guidance on classical learning, and feedback facilitation. Although the hybrid learning model has various ways in terms of its application, educators agree that with the developing hybrid learning model, many educators, such as the Team, will create an online environment for their students [3]. Although this model is relatively new, its goal is similar to other educational innovations: "to help teachers achieve what they strive for every day by understanding deeply and enabling every student they work with to achieve very high levels of educational mastery." However, the researchers said that the hybrid learning model has the potential to provide transformative experiences where a new model of education can challenge teachers to innovate and implement the best way to educate their students.

The hybrid learning strategy is a teaching strategy to improve students' engagement and performance in traditional classes in a virtual learning environment [19]. Additionally, hybrid learning combines all forms, for example, online, live, and face-to-face (conventional) [3]. Hybrid learning can be defined as a combination of face-to-face

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

learning methods in the classroom with the material provided online. Several research results found that the hybrid learning model can improve students' mathematical abilities and learning outcomes [3], [6]. Additionally, learning designed with a hybrid learning approach can influence students' metacognitive awareness. It has advantages because, in addition to using a face-to-face approach, this approach also uses ICT, both mobile and non-mobile technology.

The COVID-19 outbreak has made it more obvious how vulnerable the educational system is to outside threats. It is noted that this digital transformation of instructional delivery came with several logistical challenges and attitudinal modifications. Student assessment during this pandemic on how districts can legislate unbiased and evenhanded grading policies based on pandemic-related anxiety will negatively affect student academic performance. The student's academic performance might be affected by racial, economic, and resource differences, and the larger part, instructors need to be more effectively ready to deliver high-quality instruction remotely. The challenges discussed here are limited to the digital transformation of instructional operations during the COVID-19 pandemic [1]. Teaching online requires a different approach and a different set of skills than when teaching face-to-face [42].

The COVID-19 crisis has forced the use of this learning paradigm while adhering to the safety recommended by the Centers for Disease Control and Prevention's (CDC). The implementation is to meet the academic needs of the students amidst the pandemic and to mitigate the challenges of fully online learning. Emerging research indicates that the COVID-19 pandemic took a severe toll on teachers. Teachers were worried about their own physical and mental health and that of their students, especially high-risk students. Additionally, studies examining the effects of COVID-19 found that teacher rates of stress, anxiety, and depression were much greater than pre-COVID-19 rates.

The evidence points to COVID-19 adversely affecting well-being and satisfaction, leading to increased burnout among teachers worldwide [21].

C. Statement of the Problem

The hybrid classroom is newly implemented in the basic education community following the immediate response and peak of the COVID-19 pandemic. Due to the hybrid classroom's newness in the educational system, the actual experiences of secondary teachers in it are still unknown. It is vital to study the experiences of teachers currently involved in hybrid classrooms and teaching both in-person and virtual classes. Thus, the descriptive phenomenological approach was used to describe and explore the meaning of the lived experiences of the secondary teachers in the hybrid classroom during the COVID-19 crisis. The following questions guided this qualitative descriptive phenomenological study:

- 1. How do secondary teachers describe their lived experiences in the hybrid classroom during the COVID-19 crisis?
- 2. What are the teacher's challenges in the implementation of hybrid model learning?
- 3. What emergent framework may be proposed relative to a training development program on a hybrid model of learning based on the results of the study?

D. Significance of the Study

This study will contribute significantly to the body of research on the lived experiences of secondary teachers in the hybrid classroom during COVID-19 utilizing the Husserlian descriptive phenomenological approach as a philosophical framework in formulating the questions for investigation. The purpose of this study was to add to current research on teachers' lived experiences in the hybrid classroom at the secondary level of education. The study was conducted for current and future school administrators. Taking into account the shift from in-person or pure online to hybrid instruction occurring in the secondary level of basic education as well as the challenges and opportunities associated with this shift, it is evident that the result of this study may yield insights for the school administrators in supporting this model of learning. Considering how technology can impact how the students learn in this model is important. Therefore, as with any change to improve the hybrid classroom setting, it is

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

imperative to examine the technology used in the classroom to ensure that a supply of equipment and technology to facilitate learning continues.

Also, policymakers may use the result of this study to consider the challenges that may arise in hybrid classrooms that need access to technology which hinders students from accessing education virtually. Moreover, the result of this investigation will be used by the policymaker in involving teachers who had direct experience in the hybrid classroom in making policy proposals on implementing hybrid classes. Policymakers may involve teachers and school administrators in policy-making relative to implementing hybrid classrooms at the secondary level of education. The involvement is for further improvement of the implementation of the hybrid classroom should it be necessary to implement it for continuing education, not only in times of crisis but for more advanced education.

Furthermore, teachers lived experiences in the hybrid classroom revealed their positive and negative self-assessments during the implementation of this learning model. This sudden switch of teaching modality burdened the teacher's well-being, as revealed by their negative self-assessment of implementing hybrid classes. Thus, policymakers may use the result of this study to ensure that the teachers are fully supported to overcome the challenges of lack of preparation due to a sudden shift in the teaching mode. Though this catalyzed the unification of teaching and technology, preparation will help teachers balance their instruction for face-to-face and virtual students. Additionally, educational consultants and academic coaches will gain insights from the result of this study in assisting teachers in the hybrid classroom. It may also be helpful to educational consultants in assisting teachers in planning and writing curriculum, especially at the secondary level of education. The assistance will positively impact the teachers in facilitating the classroom to improve instruction. Indeed, these results may foster an engaging experience for students attending hybrid classes using the teacher's experience in the newly discovered tools to supplement the lesson delivery. The engaging experience could further help students feel engaged in face-to-face and virtual learning when the teachers are fully equipped with the technology and platform.

