HyFlex instruction in international classes:
Faculty and students' experiences from two universities

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ARTICLE INFO	ABSTRACT
	This case study conducted by two partner universities from the ASEAN region was participated in by 27 international students enrolled in HyFlex classes and eight (8) faculty members who utilized HyFlex as their instructional approach in handling their international classes. This study aimed to draw insights from the student's and faculty members' experiences on the implementation of Hyflex instruction in international classes of two universities. Several limitations in using this novel approach surfaced, such as those related to different rules in online and onsite classes, lack of smart classrooms and poor connectivity, and language barriers among students and faculty, especially when negotiating through cooperative interaction. HyFlex instruction may be innovative but implementing it in international classes is much more complicated than anticipated. For this approach to be an effective platform for teaching and learning, all stakeholders must be ready physically, mentally, and emotionally and must be technically capable. Universities need to set policies appropriate for this mode and invest in soft and hard infrastructures which must be well-established and accessible to all participants. Nevertheless, HyFlex instruction provides opportunities for higher education institutions to implement partnerships with other universities and continue collaborating post-pandemic and beyond.

1. Introduction

The operations of Higher Education Institutions (HEIs) globally were stupefied by Covid-19 in 2020. While it seems that universities were caught in the middle of nowhere, they learned to be resilient. Many, if not all of them, were able to thrive by doing flexible, blended, or online learning. After two years of paralysis, as restrictions eased, students were welcomed back to the four corners of the classrooms. HEIs began opening their gates to students and other stakeholders. Slowly, they are doing face-to-face learning again, following safety and health protocols such as wearing masks and social distancing. Much has changed though. Classrooms, for instance, were re-created and re-invented making them suited for classes in full capacity.

A major re-creation and re-invention in the teaching and learning process that surfaced after the pandemic is the HyFlex instruction. HyFlex (Beatty, 2019) is a coined term from the words "hybrid" and "flexible." Abdelmalak and Parra (2016) stated that the primary

characteristic of HyFlex is the combination of synchronous online and face-to-face components (hybrid) in a singular course, with students choosing when and how to attend (flexible).

In addition, Rosen (2021) purported three benefits of using HyFlex instruction. First, if students have a reliable internet connection and a computer with video conferencing software, they can always access the class. Second, lectures captured in the video are readily accessible and available in online archives. Third, students have more freedom to choose what works best for them. Also, Miller, Risser, and Griffiths (2013) stated that the use of HyFlex instruction in adult and higher education is said to improve accessibility, convenience, and adaptability as a means of enhancing adult students' educational opportunities be it synchronous, asynchronous, or through LMS classes. However, Kohnke and Moorhouse (2021) threw intriguing speculation. They posited that HyFlex instruction is challenging in encouraging participation and interaction among students, especially during group or pair work.

Abdelmalak and Parra (2016) disclosed that participants viewed HyFlex instruction as an excellent way to accommodate student needs and life circumstances, increase student access to course content and instruction, differentiate instruction to meet diverse learning styles and strategies of adult students, and give students a sense of control over their learning. Romero-Hall and Ripine (2021) specified that before implementing HyFlex instruction for a course, substantial support and resources are required. Mentzer, Isabell, and Mohandas (2023) also stated that HyFlex instruction implementation affects students' basic psychological needs, such as autonomy, competence, and relatedness.

HyFlex instruction mushroomed and was implemented at Higher Education Institutions (HEIs) during the Covid-19 pandemic. Both universities from Indonesia and the Philippines, which have had a mutual partnership since 2020, continued the cooperation, especially in the academic area, such as student exchange and visiting professor program. Despite the pandemic, they committed to continuing the program online. Thus, the use of HyFlex instruction is one of the solutions to achieve the partnership's goal.

In a recent study by Miller, Sellnow, and Strawer (2021), Tonna et al. (2023), they suggested that the implementation of HyFlex instruction needs course adaptation to the problems and potentials it brings. According to them, to enable remote teaching, redesign teaching, and rethink technology, educators must change their practices.

