



Learning Process Interventions in HyFlex Modality Teaching

Joshua Jan N. Kodangos¹, Mary Conn P. Castro², Mary Joy T. Taplin³

¹dangothandan@gmail.com, ²YuseiFudo.143@gmail.com, ³mjtaplin10@fmail.com

MED 500 – Research Design and Methodology

University of the Cordilleras

Baguio City, Philippines

ABSTRACT

The advancement in technology which was further enforced by the Pandemic gave rise to developing educational institutions in employing the HyFlex modality. This leads to teachers deliberately planning their lessons and adjusting their teaching strategies. Likewise, studies on HyFlex modality on the perspective of the teachers are limited. Thus, this study aimed to determine the challenges of the teachers in their HyFlex teaching to plot an action plan that will serve as guide in HyFlex instruction. Moreover, the study make used of a qualitative research design, specifically, a phenomenological and grounded theory approach. The phenomenological approach was used in the determination of the experiences of the teachers whereas, grounded theory was used to come up with interventions that may help in an efficient instruction under the flexible modality. The researchers then gathered the data from teachers of one private institution in Baguio City that utilized the HyFlex modality in the previous academic year. Likewise, a thematic analysis was used to analyze the collected data form the participants. Findings reveal that teachers were challenged by technical difficulties, limited interaction, implementing group activities, facilitation and classroom management, surveillance and monitoring, lack of training, utilizing traditional tools, and laborious set-up. It is therefore recommended to follow the procedures from the action plan for improved HyFlex instruction resulting to a quality learning process amongst students. Likewise, it is recommended for future researchers to replicate a similar study which is quantitative in nature.

Keywords: Teaching through HyFlex modality, challenges of educators, learning process intervention, teacher's perspectives

1. INTRODUCTION

Quality learning refers to the learning that is purposeful to which learners are provided with the ability to effectively learn, retain skills, and knowledge gain; and is usually associated with or based on student satisfaction with the learning process (Thindwa, 2016). On the other hand, teaching modality pertains to the method or approach employed by educators to convey lessons and facilitate learning. There are different types of teaching modalities, namely blended, face-to-face, hybrid, HyFlex, and online.

HyFlex is derived from “hybrid learning” with “flexible approach”, a course that enables a flexible participation policy for students (Beatty, 2014 as cited in Villegas et al., 2023). In addition, the HyFlex modality is a combination of traditional face-to-face instruction with additional distance learning techniques, and by combining independent knowledge and collaborative activities with the use of a variety of e-materials, technology, and, or social media sites (Villegas et al., 2023). In this study, HyFlex modality is defined as the simultaneous conduct of face-to-face and online learning.

The COVID-19 pandemic significantly disrupted traditional educational practices, leading to a sudden shift towards remote teaching and virtual learning environments. HyFlex emerged as an alternative to traditional classroom teaching due to its adaptability and inclusivity. Different institutions such as Mabalacat City Colleges and Malayan Colleges Mindanao have adopted and implemented HyFlex as also a part of the new normal learning modality.

As educational institutions plan to continue HyFlex teaching, it is essential to understand the challenges and explore ways to ensure a quality learning process in this modality. In line with this, (Fuentes, 2022) states that classes can take place in a physical setting where students are present in the room. Alternatively, there is also the option for students to participate remotely online, with the teacher overseeing their attendance on a large screen situated at the back. A news article of (Hilario, 2023) from Manila Bulletin conveys that the primary advantage of this modality is that it provides learners with increased opportunities to participate in classes. Conversely, it also enables students within the traditional classroom setting to engage in interactive learning with the aid of cutting-edge technologies.

HyFlex modality creates an inclusive learning environment by allowing students to easily switch between in-person and virtual engagement based on their needs. It provides interactive learning to both in-class and remote students by utilizing modern technology. This adaptable approach improves accessibility and student engagement, making it useful in contemporary education.

This study seeks to identify the challenges encountered by educators in teaching through Hyflex modality with the current technological improvements. This modality comes with certain difficulties. Studies show that the common challenges encountered by educators in implementing Hyflex modality are

technical issues, high workload, and low level of student engagement (Brown, 2021; Boehm & Boerboom, 2023; Boylan et al., 2022; Padilla Rodriguez, 2022; Wong et al., 2023).

According to Wong et al. (2023), one of the setbacks of Hyflex is technical problems such as unstable networks and lack of required equipment. Likewise, Padilla Rodriguez (2022) mentioned that teachers had limited availability of digital devices equipped with suitable webcams and microphones and the internet failed when multiple classes were being streamed simultaneously.