Moreover, for researchers, this will give an idea of future research topics related to the teachers' lived experiences in a hybrid classroom. Lastly, the result of this study provides substantive information in creating the proposed professional training framework in implementing a hybrid learning model at the secondary level of education. Professional training should help teachers reevaluate their skills in blending technology with traditional teaching practices. Reflection on teachers' lived experiences could also encompass skills in technology use but the emotional aspects as well as time management and coping with the stress of workloads. The training will equip the teachers with the skill to deal with any teaching practices that best fit a classroom scenario to continue learning to meet students' needs. To have a successful hybrid classroom, there should be a concerted effort of all the stakeholders to make the teachers prepared to embrace hybrid learning through the proper implementation of hybrid learning.

E. Scope and Limitation

This study was limited to the lived experiences of secondary teachers in hybrid classrooms during the COVID-19 crisis, particularly teachers currently teaching in a hybrid classroom for secondary students during the pandemic in Arizona and other states. Therefore, the study was focused on a small sample size; the informants were later subjected to a semi-structured interview. Eighteen (18) teachers were then qualified as participants, but only 15 participated.

2. Methodology

This section explains how this qualitative study anchored on the descriptive phenomenological approach that was employed during the investigation. The research method, design, participants, research instruments, data gathering procedure, and data analysis used are presented here.

A. Research Design

This study adopted a qualitative research design and used the Husserlian descriptive phenomenological approach to illuminate rich descriptions and explore the meaning of the lived experiences of secondary teachers in a hybrid classroom during the COVID-19 crisis in the USA. One of the strengths of this qualitative research approach was

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

that the participants' behavior was recorded in natural settings with all the intricacies of the environment operating and for this particular study the environment of teachers teaching hybrid mode of learning delivery in the United States. Hence, qualitative research was particularly useful for this in-depth study of a small group of people [31]. The descriptive phenomenological approach, therefore, allowed the researcher to gather substantive information that talked about the lived experiences of this group of teachers.

In addition, phenomenological research is strictly aimed at understanding experiences as lived. Hence, meaning-making became essential to this phenomenological inquiry but only within the construct of experience of the selected participants. Phenomenological investigations done in this study allowed for a deeper exploration of the research questions and served as the means to gather the evidence necessary to capture both individuals' lived experiences and the meaning of the phenomena of teachers teaching hybrid class in the USA. Descriptive phenomenology, unlike other branches of phenomenology, emphasizes human lived experiences to describe universal essences. Essence is a concept in phenomenological research referring to universal human constructs derived from a collective lived experience phenomenon. Therefore, for the researcher, phenomenology became the most appropriate research methodology for this study because it is all about personal experience that varies from participant to participant. However, the most important thing to remember in phenomenological research is that philosophy is just as important as techniques [21]. Thus, Husserl's descriptive phenomenology provided the methodological structure to bracket the researcher's preconceptions and biases during this research study.

B. Participants

This study used purposive sampling method to recruit participants. The participants in this qualitative study were secondary teachers teaching hybrid classes in the secondary level, 6th – 12th-grade levels in the state of Arizona and other states in the United States during the COVID-19 crisis. There were 15 secondary teachers interviewed and served as the participants of the study.

The researcher set the criteria for the selection of the participants as follows: 1) currently teaching in the USA; 2) teaching in a hybrid classroom; 3) have been teaching a hybrid class for four semesters; 4) teaching 6th to12th grade classes; and 5) received an honor/award in teaching career.

Fifteen (15) participants fell within the modified criteria set by the researcher. The criteria in determining the participants were modified into a secondary teacher in the 6^{th} – 12th-grade level of any subject area, teaching hybrid classes or had experience teaching hybrid classes for at least one semester during the COVID-19 crisis, currently teaching in the state of Arizona or in one of the states in the US, and teacher awardee in the field of teaching (optional criterion). The participants voluntarily participated in the interview session that was held at their most convenient time and preferred with either face-to-face or Zoom video conferencing as mode of interview.

The participants in general comprises a number of hybrid teachers in the state of Arizona and few were from the other states of the United States of America who were all involved in the hybrid class teaching during the pandemic.

All participants were engaged in the interview process. Four (4) of the participants were interviewed face-to-face and 11 of them were interviewed using a web-based video call via Zoom. All participants participated throughout the collection of data and none of them withdrew during the conduct of the study.

C. Instrument

During this study, the researcher developed semi-structured interview questions that consisted of 17 open-ended questions to gather the lived experiences of secondary teachers in the hybrid classroom during the COVID-19 crisis. This instrument was validated by a panel of experts which consisted of three professionals with expertise in a related area and/or connected to the location of the subject of the study. Adapted VREP (revised 2019) [32] was used by the expert for validation. This instrument was used by the experts in related areas (courses taught, professional experience, publications, or degrees in related areas) to measure face validity, construct validity, and content validity of the interview questions. Basic statistics such as mean and standard deviation were employed to determine the validity. This instrument was utilized during the semi-structured face-to-face interview or web-

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

based via Zoom that was done within a 20- to 40 minute-time allotment for each participant. The purpose of this semi-structured face-to-face interview was to employ the phenomenological approach to go into deeper detail on the lived experiences of secondary teachers in hybrid classes. Semi-structured interviews provided flexibility in following up for a better understanding of the phenomenon.