HyFlex instruction may be the future of international classes as it may be the central component of higher education institutions in moving forward with their internationalization initiatives. The researchers inflate their concentration and placed an effort into studying this e-learning/online teaching modality, which is still less explored, rooted in Alex's (2021) suggestion on the new areas for research topics in internationalization initiatives of higher education institutions in Southeast Asia. Hence, this work attempted to answer the research question: What insights can be drawn from the experiences of the faculty and students on HyFlex instruction?

2. Theoretical basis

The study is anchored on the Community of Inquiry (CoI) model for online learning environments developed by Garrison, Anderson, and Archer (2000). The theory posits the concept of three distinct "presences" - cognitive, social, and teaching. The Community of Inquiry model chains online and blended courses designs as dynamic learning environments or communities reliant on instructors and students sharing thoughts, information, and views.

In international classes using HyFlex instruction of the two partner universities implementing International Credit Transfer (ICT) online, it is theorized that the three "presences" as social phenomena are manifested in the teaching and learning experiences of the Indonesian and Filipino faculty and students. In the HyFlex setup for international classes, the local students enjoy physical mobility while the international students remain in their home universities as they attend their classes in a HyFlex mode. Filipino and Indonesian students took five subjects from both universities respectively. The course consisted of 14 sessions.

The "cognitive presence" is theorized to be evident through the scheduling of the sessions. Where at the Indonesian university, sessions were delivered once weekly, and each session was two hours, while at the Philippine university, it was delivered twice weekly, with each session held for one hour. The "teaching presence," meanwhile, is posited to be reflected through the platforms and technologies used where both universities offered the course in the HyFlex mode, with the instruction being provided through Zoom or Google Meet, face-to-face in the classroom, and used Learning Management Systems (LMS), such as e-LMA and Google Classroom. The faculty taught the lesson using Zoom or Google Meet to stream the live session. Thus, students could attend in real-time; for example, the students from the Philippines who enrolled and took one subject or course in Indonesia attended an online class, while Indonesian students (local students) attended face-to-face mode, and vice versa. Previous research has contributed to revealing the practices, benefits, and challenges of the implementation of HyFlex instruction (Lakhal, Mukamurera, Bédard, Heilporn, & Chauret, 2020; Malczyk, 2019; Wong, Li, Chan, & Cheung, 2022); and its challenges and opportunities (Binnewies & Wang, 2019; Miller et al., 2021).

The "social presence," on the other hand, is assumed as mirrored through the activities and assessments or evaluation tools employed by the faculty including classroom management in which to facilitate and promote participation, the faculty utilized various features, for example, breakout rooms in which students could discuss, interact, and accomplish assignments or questions from the lecturers. In addition, the faculty also used online collaboration such as Google Docs, Padlet, and Mind Map, where students can share their opinions, post notes, and collaborate to answer questions. In the middle of teaching, faculty conduct quiz sessions using Mentimeter and Jamboard for asking and students responding to questions about course content, materials, and others. Several literatures affirmed the positive impact of the "social presence" of HyFlex instruction. Mentzer, Isabell, et al. (2023) found that when HyFlex instruction is done interactively and engagingly, 70% of the students expressed appreciation for its convenience, time efficiency, and flexibility. Furthermore, in the same study by Mentzer, Krishna, Kotangale, and Mohandas (2023), it was revealed that the student passing percentage achieved through HyFlex instruction, when compared to that of traditional in-person classrooms, was similar. However, students' academic performance was quite higher in HyFlex instruction. Tonna et al. (2023) also confirmed the effect of HyFlex instruction on the cognitive and academic performance of the students.
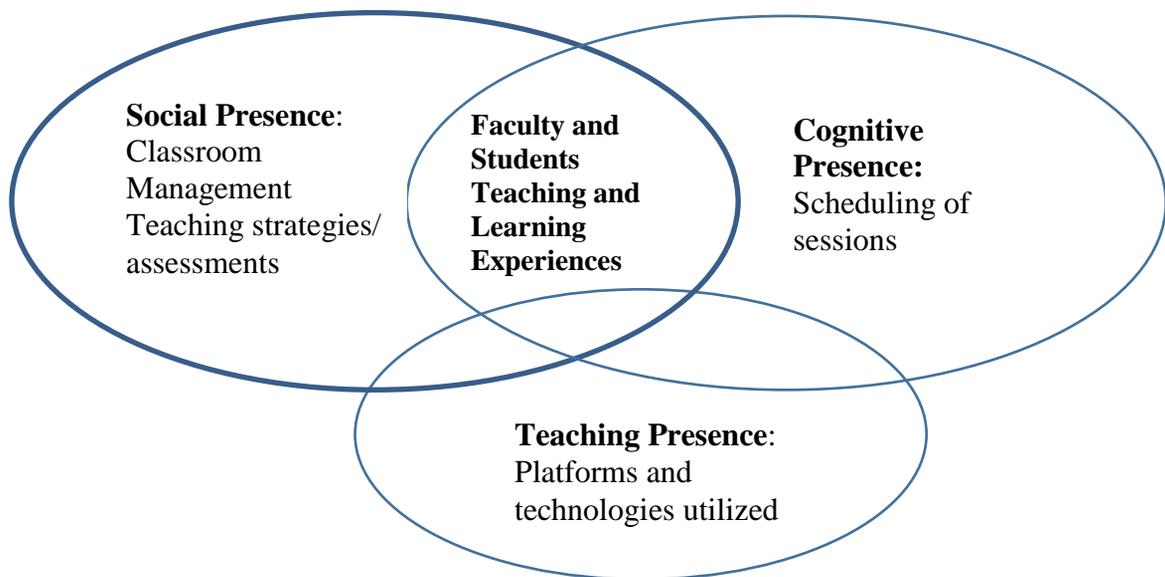
Figure 1. Theoretical framework of the study

