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Practical Tips for HyFlex Undergraduate Teaching During a Pandemic

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Abstract:

Many universities in the United States have resumed campus-based learning during the coronavirus disease of 2019 (COVID-19) pandemic. Under these special circumstances, many instructors have considered the HyFlex approach to redesign their undergraduate courses. However, a HyFlex teaching model that one adopts in reaction to a global pandemic significantly differs from HyFlex teaching that one adopts under normal conditions. In this paper, we provide actionable practical tips that will allow fellow instructors to better prepare themselves for running a COVID-19 HyFlex classroom. First, we explain how the COVID-19 HyFlex model has some key distinctions from the regular HyFlex teaching model. Then, in the COVID-19 HyFlex classroom, we focus specifically on how to effectively use group work as the learning instrument in these types of classrooms. We consciously seek to go narrow and deep on the dimension of group work as it has the most potential to yield beneficial outcomes while also being fraught with logistical challenges in the COVID-19 HyFlex context. Our collective success with undergraduate HyFlex teaching in future academic terms during COVID-19 will determine our universities' economic success and our jobs' security.

Keywords: HyFlex Teaching, Undergraduate Teaching, COVID-19, Practical Teaching Tips, Group Work, Actionable Tips.

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1 Introduction

To balance economic and safety issues due to the coronavirus disease of 2019 (COVID-19) pandemic, many universities have cautiously resumed on-campus education under new social-distancing rules. In preparation, faculty across many universities in the United States (US) have redesigned their undergraduate-level courses around the Hybrid-Flexible (HyFlex) model (Beatty, 2014; Lederman, 2020). The HyFlex model's creators developed it for teaching under normal circumstances based on recognizing the natural diversity in students and their daily circumstances (Beatty, 2014). It combines simultaneous face-to-face (F2F) and online components and gives students the flexibility to choose their preferred learning mode. A traditional HyFlex course would run the same course in three parallel modes: synchronous F2F, synchronous online, and asynchronous online (where instructors provide live class recordings for later consumption) (Educause Learning Initiative, 2020).

Most undergraduate instructors and students do not know about the HyFlex model. Further, implementing the model in the COVID-19 pandemic context could create additional uncertainty for students, instructors, and academic institutions. Such uncertainty may tempt instructors to simplify class meetings as much as possible and remove more involved activities, such as group activities, which pose additional logistical challenges given the current environment. However, we believe that doing so would be a mistake as group activities not only provide enhanced learning outcomes (Hammar, 2014) but also can provide benefits specific to teaching during the COVID-19 pandemic. As such, we highlight the benefits of incorporating group activities in the classroom (especially during the COVID-19 pandemic) and offer instructors actionable tips that they can follow to facilitate these activities in this new teaching style.

In this paper, we delineate the major ways in which HyFlex teaching during the COVID-19 pandemic (which we refer to as COVID-19 HyFlex) differs from traditional HyFlex teaching during normal circumstances. We then draw on these differences to frame the tips we offer on leveraging the COVID-19 HyFlex structure to facilitate group activities.

2 The HyFlex Teaching during the COVID-19 Pandemic

The traditional HyFlex model has two key components. First, students choose which delivery modality to follow among the three modalities in the model, and their choices can change from one class period or one learning activity to another (the "flexible" in the Hybrid Flexible model). Second, whatever the learning mode that students choose, they can all fully participate in the course without compromising their learning outcomes. Therefore, in this model, remote students would fully participate and equally benefit from all learning tools, such as discussions, activities, and assignments, in the same manner as F2F students and accomplish the same learning outcomes.

The type of HyFlex model that educators would implement during the COVID-19 pandemic would likely differ from the traditional HyFlex model (Educause Learning Initiative, 2020). In the traditional HyFlex model, students drive the learning mode for each class meeting and learning activity (Lederman, 2020), which implies that students receive their education in an optimal way for their individual circumstances and learning. If a student feels a certain topic requires them to engage F2F with the instructor, they have the freedom to make that choice. If they do not want to come to campus a certain day, they can participate remotely that day. If they just want to come to school every class period and be a "normal" student, they can.

During the COVID-19 pandemic, students did not have the freedom to choose how they received their education. Due to social distancing policies and constrained room capacities, students generally could not choose how they attended university each day. Instead, course instructors likely assigned them to cohorts and specific days of the week to attend class in person or virtually.

Furthermore, universities that adopt the HyFlex model under COVID-19 circumstances do so as a coping mechanism rather than as a proactive strategy (Educause Learning Initiative, 2020). As such, most universities that adopt HyFlex teaching during the COVID-19 pandemic do not necessarily have the required infrastructure to enable the equitable learning experiences and outcomes across learning modalities that characterizes the traditional HyFlex teaching model. In the COVID-19 HyFlex experience, universities have retrofitted classrooms; instructors and students have received rudimentary guidelines rather than hands-on training.

Given these challenges, instructors may find it tempting to resort to straightforward projector screen-based lecturing, which would present the fewest number of logistical challenges to implement. Incorporating group activities in live class meetings may, at first glance, seem impractical in this setting. Indeed, a traditional HyFlex strategy would likely make it difficult to engage in significant live group work due to the need to record live class sessions for the asynchronous online modality. Students who attend class asynchronously would not have much to gain from watching video recordings of their peers engaged in group work, so live sessions naturally would need to include significant instructor-driven content to create a more inclusive multi-modality course design under the traditional HyFlex model. Further, instructors in the traditional HyFlex model may not clearly know the number of students that will attend in person versus students who join remotely on a given day. However, in the COVID-19 HyFlex classroom, the constraints that arise from predetermined instructor-assigned cohorts for in-person or remote attendance create a silver lining that allows for live sessions to deeply engage in group activities and move beyond offering only lecture instruction.