Another challenge arises from an excessive amount of work. Planning and managing Hyflex courses were seen as challenging and time-consuming. Hyflex modality teaching requires lots of work from designing the course for in-person and online students to managing different groups of students and technology in real-time (Boehm & Boerboom, 2023).

Teachers had to invest significant effort into preparing and conducting two distinct sets of materials, one for students attending in person and another for those participating remotely, for every class session (Padilla Rodriguez, 2022). Also, keeping students engaged in a Hyflex setting is a struggle for educators. In the study of Leung and Kearns (2022), an instructor said that they had trouble keeping the remote students interested and participating throughout the entire class.

Furthermore, this study aims to discover the learning process interventions to improve the Hyflex classroom. Different studies presented various interventions mediated by technology that were implemented in HyFlex classes. Wong et al. (2023) found that the common practices of Hyflex learning are livestreaming and recorded lectures for online students, learning management systems/learning platforms, putting students into groups, and discussion forums and chat tools.

In addition, Boylan et al. (2022) stated that the lecturers utilized a mix of different technologies such as computers, drawing tables, visualizer, and even a Swivl Robot - which followed them around the room and provided better audio for remote participants. In connection, other educators made use of online software tools namely Tinkercad and Nearpod were utilised to provide information and involve students (Leung & Kearns, 2022). On the other hand, the study of Linvill and Wallen (2022) presented other methods such as building community, patience with participation, and rewarding engagement.

Statement of the Problem

From the discussed research gaps and the need to study HyFlex modality, this study seeks to assess HyFlex modality in the perspective of the teachers. Specifically, it seeks to answer the following questions:

1. What are the challenges encountered by educators in teaching through HyFlex Modality?
2. What are the learning process interventions to improve the HyFlex classroom?

2. METHODOLOGY

This section discusses the materials and methods employed to complete the research. It presents the research design, population, locale of the study, data gathering instruments, and analysis of data.

Research Design

This study used a qualitative research approach, precisely, the phenomenology model for the first problem. A phenomenology model seeks to find out the different experiences, phenomena, and perspectives of a person. Phenomenological studies investigate human lived experiences through qualitative descriptions shared by the people involved. Consequently, a grounded theory approach was used to analyse the second problem. It's a qualitative approach that seeks to create a theory from the patterns of the retrieved data.

Population and Locale of the Study

The participants of this study are the teachers who have taught in the HyFlex set-up from the last academic year. Specifically, three teachers specializing with physical education, three for Filipino, three from social studies, one for English, two from mathematics, 1 from science, and two from general education. This totals to 15 participants in all. Moreover, the research was conducted at the Berkeley School, Baguio City, Philippines.

Data Gathering Instruments

The study utilized an interview guide containing the necessary questions to determine the challenges and learning interventions of the teachers. The research questions used to gather data were validated by both experts in research and in education. Further, the researchers interviewed the key informants through a one-by-one virtual and onsite interview to be able to produce honest and confident answers.

Analysis of Data

A thematic analysis was used to determine the challenges encountered and learning interventions in the teaching practice under the HyFlex modality. According to Braun & Clark (2006), the thematic analysis identifies and analyzes qualitative data focused on reporting patterns or themes within the data. There are different steps in the process of thematic analysis. It includes transcribing the collected data into written documents, reading and re-reading, familiarizing the data, coding, thematizing, reviewing, and finalizing themes.

3. RESULTS AND DISCUSSION

This part presents the salient findings of the study. It also discusses the collected data, its analyses, and its interpretation.

The table below shows the derived challenges from the participants of the study. There were 8 derived themes from the analysis of data, namely, technical difficulties, inadequate interaction, facilitation, and classroom management, surveillance concerns, implementing group activities, lack of orientation, difficulty utilizing traditional tools, and laborious set-up.

Table 1

Challenges Encountered by Educators in Teaching through HyFlex Modality

Themes	f	Sample Responses
Technical Difficulties	15	“Internet connectivity (no connection/slow/weak connection)”
Inadequate Interaction	10	“The interaction of the onsite students to online students is limited.”
Implementing Group Activities	9	“It’s difficult to group the ones onsite to the online ones. We cannot just half the screen for them to talk.”
Facilitation and Classroom Management	9	“It’s hard to manage these two-learning space together especially if students in the different modality is noisy”
Surveillance Concerns	8	“In the onsite, you can monitor the child, whereas the online students, we don’t know if they are the ones really doing it.”
Lack of Orientation	6	“The training that I have attended before is not sufficient, since it is more theoretical”
Utilizing Traditional Tools	5	“It’s hard to use the blackboard to teach something.”
Laborious Set-up	4	“Setting up can be burdensome”

Technical Difficulties

Technical difficulties came out as the top problem in the Hyflex set-up which is evidently supported by the 15 agreed responses of the 15 teacher participants. This highlight response pertains to the challenges in using technological educational tools in the process of HyFlex teaching. Specifically, this includes internet connection problems, lack of good sound quality, limitations in the gadgets, incompatibility of devices, and adjusted presentations. As a result, the teaching process is disrupted, and the learning process is delayed. This finding is similar the results of Wong et al. (2023), in which technical problems such as an unstable network and lack of required equipment are a challenge for teachers.