3. Methodology

This research is designed with the descriptive qualitative research approach with a case study. The case study examines and develops an in-depth description and analysis of a case or multiple cases. A case can be based on a person, a group of people, a classroom, a school, or even an event (Mertens, 2009). The case study method lets researchers keep the whole and important parts of real-life events (Yin as cited in Bartlett & Vavrus, 2016). The qualitative case study can be described by how the investigation is done, the unit of analysis (the bounded system, the case), or the result. A case study is a detailed, all-around analysis and description of a single thing, event, or social unit (Merriam, 1998).

Anchored on this design, this work necessitated the participation of three Filipino teachers from the Elementary Education Department and five Indonesian faculty members from the Primary Education Department, Biology Education, Physics Education, and English Education, 12 outbound Filipino students, and 15 inbound Indonesian students enrolled during the 1st semester of SY 2022 - 2023 from those departments. All participants were selected purposively. Both universities provided the course in the HyFlex mode, where instruction was delivered online or mixed. Online means the use of the Video Conferencing System (VCS), Zoom, or Google Meet. A mixed method of delivery means some students are online while other students are present in the classroom in real time.

Table 1

Demographic profile of faculty participants and mode of delivery of the HyFlex instruction

Faculty participants	Gender	Department	Mode of Delivery
Philippine university			
A	Female	Elementary Education Department	Online
B	Female	Elementary Education Department	Online
C	Male	Elementary Education	Online

Faculty participants	Gender	Department	Mode of Delivery
Indonesian university			
D	Female	Biology	Mixed
E	Female	English	Online
F	Male	Primary	Mixed
G	Female	Primary	Online
H	Male	Physics	Online

Source: Registration forms of participants

The researchers employed face-to-face interviews and Focus Group Discussions (FGDs) with the faculty and student participants from both universities, respectively. For the Filipino participants, the FGD was held first before the interviews. Twelve students and one faculty were captured in an almost one-hour discussion. Meanwhile, in a separate event, five students and two faculty members were individually interviewed. The main author decided to do this to validate some data which transpired from the FGD. The co-author, after the semester ended, held a one-hour FGD with five faculty and 15 outbound students. To validate the results of the FGDs, in-depth face-to-face interviews were also conducted with two faculty members and five students which lasted for 20 to 30 minutes for each participant. The FGDs and interviews were conducted using the local language, Bahasa. The FGD questions focused on the implementation, challenges, and opportunities offered by the HyFlex instruction. The interviews which were not constrained, meanwhile, highlighted the students and faculty members' HyFlex instruction experience reflected through their spontaneous sharing of their narratives and stories.