D. Data Gathering Procedure

This qualitative research anchored on Husserl's (1859-1938) descriptive phenomenological approach in the qualitative study has two phases that are illustrated in Figure 1. A time frame for each phase of this study was set to ensure that the investigation is done within the timeline of the investigation.



Figure 1. The Flow of Data Gathering

The first phase of the data gathering focused on communication. A recruitment letter in the form of electronic messages was disseminated to the teachers from February to March of 2022.

The interview process, which was the second phase of data gathering was held from April to June 2022. The qualified target participants were invited to participate in a one-on-one face-to-face interview or via Zoom, whichever is preferred. Fifteen (15) out of 18 qualified participants participated in the live interview. Four (4) of them were joined face-to-face and eleven (11) were joined in a web-based video call via Zoom during the interview. The interview session has 20 to 40 minutes allotted to each participant in the interview. A five-minute follow-up interview was done with a few participants for additional information.

E. Data Analysis

The recorded information gathered during the interview was organized and labeled according to the participant's number. The information that was audio recorded via voice memos for each participant was uploaded online and transcribed using otter.ai (an online tool that converts audio to text). Once the information was transcribed, transcripts were subjected to member checking by the participants to verify the accuracy of the data gathered during the interview.

After the researcher gained an overall understanding of the data, the transcripts were organized and prepared for manual analysis. These were analyzed using thematic analysis. The researcher used the tabulated format in analyzing the organized information. A four-column table was used to document the themes generated from the gathered data. Figure 2 represents the coding process employed to analyze the data.

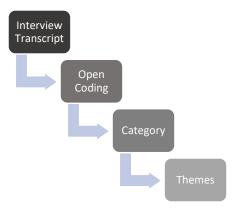


Figure 2. Coding Process

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

3. Results and Discussion

Table 1. Sample Coding Process Leading to Emergent Themes

Interview Transcript	Open Coding	Category	Themes
I would say effective and that is based on the evaluations that they did with me. In the school year 2020-2021, I was one of the teachers who was cited in most of our meetings, you know, just because of the ease of use I was able to do with online platforms and online programs.	Effective teaching Thankful for online programs	Gratitude for Online Programs	Virtual Online Programs Support Hybrid Learning

The effective teaching and being thankful for online programs that led to the emergence of the category, gratitude for online programs were created as an example of the initial codes leading to a particular theme which is virtual online programs support hybrid learning. The reduction was done by bracketing and the selective codes were developed. The process was employed in the original interview transcripts of all the participant's responses to the interview questions.

Classroom structure was described by each participant based on their lived experiences in the hybrid classroom. Participant's statements like "Students come in person on certain days. One comes on Monday, Tuesday, and Wednesday. The other group comes on Thursday and Friday. Students come in part of the week, and the rest of the week they do virtually with me. They log in to zoom with me" describes the classroom structure. Another participant responded, "Based on my experience, students that would come in-person in my classroom, who are healthy and not affected by COVID-19, and students who are at home are on zoom at the same time". This setting gives more access to a more diverse group of learners. The synchronous hybrid classrooms have been designed to connect both onsite and remote students during synchronous teaching [27]. The educational setting depends on whether students are physically present and attend the lecture face-to-face (F2F) or remotely (virtual), and on whether the settings is the same for all students (pure) or mixed (hybrid). Three of the participants described the settings of their hybrid classroom very similar. Participant 1 states "a combination of virtual and in-person learning occurring at one time is the setting of our classroom." Another participants described the population settings in their hybrid classrooms. This is supported by the statements such as, "During my hybrid class, I have a few students doing in-person and the rest of the class is virtual". This other statement that was recorded during the interview, "I've had a class that more than 50% of my students are attending in-person and only a few are online" describes the setting of the hybrid classroom. On the other hand, the opposite population setting in the hybrid classroom was also described. According to the other participants, "For our county, half of the class is in school, and half is home remotely. I am teaching them at the same time." "With half of the students in class and half of the students virtual, so for example, if there are 20 students, 10 students are going to be online and 10 students are in the classroom", this clearly described the population setting in the hybrid classroom. Few of the participants described the classroom settings differently. One participant responded that "Each class is different as to how that is made up. I've had classes where the majority were in school and only a small percentage were remote. And I've had the opposite, where a larger percentage was remote, and only a few are in the classroom." Online learning is a generic term describing the integration of information and communications technology into learning and teaching both on and off campus. This method has been adopted for students who are unable to attend on-campus [30]. Additionally, the hybrid classroom concept aims to reduce the number of involved people in each activity by offloading some groups of people online from their homes [35]. The hybrid classroom is designed to allow online and physical attendees to interact during operating sessions.

Scheduling classes emerged from the participant's responses. Five of the participants experienced block scheduling. They mentioned that their school implemented block scheduling. Recorded statements like: "We run

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

the block schedule. We got blocks A and B. Block A scheduled on Monday and Thursday while Block B is on Tuesday and Friday. Each block is 90 minutes. The first half of the students go to school Monday and Tuesday while the other half stays at home and attends class virtually. The schedule switched on Thursday and Friday. Our Wednesday is an asynchronous day for both blocks." clearly described the schedule in their hybrid classroom. "For a schedule, those last names are from A to L, the schedule is Monday and Tuesday. And then last names from M to Z, the schedule is Thursday and Friday. So basically, our Wednesday is all remote. It is our cleaning day following the CDC guidelines" stated by the other participant. Two of the participants expressed their frustrations when the block scheduling for the second semester of the school year 2020-2021 was switched to a regular schedule. One said, "I understand why we are in the hybrid model. And although I do think we could be a little bit more proactive, having students go out one day, that is on A-day, and then have students who were at home remotely for A-day come in for B-day made a lot more sense than just having students and teachers or students and parents decide whether or not their students should come."