Inadequate Interaction

Second to technical difficulties is inadequate interaction which refers to insufficient engagement amongst the onsite students, online students, and classroom teachers. This coincides with the study of Boylan et al. (2022) which indicated that subsequent to the primary challenge of technology in implementing a HyFlex model, the most substantial hurdle pertains to learner engagement and the difficulty of engaging with both face-to-face and remote cohorts at the same time. Factors such as passivity in students, lack of time, and noisy environments contribute to this challenge.

Implementing Group Activities

Nine participants agreed that conducting group activities is difficult in the Hyflex setup. One participant mentioned that “It’s difficult to group the ones onsite to the online ones. We cannot just half the screen for them to talk”. Likewise, another participant said that it will be time-consuming to group the onsite students with the online students as they must talk through another channel such as video teleconferencing.

Group activities inherently rely on face-to-face interactions and physical proximity, which can be challenging to replicate in virtual or offsite learning environments. The absence of direct visual and social cues in online interactions can hinder the information of cohesive groups, potentially leading to reduced engagement and unequal participation. Additionally, variations in time zones, availability, and internet connectivity further complicate the process of synchronizing group activities for both online and offline students.

Facilitation and Classroom Management

In an ongoing HyFlex class, facilitation and management are seen to be the hardest. Simultaneously checking both the online and onsite students together means a double workload when compared to the traditional onsite class. It becomes the hardest especially if students are noisy and their activeness is

uncontrollable already. Thus, setting ground rules at the beginning of the school year is crucial in order to achieve a meaningful and continuous teaching-learning process.

Surveillance Concerns

Surveillance concerns are similar to the monitoring of the learners' work or output. A participant of the study stated, "In the onsite, you can monitor the child, whereas the online students, we don't know if they are the ones really doing it". From this statement itself, it is a struggle on the side of the teachers to monitor the work of the online class which is done simultaneously with the onsite one. In addition, part of monitoring is providing immediate feedback too, hence, it is easier to provide immediate feedback to those that are in the onsite cohort.

Lack of Orientation

Lack of orientation is a realization from the participants during their implementation of the HyFlex class. As they navigate and balance everything whilst ensuring the quality delivery of lessons, their lack of experience and practice makes it uncomfortable for them. The usual response is that the training that they have attended regarding HyFlex is theoretical in nature only. Therefore, they were not able to have sufficient practice to teach under this modality which supposedly results in mastery. Consequently, some of the participants even mentioned that they have just learned some good practices along the way. This confirms the study of Rodriguez (2022) mentioning that teachers had to engage in self-directed learning, and despite their efforts, they still encountered unresolved questions.

Utilizing Traditional Tools

It is evident that educational technology tools are mainly used in the delivery of lessons in the HyFlex set-up. This is fully utilized in order to cater to both onsite and online classes. This results in a decrease in the utilization of traditional tools such as blackboards, paper cutouts, and other creative instructional materials. On the side of the teachers, there are certain lessons such as topics in mathematics that require a step-by-step portrait of solutions. The idea of using blackboards and printed posted cut-outs make it interesting for the ones in the onsite class but is disadvantageous to those who are online. On the bright side, the development of applications and devices to substitute the traditional blackboard should be strengthened in order to compensate for the decrease in the use of traditional tools.

Laborious Set-up

Four out of fifteen participants mentioned that preparing devices is laborious and it adds to the given workload of the teachers. Teachers need to dedicate considerable time and effort to preparing and managing the technical aspects of HyFlex. This includes configuring devices, troubleshooting technical issues, and ensuring a seamless transition between in-person and online components of the class. Further, the time spent on setting up devices and managing technical aspects of the HyFlex setup might divert the teachers' attention and resources away from instructional planning, content development, and engaging with students. This can potentially affect the quality of teaching and the overall learning experience.

On the contrary, some participants posited that once a teacher masters the art of setting the HyFlex device, then the struggle will lessen. This reflects a learning curve that educators experience when adopting new technologies, as they gradually develop proficiency and confidence in managing the technical aspects of their teaching setup.