The data sets were transcribed in toto independently by two coders: a Filipino faculty and an Indonesian faculty. To maintain objectivity, these coders who were tapped were not faculty participants in the study. Open coding was used to connect and classify the data, which guided the researchers in formulating the themes.

4. Results and discussion

To answer the research question, what insights can be drawn from the HyFlex instruction experiences of the students and faculty? Three major themes emerged from the data: employing two sets of rules in the class, lack of smart classrooms and poor internet connectivity, and intensified language barrier. The first theme, employing two rules, capsulizes how the onsite teacher manages two classes simultaneously and how the students cope with this setup. The second theme, the lack of smart classrooms and poor internet connectivity reveals the insufficiency of hard and soft infrastructures necessary to use the HyFlex instruction. The last theme intensified the language barrier, reflecting how the approach added to the need for more use of English as a medium of instruction and communication in international classes.

Theme 1. Employing two sets of rules in the class

Based on the interviews, the faculty members confessed the difficulty of implementing two sets of policies or rules and regulations inside the class at the same time. They admitted that they must adjust to these two rules. The Filipino teachers revealed that there is no existing policy for HyFlex classes, and they did not receive any training beforehand thus, implementing their own devised policies was like "experimenting".

The primary education teacher shared, "*I have to keep track of the discipline for the onsite and online students. This was hard, I admit, I had a difficult time monitoring if they really follow through the lessons or they are even listening*".

A secondary education teacher had the same sentiments, "*When the onsite students are noisy, the online students are distracted, actually all of us are distracted. I have to be very strict with the onsite students, rules inside the class are different now. Like, if the students would pee, they have to go to the restroom after the class. Thus, when they come to the class, they have to sit there the entire time. This is to avoid the distraction*".

Unlike the teachers who felt prepared to use the HyFlex modality in the courses they were teaching based on the study of Romero-Hall and Ripine (2021), Filipino teachers were not equipped to create and deliver HyFlex classes. They were not given opportunities to learn and acquire the new skills needed in managing these kinds of classes as emphasized too by Ugwu (2021) that to create and offer HyFlex courses, faculty members should be equipped with new knowledge and abilities.

Relatively, students also whined about the new setup. A Filipino education student disclosed, "*Movements inside the class, distract the whole class. Even us, onsite students are not comfortable. The teacher becomes anxious sometimes if we truly grasp the lesson for the day. In the HyFlex class, one rule is we must be sensitive to all participants, be it onsite or online*".

A math major also pointed out the confusion of the two sets of rules. "*It [was] only in the middle of the semester that I realized that I was in a HyFlex class. And that students in the class follow the rules for onsite students while those joining virtual also have their own rules to follow, this was quite confusing. We should have been informed from the beginning*" the student shared.

However, during the FGD, the faculty from the Indonesian university revealed that she also had similar opinions regarding the challenges of the HyFlex mode.

Implementing the HyFlex class was quite challenging for faculty and students as revealed from both the interviews and FGDs. The faculty of the Biology Education Department said, "*It really takes time before we begin the meeting. I must prepare the supporting facilities and students both online and offline; sometimes, it takes almost 15 minutes for pre-conditioning*".

The Mathematics Education Department faculty shared, "*At the opening phase, because I tried to prepare my laptop, camera, and material, sometimes the students were so noisy. But for the next meeting, I involved them to help me*".

Indonesian students gave feedback regarding this mode, indicating their appreciation of HyFlex learning. A Primary Education Department student said, "*The HyFlex mode is a new experience, we can see and interact with inbound students. They can see our activities in the classroom. I enjoy the class*".

But other students disagreed. For example, a student from the English Education Department noted, "*Sometimes, the class is too noisy, [and] the lecturers seemed to have difficulty in handling the class*".