Effective Virtual Learning and Purposive In-Person Classes was identified as the first theme during data analysis that emerged from different categories namely: Conducive Classroom Environment, Student Population in Mind, Strategic Scheduling, and Efficient Utilization of Technology.

The hybrid learning model is an innovative one that utilizes information and communication technology. This model was developed around 2000 and has been used in several countries: North America, England, Australia, universities, and training institutions. This learning model has several advantages: using learning technology such as computer media, iPhone, TV, video conferencing, images and sound, multimedia presentations, weblogs, and social media [3]. Hybrid learning is a process of acquiring knowledge and skills (learner-centered) that is developed with an instructional design that integrates digital (internet and mobile), printed, recorded, and traditional face-to-face class activities in a planned, practical pedagogical way [3]. As teachers are compelled to quickly adopt the new teaching modality, determining teachers' technological competence becomes an interesting endeavor to take [17] It is hoped that the teacher can deliver interesting methods and techniques in teaching online to foster students' motivation and performance in this pandemic situation [41].

The students during pandemic times are more striving in remote setting. There are mentions of technology, being thankful for technology, in which the Technology-Gratitude category emerged. These concepts or codes were supported by the participants statements like: "we just use zoom because it is more student-friendly. I am very thankful that our school district has a lot of online programs. And I am able to use those materials to teach the students and one of those was IXL." The participants, in general, expressed their thankfulness for technology on how they were able to use it to have a much more effective hybrid learning. Another participant expressed that hybrid learning is effective, saying "I would say effective and that is based on the evaluations that they did with me. In the school year 2020-2021, I was one of the teachers who was cited in most of our meetings, you know, just because of the ease of use I was able to do with online platforms and online programs." One participant also spoke on how students, particularly those who study remotely, aspire towards hybrid learning with statements like, "I've had some students who have thrived in a remote setting. You know, I had some kids last year, and being in the remote setting was probably the best thing for them ever ..., because they were kids who had dealt with being bullied in school, they had kids who had dealt with anxiety issues in school, and they got to stay home. And they were great remote students"..., "Kids who were remote last year pretty much have it down. Kids didn't think they did the majority of them. They didn't think they would do well in a remote environment. So they kind of picked what they thought would work. So we've seen some of those kids really step up and advocate for themselves." These difficulties and limitations that students may have because of online learning have been considered in a number of research about its efficacy. Several studies [14], [15], [4], [23] were among those who fall under this category. Online learning is beneficial since it makes it easier to use tools like WhatsApp, Zoom, and Google Classroom. The efficiency of online learning is, however, constrained by internet access and internet package availability, according to. The efficiency of online learning is also influenced by the attitudes of the students. All stakeholders, therefore, should collaborate to address the difficulty posed by students who approach online learning recklessly [14]. The students should seize the chance to study, develop their social skills, and increase their capacity for technological adaptation lends credence to this. All these were captured through the second theme, Virtual Online Programs Support Hybrid Learning.

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

Other categories emerged from the participants' responses during coding analysis from the interview process like in the second research question, "What are the teachers' challenges in the implementation of the hybrid model of learning?" Challenges in Hybrid Learning Engagement was identified as the third theme during data analysis that emerged from Interactive Participation, Attendance Retention, Resource-Maximization, Time Management, and Standardized Assessment categories.

The researcher gathered information from the participants and made "meaning" out of their responses in the interview when the researcher asked, "Tell me about your experience as a hybrid classroom teacher." Participant 3, for example, responded that "There are students who struggle doing online. So, what I did is to really chunk the information presented to them. Some students wanted printed materials. I did photocopy all the assignments and put them in a folder and had to deliver them to their houses. In that way, when we talked about the lesson, they know what we are talking about. They have the option to take a photo of the assignment that they have finished and email it to me or the parents have the option to come and drop those assignments in the office. It was difficult. It was really like a lot of work. I feel that I was put in a situation where I was not really ready. The good thing is, as weeks passed by, the administration equipped us by attending online professional development." However, this is in contrast with what Participant 9 experienced in her classroom. She answered, "Classroom management, I like it. Students are not allowed to be close to each other. At some point, I focused my time on the delivery of the lesson. I maximize my skills in using technology. I maximize the use of Google Classroom. I do less paperwork. Everything is in the electronic form." When participant 2 was asked on the other hand, she stated, "Doing camera check for attendance..., I had some kids, and being in the remote setting was probably the best thing for them ever..., and Because they were kids who had dealt with being bullied in school, with anxiety issues and they got to stay home."

Student interactions such as groupings, classroom engagement, parents' involvement, curriculum revision, workloads, assessment, feedback, and documentation were also shared by the participants' as they continue to experience hybrid classroom during the COVID-19 pandemic crisis. Information and communication technologies have had great significance in this process. This technology-mediated learning has had relevant consequences regarding how teachers give their lessons, how students interact in that context, and how school tasks are implemented [2]. Thus, online learning becomes a new challenge for students and teachers in this pandemic situation. Students faced some difficulties in learning online such as poor internet connection, lack of motivation, frequent distractions, and more stress due to the teachers' amount of tasks [41].