4. CONCLUSION AND RECOMMENDATIONS

This section presents the conclusions and recommendations derived from the salient findings of the study.

Conclusions

Taking into consideration the salient findings of this study, the researchers was able to arrive at the following conclusion:

1. HyFlex Modality teaching poses a variety of difficulties which are technical difficulties, low level of engagement, group activity implementation, simultaneous facilitation, monitoring concerns, insufficient teacher training programs, utilization of traditional tools, and laborious set-up of needed tools.
2. An action plan for HyFlex teaching is created to tackle the abovementioned difficulties which can be used and attended by fellow educators who plans in utilizing the HyFlex set-up.

Recommendations

Based on the conclusions, the researchers were able to generate the following recommendations:

1. Ease the difficulties of teachers by following the proposed plan for quality learning process in HyFlex learning modality teaching.
2. Replicate the similar study that is quantitative in nature which focuses on the significant underlying factors affecting teacher's struggles.
3. Improve on the action plan through evaluation of the program itself after its first implementation.

ACKNOWLEDGEMENT

The researchers would like to give their gratitude to everyone who supported them throughout their journey in writing this research paper.

Firstly, to Almighty God who gave the researchers knowledge, patience, and strength to conduct this study and for keeping them dedicated throughout the extent of this study. This research paper was only possible in the presence of his favor and grace.

Foremost, we would like to express our appreciation and gratitude to our adviser Dr. Marcelino Agnawa Jr. for his patience, motivation, enthusiasm, and immense knowledge. For the outstanding advisement and supervision during the processes of the research. His guidance helped us in the completion and polishing of this study.

Besides our adviser, the researchers would like to thank their parents, friends, classmates, schoolmates who participated and responded to the surveys, and their instructors for the guidance, support, and encouragement in the process of completing this research.

- The Researchers

APPENDICES

Action Plan for HyFlex Teaching: Enhancing Quality Learning Processes

Introduction: HyFlex teaching, which combines in-person and online instruction, has gained significant attention due to its flexibility and potential to offer quality education. This action plan outlines a set of programs aimed at supporting teachers in delivering effective HyFlex instruction while maintaining a high standard of learning quality. The plan focuses on enhancement training, resources, assessment, and continuous improvement. Finally, the plan shall be conducted through a series of **seminar workshop**. Below is just a sample plan for the implementation of the program.

Seminar Work Shop

Objectives:

1. Equip teachers with the necessary skills to effectively design and facilitate HyFlex learning experiences.
2. Train teachers in the proficient use of technology required for seamless HyFlex instruction.
3. Assist teachers in adapting course materials for both in-person and online modalities.
4. Enable teachers to create equitable assessments that evaluate both in-person and online students fairly.
5. Establish mechanisms for ongoing improvement based on teacher feedback and student outcomes.

Proponents: The researchers and invite speakers

Audience: Teachers and administrators

Dates: The series will be held every Saturdays of the month of October 2023.

Venue: University of the Cordilleras G311 Hall.

Enhancement Program 1: HyFlex Pedagogy Orientation and Training

Date: October 7, 2023

Speakers: Researchers and Invited Experienced Teachers in HyFlex Instruction

Activities:

1. Define HyFlex instruction and differentiate it with other learning modalities such as hybrid, blended, and online instruction.
2. Offer technology orientation sessions to familiarize teachers with the learning management system (LMS), virtual classroom tools, and multimedia resources. This includes basic configuration in teleconferencing applications.
3. Foster a community of practice where teachers can share experiences, challenges, and innovative ideas related to HyFlex teaching.
4. Provide training resources such as video tutorials, guides, and best practice documents.

Enhancement Program 2: Technology Proficiency Enhancement

Date: October 14, 2023

Speakers: IT experts and Invited Experienced Teachers in HyFlex Instruction

Activities:

1. Continue the orientation on technology orientation sessions to familiarize teachers with the learning management system (LMS), virtual classroom tools, and multimedia resources.
2. Provide ongoing technical support for troubleshooting and addressing technology-related issues.
3. Collaborate with the Information Technology experts to organize training sessions on new tools and updates.
4. Practice efficient setting of needed HyFlex tools to ensure time saving practices amongst teachers.
5. Provide training resources such as video tutorials, guides, and best practice documents.

Enhancement Program 3: Learning Material Adaptation and Classroom Engagement Strategies

Date: October 21, 2023

Speakers: IT experts and Invited Experienced Teachers in HyFlex Instruction

Activities:

1. Develop guidelines for transforming traditional course content into formats suitable for in-person and online learners.
2. Encourage the creation of multimedia resources, such as video lectures, interactive quizzes, and discussion prompts.
3. Provide access to a repository of pre-designed learning objects that align with different teaching styles.
4. Have a quick drill on some effective prompting techniques including group collaboration procedures.