From the FGD of the Indonesian and Filipino faculty, it was divulged that some areas need to be prepared before engaging in HyFlex instruction, such as: informing students regarding the class schedule and preparing the equipment in the (smart) classroom. When the class has started, the faculty has to adapt to accommodate both students on-site and online. From the students' point of view, they said that they were easily distracted and most of the time, they could not focus on the learning materials.

Results from the FGD further disclosed that on the side of the onsite and online students who experienced HyFlex classes, as part of classroom management, there is a need for a clear policy for online and onsite students for classes using HyFlex instruction. Also, there should be informed consent from the students that they are being "viewed" in real time since they felt as if their privacy was being violated. This is to prepare them physically, mentally, and emotionally. In as much as teachers are prepared, the students must also be ready, committed, and open to this kind of mode of learning. Findings affirm the studies of Malczyk (2019), Wong et al. (2022), Lakhal et al. (2020), which revealed the practices, benefits, and challenges of the implementation of HyFlex instruction.

Theme 2. Lack of smart classrooms and poor internet connectivity

During the interview, a primary education faculty disclosed that she thinks even if the HyFlex mode is innovative, doing purely virtual classes is better, *"In doing HyFlex, I have to improvise. We don't have yet classrooms [that] are HyFlex-ready, so I must use my creativity if I want to do real-time classes for my students here in the Philippines and my students in Indonesia. I admit, the lack of these infra blocks my efficiency in teaching the course".*

Her student from the Philippines agrees, *"When the professor improvises, her eye contact is not with us, those in the classroom, her attention is divided. And we are distracted".*

Both the faculty and the students complained about the poor internet services. *"The connection when slow definitely disrupts the classes. When the online students cannot join because of the poor connection, I have no choice but to re-schedule them [online students]. Meaning, I have to meet them on a separate day and time to catch up. Of course, this is extra work for me and for the students too,"* The faculty divulged. The student added, *"We have to wait for our online classes every time there are technical glitches. The lessons do not also move because we have to be in sync. There are times that I feel bored in my international classes when these things happen".*

The challenges experienced by the Filipino students and faculty are similar to what, Detyna, Sanchez-Pizani, Giampietro, Dommett, and Dyer (2023, p. 01) have articulated when they posited that challenges faced in HyFlex classes are "cognitive burden, social presence, and how to deal with a cohort that is dispersed across two places." Moreover, Filipino teachers have similar plights as they have no prior plans of utilizing HyFlex as an educational approach because they are not yet ready for significant resources, and assistance needed to be present and provided first to them.

The experiences of the Filipino participants also happened to Indonesian participants regarding the lack of smart classrooms and poor connectivity. The policy regarding hybrid learning was supported by the university by preparing several smart classrooms. However, not all departments and classes had smart classrooms. Also, not all faculty could use and apply the tools, so they tried and practiced themselves during the first phase. The faculty who did not teach in the smart classrooms, however, faced an extra challenge similar to the Filipino faculty members: they had to prepare the facilities by themselves, for example, two cameras. The Primary Education Department faculty shares, *"It is quite challenging in teaching at hybrid mode, I must prepare two cameras to support my teaching and learning process. In the beginning, I felt so exhausted to prepare, but by the time, finally, I can handle all with the students' help".*

A faculty of the Management Department also had a similar opinion, she noted during the interview, *"If the campus internet connection is unstable, I must prepare my data and turn it on. Hmm, I think, it needs a high cost for Hyflex mode. Also, the problem is when my students have*

difficulty participating due to unstable internet connection, it is exhausting to repeat my explanation. Then, the internet connection cannot make students participate actively in collaboration with friends, so it is really time-consuming".

Also, a student of the Physics Education Department shared, *"Because the location of my house is in a mountainous area, I had difficulty in joining and participating actively in class, the signal is unstable, so I must click off-camera to stabilize it. Also, sometimes I have difficulty listening to the faculty's discussion".*

The sentiments of the participants coincide with Kohnke and Moorhouse's (2021) contention that the main problem with the HyFlex mode is that not all students have access to a quiet place to study, a modern computer, and a high-bandwidth internet link, which is all needed for synchronous online learning. For HyFlex classes to be successful, hard, and soft infrastructures must be available and accessible to the participants. However, capacitating the users through faculty development programs should be a foremost consideration to maximize the potential and fulfill the promises of this innovative approach. Findings concur with the contentions of Miller et al. (2021), Tonna et al. (2023), as they suggested that the implementation of HyFlex instruction needs course adaptation to the problems and potentials it brings. According to them, to enable remote teaching, redesign teaching, and rethink technology, educators must change their practices.