Other excerpts were found in the participants' responses like Participant 1 stated, "Because of all the challenges, you can really tell the students are not learning in this kind of setting. You get worksheets that are too perfect. Obviously, your students didn't do it." Participant 5, meanwhile, shared how he transitioned from traditional teaching to digital teaching in his hybrid classroom in assessing the students learning. He said, "I had to move away from the traditional methods using textbooks and hardcopies in the classroom. I had to move away from worksheets so I had to digitize everything. I use pear deck for formal assessments, google forms for summative assessments. The challenge was modifying the assessment from paper to electronic. This is the most tedious part of hybrid teaching." When the interview question was asked on how do students demonstrate learning in the hybrid classroom, the participant answered "I try my best to have them produce original work. I use writing strategies like PEA (point, evidence, and analysis)." In general, research participants shared their experiences with the assessment in their classroom with statements like, "I've had some great kids who had no problem working in a group with somebody in a Google Meet..., no trouble juggling work..., and turning them in when it was due..., but I had to change the way I assess learning. I can't monitor their devices..., and so, my assessment has become more classroom evidence-based." Participant 2 responded. While Participant 7 said, "I need to make a follow-up after the real-time feedback was given to the students., I seem to be strict with the due dates. I also follow up with the parent...I try to end the lessons with a closing question like an exit ticket or even just an informal conversation as long as there's a conclusion to the lesson..., and I assess students in a variety of ways like the live documents." Participant 6 responded.

The fourth theme, Needs Assessment is Given Prior to Hybrid Learning emerged because of the previously mentioned categories, such as Device and Gadget Allocation, Allotted Supply Generation, and Financial Support

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

Intervention. These were supported by statements such as, "The district also provided touchscreen laptops for everybody and one is to one wifi hotspot...", "laptops are provided with wifi hotspots, all the buses are equipped with wifi, and this was the first time in the school buses..., they have a wide range of wifi..., also, the bus delivers breakfast and lunch..., So every single thing is provided. And then the school district gave out bags. Pretty good bag..., I think they are Under Armour bags..., They have school supplies and So everything is provided..., All they're gonna do is to study." Participant 3 expressed how the district offered everything a student need which are supplies, internet, and food. Another participant mentioned that the teachers also get the support they need, especially in finances. As the participant said, "ask and provide support if we need them. But most of the support provided is the financial support for the online program or tools that we use in teaching."

Academic coaches, trainings for teachers, professional development, and co-teaching drop-ins are the categories for the last emergent theme. Open Opportunities to Improve Hybrid Learning is the last theme that emerged from the participants' interview transcript. They mentioned strategies that support hybrid learning as an effective mode of teaching in the secondary level of education. As one participant said, "for each program that they are rolling out, we do professional development about them..., academic coaches are always willing to help..., and we do lengthy training, and they would come into the classroom and we ask and provide support if we need them." The participants indicated that they do professional developments that could help them improve hybrid learning. Coaching, training, or seminars are ways they have used to support the improvement of teaching in hybrid learning. Another participant supported this claim by stating that Before the beginning of the school year..., we always have professional development..., and Technology-wise, it is easy for me to learn what they are providing and use in my class the way that district wants me to use it, if it gets challenging it is where the academic coaches will come in and their help is really valuable." The participant also mentioned that every beginning of the school year, the district offers them trainings that could help them, especially in technology. Some teachers still lack the skill in technology since not everyone has the liability to explore technology.

In addition, statements like, "They upgraded our Wi-Fi system so that we didn't have connection issues. You know, they upgraded apps, and we got access to a lot more apps to use in order to integrate different things. So in that respect, technology-wise, I think we were in a good shape. Professional development really gave you some resources or clues as to how to do it synchronously," helped the participant expressed how the district gave them support by upgrading their Wi-Fi system so they will not encounter connection issues during lessons. Co-teaching and drop-ins were also mentioned by the participants through statements like, "We did a lot of like, kind of coteaching drop-ins, like, somebody would say, Hey, I mastered this to like, I figured out how to use Flipgrid...and I'm gonna have them do this...So we did a lot more peer coaching kind of things, to share that information. In our staff meetings, the principal actually instituted more professional learning communities, I was brainstorming things we were still struggling with." Peer coaching is another tool that supports enhancing hybrid learning. When necessary, colleagues should be encouraged and supported to succeed academically. Peer coaching is a technique for professional growth that has been found to boost collaboration and enhance instruction. In a private setting, instructors collaborate, share knowledge, and encourage and help one another to improve existing abilities, acquire new ones, and/or resolve issues pertaining to the classroom. Peer coaching also refers to in-class instruction provided by a helpful peer who assists the teacher in putting workshop skills into practice. When given a suitable program that ensures accountability, support, companionship, and detailed feedback over a long period of time, coached teachers experience noticeable beneficial changes in their habits.

This is, therefore, extremely pertinent to the 4C idea (Communication, Critical Thinking, Collaboration, and Creativity) through peer coaching. The field of education, particularly instructors as members of the teaching staff who are directly involved, undoubtedly needs learning techniques for choosing the appropriate learning media for learning efficacy [7]. Aside from peer coaching, multimedia technology is becoming a necessity rather than a luxury. Particularly in the delivery process, where various factors connected to delivery are 1) the media aspect in learning plays a role as an auxiliary component, learning medium; 2) interactions with the media to learn; and 3) utilized learning structures in various forms [9]. Hence, in terms of the vast opportunities and innovations that schools may have in the conduct of hybrid learning, the avenues mentioned in the previous discussion signify Open Opportunities to Improve Hybrid Learning categorized by Resource-Readiness, Training and Development, Support Systems in Place, and being Option-Oriented.

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

These were essential thoughts from the coding and thematic analysis justified from the literature as the researcher, during the analysis, continued to craft the categories and themes that captured the lived experiences shared by the participants.