Enhancement Program 4: Assessment Strategies Alignment

Date: October 28, 2023

Speakers: Researchers and Invited Experienced Teachers in HyFlex Instruction

Activities:

1. Conduct workshops on designing authentic assessments, including collaborative projects, presentations, and online quizzes.
2. Emphasize the importance of rubrics and clear grading criteria to maintain transparency and consistency.
3. Explore technology-enabled assessment tools that allow for both synchronous and asynchronous evaluations.

Program 5: Continuous Improvement and Feedback Loop

Date: October 28, 2023

Speakers: Researchers and Invited Experienced Teachers in HyFlex Instruction

Activities:

1. Implement regular surveys and feedback mechanisms to gather input from both teachers and students regarding the effectiveness of the HyFlex model.
2. Analyze assessment results, learning analytics, and student engagement data to identify areas for enhancement.
3. Facilitate regular reflection sessions where teachers can share their experiences, successes, and challenges, fostering a culture of continuous improvement.

Through the execution of this all-encompassing strategies for HyFlex teaching, educators will possess the necessary tools to deliver a top-tier learning encounter for students attending both in-person and online sessions. Uninterrupted support, training, and cooperation will cultivate an atmosphere of creativity, advancement, and exceptional HyFlex instruction.

REFERENCES

- Boehm, M., & Boerboom, S. (2023). Faculty experiences of HyFlex: An exploratory study. *Educational Research: Theory and Practice*, 34(2), 43-47. http://www.nrmera.org/wp-content/uploads/2023/05/V34-2_8-Boehm-Boerboom_Faculty-experiences-of-HyFlex.pdf
- Boylan, F., Gorham, G., Gorman, C., Harvey, J., Lynch, L., Minto, N., & Mottiar, Z. (2022). Trialling HyFlex at TU Dublin—stakeholders' voices and experiences. *Irish Journal of Academic Practice*, 10(2), 3. <https://orcid.org/0000-0001-9893-4132>
- Brown, T., & Tenbergen, B. (2021, July). Teaching Software Quality Assurance (SQA) During COVID-19 Using the HyFlex Approach -- Course Design, Results, and Experiences Paper presented at 2021 ASEE Virtual Annual Conference Content Access, Virtual Conference. <https://peer.asee.org/37820>

- Fuentes, A. (2022, March 23). PH Education Going “HYFLEX” in new normal: Lenovo. PH education moving towards ‘hyflex’ setups in new normal: Lenovo. <https://news.abs-cbn.com/business/03/23/22/ph-education-going-hyflex-in-new-normal-lenovo>
- Hilario, E. (2023, February 27). Shaping the future of learning with HYFLEX model. Manila Bulletin. <https://mb.com.ph/2023/02/27/shaping-the-future-of-learning-with-hyflex-model/>
- Leung, E., & Kearns, J. (2022, August). Using a Hyflex Learning Format in a Second-year Mechatronics Course. In 2022 ASEE Annual Conference & Exposition. <https://peer.asee.org/40842.pdf>
- Linville, C., & Wallen, B. M. (2022, August). Effectiveness of a Hyflex Teaching Pedagogy in Environmental Engineering Education on Student Performance and Course Outcomes. In 2022 ASEE Annual Conference & Exposition. <https://peer.asee.org/40708.pdf>
- Padilla Rodriguez, B. The Rise and Fall of the HyFlex Approach in Mexico. TechTrends 66, 911–913 (2022). <https://doi.org/10.1007/s11528-022-00780-3>
- Thindwa, H. (2016). The role of technology in improving quality of teaching in higher education: An international perspective. Teacher education: Concepts, methodologies, tools, and applications, 207-227. DOI: 10.4018/978-1-4666-8170-5.ch003
- Villegas, E. S., Omayao, K. A. A., & Potane, J. D. (2023). Teachers’ Readiness Level for the Implementation of Hyflex Instructional Modality. https://www.researchgate.net/profile/Joel-Potane/publication/369139640_Teachers'_Readiness_Level_for_the_Implementation_of_Hyflex_Instructional_Modality_International_Journal_of_Innovative_Science_and_Research_Technology_ISSN_No-2456-2165/links/640b3959315dfb4cce6ed154/Teachers-Readiness-Level-for-the-Implementation-of-Hyflex-Instructional-Modality-International-Journal-of-Innovative-Science-and-Research-Technology-ISSN-No-2456-2165.pdf