Theme 3. Intensified language barriers

The FGD results divulged that the Filipino students note that their Indonesian teacher sometimes uses the local language instead of English. One student claimed, *"The professor use their native language addressing the onsite students. Most of the time, if I do not message her privately, she forgets that I am in the class".*

Also, another student imparted, *"I think they use their native language for emphasis but, for us foreign students, what I do if this happens, I just read the notes or presentations".*

A math major student also said, *"Sometimes, it is difficult to understand what lecturer and classmates said due to their accent. But after several meetings, the lecturer has the initiative to turn on the transcription mode, and it helps".*

In an FGD with Indonesian students, a student who joined the onsite class added, *"The Filipino students' English is very good, they speak fast and sometimes their accent is quite different, so I missed several words".*

Based on the evaluation, Indonesian students did not fully participate actively in international classes due to several aspects: most students still have low scores on Tests of English as a Foreign Language (TOEFL), and they seldom communicate using English. Therefore, they have difficulty communicating, especially during the speaking activities in HyFlex classes.

Similarly, another student from the Mathematics Department noted, *"I am not confident if the faculty called me and answer the question or give feedback, because actually I understand what teacher said, but I have difficulty to answer it using English".*

Another student from the Primary Education Department added, *"I am more comfortable if I participated in written mode, for example, Google Docs or Jamboard because I only need to type, and if it is difficult, I will go to Google Translate".*

Friedman (2019) contends that a language barrier is the absence of a common language that prevents two or more people from verbally communicating with one another. Findings from several studies reveal that international students have a hard time, especially with the language barrier (Ali, Yoenanto, & Nurdibyanandaru, 2020; Gautam, Lowery, Mays, & Durant, 2016). Luftiana, Suwartono, and Akter (2020) noted that language barriers affected the academic performance of the students. The findings deliver a similar message that international classes done using HyFlex mode intensify the language barrier as opposed to the findings in the study of Francisco (2022) that virtual classes enhanced the English communication skills of Filipino students. In HyFlex classes therefore, to maximize its potential for English language enhancements, the faculty may provide more opportunities for the members of the class to use the English language functionally and communicatively.

5. Conclusions and recommendations

The implementation of the HyFlex instruction increases the flexibility of faculty and students on whether the internationalization and collaboration program can still be implemented. The students interviewed for this study were motivated to enroll in a HyFlex course because it allowed them to take subjects at the host university and learn with local students. With several limitations related to different rules in class, lack of smart classrooms, poor connectivity, and language barriers among students, the faculty observed several verbal and nonverbal communication challenges between students using various modalities when negotiating to mean through cooperative interaction. However, the HyFlex mode helps the university implement partnerships with other universities and continue collaborating, especially for the international credit transfer program.

Several directions could be taken with this research's implications for higher education classroom practice. First, the university must prepare the policies, tools, and facilities to support the HyFlex mode so that the faculty members are not confused about what policies to employ and need not prepare the tools by themselves. Also, higher education faculty members may apply various applications to engage students and enhance the learning experience, for example, breakout rooms, Google Docs, Mentimeter, Jamboard, Word Clouds, or Padlet. To promote a strong sense of community in a HyFlex classroom, combining face-to-face and remote students for classwork and assignments may be used as a strategy.

This qualitative study cannot be applied to other learners in various circumstances; rather these findings provide a foundation for further research. Thus, future studies could evaluate the HyFlex mode for delivering courses to more undergraduate and postgraduate students in other universities. Nevertheless, this study helps build effective practices for promoting and sustaining learning while considering contextual factors by presenting some preliminary insights from both faculty and students.

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