Table 2 presents a sample of the categories and themes that emerged during the process.

Table 2. Categories and Themes

Categories	Themes	
Conducive Classroom Environment	Effective Virtual	
Student Population in Mind	Learning and Purpo-	
Strategic Scheduling	sive In-Person	
Efficient Utilization of Technology	Classes	
Technology-Gratitude	Virtual Online	
Gratitude for Online Programs	Programs Support	
Resilience of Students	Hybrid Learning	
Interactive Participation Attendance Retention Resource-Maximization Time Management Standardized Assessment	Challenges in Hybrid Learning Engagement	
Device & Gadget Allocation	Needs Assessment	
Allotted Supply Generation	is Given Prior to	
Financial Support Intervention	Hybrid Learning	
Resource-Readiness Training & Development Support Systems in Place Option-Oriented	Open Opportunities to Improve Hybrid Learning	

Table 2 reveals the themes that emerged from the categories based on qualitative analysis wherein, through constant comparison from open coding, concepts were slowly grouped into their similarities, from low-level ordinary concepts to high-level concepts leading into themes. The findings described the participants' lived experiences as they resolve the research questions asked of this study which led to five emergent themes that were closely intertwined into one another and holds how the participants described and resolved the main concern. The five major themes that emerged from thematic data analysis were 1) Effective Virtual Learning and Purposive In-Person Classes; 2) Virtual Online Programs Support Hybrid Learning; 3) Challenges in Hybrid Learning Engagement; 4) Needs Assessment is Given Prior to Hybrid Learning; and 5) Open Opportunities to Improve Hybrid Learning. The information gathered from the interviews and the researcher's journal, or memos revealed different descriptions from the participants' lived experiences in the implementation of the hybrid model of learning at the secondary level of education. Teachers described the actual structure of the hybrid classroom that emerged from the classroom setting, students' population, scheduling, and technology use. Teachers also positively and negatively assessed themselves as they characterized their role in the hybrid classroom. While teachers shared their experiences on how flexible they were with their roles and assessed themselves as successful, there were teachers who characterized themselves as unsuccessful and traditional, participants that are reluctant to change. According to them, there is no replacement for in-person learning and they will still choose this modality. Participants explained the challenges encountered by the teachers in their hybrid classrooms. All participants stressed their concern about the validity of the assessment they administered in the class. They made sense that real-time assessment and feedback support the validity of the assessment.

The emergent framework with the five major themes is, therefore, intended for the improvement of the hybrid mode of delivery of learning at the secondary level of education, which was created based on the findings of the study.

Indeed, hybrid mode of learning by virtue of this framework shows the needed adequate preparation mentally, physically, and financially to support their learning deficiency [24]. Though a specific new learning space relative to the emergent theme effective classes are better separated into online and in-person which is a synchronous

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

hybrid or in the literature a blended learning environment in which both on-site and remote students can simultaneously attend learning activities much must be done and be considered [27]. Technology, therefore, plays a key role but the considerations to design for an effective online learning environment that meaningfully engages students will always remain complex [34]. Teachers' attitude toward virtual teaching is also an essential concern, especially when teachers are accustomed to the traditional approach (face-to-face) of education [17].

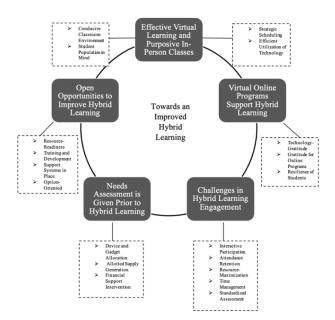


Figure 3. Emergent Framework Towards an Improved Hybrid Learning

The Emergent Framework Towards an Improved Hybrid Learning in Figure 3 presents the foundational dimensions upon which educational institutions must consider in improving the hybrid mode of learning delivery. The theme Effective Virtual Learning and Purposive In-Person Classes came into fruition based on the categories that schools must consider like a Conducive Classroom Environment, Student Population in Mind, Strategic Scheduling, and Efficient Utilization of Technology. The second theme, Virtual Online Programs Support Hybrid Learning reminds school administrators to be thankful of technology where the category Technology-Gratitude emerged, therefore they should maximize them in support of their online programs to help students cope remotely that is why in general the category Gratitude for Online Program emerged. The third theme, meanwhile, presents the reality of the difficulties that may arise in hybrid learning modality in terms of Interactive Participation, Attendance, Retention, Resource-Maximization, Time Management, and Standardized Assessment. Thus, the emergent theme, Challenges in Hybrid Learning Engagement emerged. The fourth theme, Needs Assessment is Given Prior to Hybrid Learning, on the other hand, reminds all stakeholders to prioritize and attend to the needs of both students and teachers in a hybrid set-up, that is why the following categories emerged like Device & Gadget Allocation, Allotted Supply Generation, and Financial Support Intervention. Lastly, the fifth theme captures the essence for schools to be dynamic in terms of the innovations that they may have in a hybrid learning environment. Hence, the theme Open Opportunities to Improve Hybrid Learning emerged that focuses on the following categories, Resource-Readiness, Training & Development, Support Systems in Place, and to be Option-Oriented.

In conclusion, the results yielded from the interview questions used in this study speak of the essence of the secondary teachers lived experiences in the hybrid classroom in the state of Arizona and other states in the United States of America.

As a result, the Emergent Framework Towards an Improved Hybrid Learning, which comprises the five major emergent themes is deemed necessary as an option for secondary-level teachers to consider to have an improved hybrid learning in class. The emergent framework also suggests that by virtue of the emergent themes, policy-making may be anchored on these five major themes as reference for a more effective development of teacher skills and competencies to handle hybrid learning classes in the future.

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

4. Conclusion

The study yielded the proposed Emergent Framework Towards an Improved Hybrid Learning which comprises five major emergent themes namely, 1) Effective Virtual Learning and Purposive In-Person Classes; 2) Virtual Online Programs Support Hybrid Learning; 3) Challenges in Hybrid Learning Engagement; 4) Needs Assessment is Given Prior to Hybrid Learning; and 5) Open Opportunities to Improve Hybrid Learning.

Secondary teachers made sense of the hybrid model of learning implementation that requires long-term planning and preparation based on their description of the structure of the hybrid classroom. Their gratefulness to the technology and online programs, and the encountered challenges that the reality of it brings, the support of the district to supply their needs and opportunities were also taken into consideration. The emergent framework was proposed for a proper development training program in the future to improve hybrid learning at the secondary level of education.

References

- [1] Adedoyin, O. B., & Soykan, E. (2020). Covid-19 pandemic and online learning: The challenges and opportunities. In *Interactive learning environments*. https://doi.org/10.1080/10494820.2020.1813180
- [2] Almenara, J. C., & Valencia, R. (2021). And COVID-19 transformed the educational system: reflections and experiences to learn. *Ijeri-International Journal of Educational Research and Innovation*, 15.
- [3] Aristika, A., Darhim, Juandi, D., & Kusnandi. (2021). The effectiveness of hybrid learning in improving of teacher-student relationship in terms of learning motivation. *Emerging Science Journal*, 5(4).
- [4] Awal, B., Wulan A., Muhammad, M., & AswarR., (2020). Effectiveness of Online Learning in Pandemic Covid-19. *International Journal of Science, Technology and Management.*
- [5] Baber, H. (2020). Determinants of students' perceived learning outcome and satisfaction in online learning during the pandemic of COVID19. *Journal of Education and E-Learning Research*, 7(3). https://doi.org/10.20448/JOURNAL.509.2020.73.285.292
- [6] Bowen, W., Chingos, M., Lack, K., & Nugren, T., "Online learning in higher education: Randomized trial compares hybrid learning to traditional course." Education next 13, no.2 (2013):58-65
- [7] Chaeruman, U. (2010). E-learning dalam pendidikan jarak jauh. Jakarta: Kemendiknas.
- [8] Damo, L. E., & Padagas, R. C. (2020). Can hybrid learning supplant the brick-and-stone classroom in teaching "strategies for academic success in college"? A focus assessment study. *Universal Journal of Educational Research*, 8(5). https://doi.org/10.13189/ujer.2020.080507
- [9] Degeng, N, S. (2013). *Ilmu Pembelajaran: klasifikasi variable untuk pengembangan terori dan penelitian.* Bandung: Aras Media.
- [10] Dewantoro, A., & Rachmawati, I. (2020). Analysis of evaluation and exploratory studies on student's resilience of online learning during pandemic of Covid-19. *KONSELI: Jurnal Bimbingan Dan Konseling* (*E-Journal*), 7(2). https://doi.org/10.24042/kons.v7i2.7422
- [11] Dong, C., Cao, S., & Li, H. (2020). Young children's online learning during COVID-19 pandemic: Chinese parents' beliefs and attitudes. *Children and Youth Services Review*, 118. https://doi.org/10.1016/j.childyouth.2020.105440
- [12] Dragicevic, N., Pavlidou, I., & Tsui, E. (2020). Use of hybrid classroom and open educational resources: Experience gained from a university in Hong Kong. *Proceedings of the 14th IADIS International Conference E-Learning 2020, EL 2020 Part of the 14th Multi Conference on Computer Science and Information Systems, MCCSIS 2020.* https://doi.org/10.33965/el2020_202007l001
- [13] Dwijonagoro, S., & Suparno, S. (2019). Pranatacara learning: Modeling, mind mapping, e-learning, or hybrid learning? *Cakrawala Pendidikan*, *38*(1). https://doi.org/10.21831/cp.v38i1.23034

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

[14] Hazwani Mohd N., Noor Raudhiah Abu B. and Norziah O. (2020). E-Pembelajaran Dalam Kalangan Pelajar Di Sebuah Institusi Pengajian Tinggi Selangor. Selangor. *Malaysian atas talian. Journal of Education*

- [15] Hofer, S. I., Nistor, N., & Scheibenzuber, C. (2021). Online teaching and learning in higher education: Lessons learned in crisis situations. *Computers in Human Behavior*, 121. https://doi.org/10.1016/j.chb.2021.106789
- [16] Irfan, F. and Iman Hermawan Sastra, K. (2020). Teachers Elementary School in atas talian Learning of COVID-19 Pandemic Conditions. Jakarta. *Jurnal Igra*.
- [17] Jacinto, M. J., & Alieto, E. (2020). Virtual teaching attitude and technological competence among English as Second Language (ESL) Teachers: Implications for the management of learning. *Asian EFL Journal*, 27(44).
- [18] Johnson, E., Morwane, R., Dada, S., Pretorius, G., & Lotriet, M. (2018). Adult learners' perspectives on their engagement in a hybrid learning postgraduate programme. *Journal of Continuing Higher Education*, 66(2). https://doi.org/10.1080/07377363.2018.1469071
- [19] Jusuf, H., Ibrahim, N., & Suparman, A. (2019). Developing a hybrid learning strategy for students' engagement in object-oriented programming course. *Universal Journal of Educational Research*, 7(9 A). https://doi.org/10.13189/ujer.2019.071610
- [20] Khalil, M. I., Humayun, M., & Jhanjhi, N. Z. (2021). COVID-19 impact on educational system globally. In *Studies in Systems, Decision and Control*, 324. https://doi.org/10.1007/978-3-030-60039-6_13
- [21] Kotowski, S. E., Davis, K. G., & Barratt, C. L. (2022). Teachers feeling the burden of COVID-19: Impact on well-being, stress, and burnout. *Work*, 71(2). https://doi.org/10.3233/WOR-210994
- [22] Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1. https://doi.org/10.1016/j.ijedro.2020.100012
- [23] Muhammad, A. & Kainat, A. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. Journal of Pedagogical Sociology and Psychology
- [24] Muslimin, A. I., & Harintama, F. (2020). Online learning during pandemic: Students' motivation, challenges, and alternatives. *Loquen: English Studies Journal*, *13*(2). https://doi.org/10.32678/loquen.v13i2.3558
- [25] Nørgård, R. T. (2021). Theorising hybrid lifelong learning. *British Journal of Educational Technology*, 52(4). https://doi.org/10.1111/bjet.13121
- [26] Peoples, K., (2021). How to write phenomenological dissertation a step-by-step guide. Qualitative research methods Vol. 56. Sage Publications
- [27] Raes, A., Detienne, L., Windey, I., & Depaepe, F. (2020). A systematic literature review on synchronous hybrid learning: gaps identified. In *Learning Environments Research*, 23(3). https://doi.org/10.1007/s10984-019-09303-z
- [28] Raes, A., Vanneste, P., Pieters, M., Windey, I., van den Noortgate, W., & Depaepe, F. (2020). Learning and instruction in the hybrid virtual classroom: An investigation of students' engagement and the effect of quizzes. *Computers and Education*, 143. https://doi.org/10.1016/j.compedu.2019.103682
- [29] Rahayu, R. P., & Wirza, Y. (2020). Teachers' perception of online learning during pandemic Covid-19. *Jurnal Penelitian Pendidikan*, 20(3). https://doi.org/10.17509/jpp.v20i3.29226
- [30] Rizal, D. (2017). hybrid learning of daviq.com in the subject of teaching listening and speaking. *Vision: Journal for Language and Foreign Language Learning*, 6(2). https://doi.org/10.21580/vjv6i21980
- [31] Sharma, S. (2010). Qualitative methods in statistics education research: Methodological problems and possible solutions. *Proceedings of the Eigth International Conference on Teaching Statistics*, 8.

eISSN: 2589-7799

2023 August; 6 (9s2): 1437-1452

- [32] Simon, M.K., & Goes, J., (2016). *Designing and interview questions for qualitative studies: Validation Rubric for Expert Panel (VREP).* The University of Phoenix, School of Advance Studies.
- [33] Soman, N., Afrin, T., Brody, B., Vetukuri, A., Vetukuri, A., O'Brien, C., Chan, K., Chowdhury, M., Douglas, A., Pandya, D., & Azeez, A. (2021, October 12). Predicting COVID-19's effects on education quality with arizona. ssrn.com. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3949122
- [34] Tay, L. Y., Lee, S. S., & Ramachandran, K. (2021). Implementation of online home-based learning and students' engagement during the COVID-19 Pandemic: A case study of Singapore Mathematics teachers. *Asia-Pacific Education Researcher*, 30(3). https://doi.org/10.1007/s40299-021-00572-y
- [35] Triyason, T., Tassanaviboon, A., & Kanthamanon, P. (2020). Hybrid classroom: Designing for the new normal after COVID-19 pandemic. *PervasiveHealth: Pervasive Computing Technologies for Healthcare*. https://doi.org/10.1145/3406601.3406635
- [36] UNESCO. (2020a). COVID-19 educational disruption and response. 2020. UNESCO. https://En.Unesco.Org/Covid19/Educationresponse
- [37] UNESCO. (2020b). *Covid-19 Impact on education data: COVID-19 education disruption and response*. United Nations Educational, Scientific and Cultural Organization.
- [38] van Slyke, C., Topi, H., & Granger, M. (2021). Special section: COVID-19, learning, pedagogy, and educational systems. *Communications of the Association for Information Systems*, 48(1). https://doi.org/10.17705/1CAIS.04841
- [39] Vijayan, R. (2021). Teaching and learning during the COVID-19 pandemic: A topic modeling study. *Education Sciences*, 11(7). https://doi.org/10.3390/educsci11070347
- [40] Xiao, J., Sun-Lin, H. Z., Lin, T. H., Li, M., Pan, Z., & Cheng, H. C. (2020). What makes learners a good fit for hybrid learning? Learning competences as predictors of experience and satisfaction in hybrid learning space. *British Journal of Educational Technology*, 51(4). https://doi.org/10.1111/bjet.12949
- [41] Yuzulia, I. (2021). The challenges of online learning during pandemic: students' voice. *Wanastra: Jurnal Bahasa Dan Sastra*, 13(1). https://doi.org/10.31294/w.v13i1.9759
- [42] Καρβούνης, Λ. Αλκ., & Αναστασιάδης, Π. (2019). The importance of "teaching presence" and the new role of the teacher in contemporary learning environments focusing on pedagogical exploitation of interactive videoconferencing. Ανοικτή Εκπαίδευση: Το Περιοδικό Για Την Ανοικτή Και Εξ Αποστάσεως Εκπαίδευση Και Την Εκπαιδευτική Τεχνολογία, 15(1). https://doi.org/10.12681/jode.18961