3 Group Activities in the COVID-19 HyFlex Classroom

3.1 The Importance of Group Activities

In May, 2020, we had 154 undergraduate business students complete a survey so we could understand the challenges they faced in completing courses during the stay-at-home orders. Reviewing student responses made it clear that students relied on their relationships with peers as a source of strength. During stay-at-home learning in early 2020, many students reported feeling lost or demotivated toward schoolwork due to losing “positive peer pressure”. They expressed missing the support structures that they counted on by being able to exchange notes with each other, study together, or even swap stories on their course experiences while attending classes on campus during stay-at-home learning. While the regular college experience naturally provides these support structures to students in a normal academic term, during the COVID-19 pandemic, instructors need to be more intentional in this regard. Incorporating peer collaboration (e.g., group activities) in the classroom experience would constitute one way to do so. Past research has found that group activities can effectively help students build social relationships with their peers, develop support structures, and to feel affiliated with a group (Hammar, 2014). These benefits will have particular value in the coming academic terms as students struggle with the effects of reduced opportunity for social interaction.

3.2 Making Group Activities Work

We first acknowledge that instructors face additional logistical challenges to facilitating group activities and collaboration during COVID-19 HyFlex teaching. Students in the classroom must socially distance, which makes meeting in small groups difficult. Furthermore, other students sign in virtually via videoconferencing technologies such as Zoom. As a result, generating an integrative and cohesive classroom experience in the same 50- or 75-minute span of time poses a significant challenge for instructors over and above deciding what content to deliver. However, with proper planning, instructors can overcome these challenges to provide meaningful opportunities for students to continue to reap the benefits from working with their peers. To that end, we offer the following tips to help instructors effectively use group activities in their classrooms.

As our first tip, we suggest that instructors use the breakout room features on platforms such as Zoom to divide students into groups that pair students in the classroom with students attending remotely. Dividing students in this manner results in collaboration clusters in which students primarily talk to their computers rather than to other co-located students. Structuring student groups in this manner across attendance modalities has several benefits.

First, it enables a more integrative learning experience in each live session and for the course as a whole. Given that instructors often divide students into cohorts that attend the physical classrooms on opposing days, students in different cohorts could never bond with each other, which would result in a disconnected sub-clustered class experience for students. During the live sessions, grouping students across modalities to engage in group work would allow for students in different cohorts who normally would not interact given the COVID-19 HyFlex model to interact and build social relations with one another. Grouping students in this manner also increases engagement and participation in each live session as students get to know each other better across modalities and can open up and participate more freely in class discussions or to reach out to one another for help.

Second, keeping at least one in-person student in each group will help the instructor keep a closer eye on and monitor each group meeting in real time. This approach also creates a semblance of familiarity to the in-class experience as instructors can walk around the classroom as in normal times and interact with groups: if they walk up to one in-class student, they get to see everyone else in that group on this person's screen as well. Zoom breakout rooms do have one limitation in this respect: an instructor in the main Zoom classroom cannot see or hear students in the Zoom breakout rooms all at once. Instead, the instructor must join individual breakout rooms one at a time to observe their behavior. However, with the breakout rooms populated with at least one in-person group member, the instructor can, through the in-person screens, directly reach out to all groups from the physical classroom. Also, at least one member from each group can hear any instructions that the instructor announces in the classroom and can then communicate to the entire group. By making the breakout rooms more public in this way, pairing in-class and remote students in each group would also disincentivize shirking behavior in breakout rooms (we discuss this behavior more in Section 3.3). Acknowledging that, as a whole, in-class instruction may be more effective than virtual instruction or at least a different experience allows each group to have a participant that has received the materials in person and gives an opportunity for virtual participants to discover if they missed something due to the delivery mode. This strategy also means that all students, even those attending class in person, would need to sign in through the same videoconferencing tool.

As our second tip, we suggest that instructors organize students into breakout room groups before class starts to allow for a smoother live experience with less "dead-air" time since assigning one in-class person to each breakout room may be a time-consuming process to do manually in class. We recognize that the ability to set up breakout rooms before live sessions depends on a technology platform's capabilities. For instance, Zoom allows one to set up breakout rooms before class time by first going to the user settings and, in the "in meeting (advanced)" section, checking the box next to "allow host to assign participants to breakout rooms when scheduling". With this setting enabled, when scheduling a Zoom meeting, instructors can check the option "breakout room pre-assign" so they can create the breakout rooms before class begins using students' registered email accounts. For this reason, instructors should make it a matter of course policy for students to use a Zoom account tied to their official university email address and join meetings using this account. To save time, especially if instructors plan to repeat breakout rooms, in Zoom, instructors can save their breakout room assignments as a .csv file, which they can then upload to assign students to breakout rooms rather than assigning each student manually for each live session. Even if instructors wish to make changes to group assignments, especially in reaction to real-time needs (such as adjusting for absentee students during the live session), it may be quicker to modify the .csv file than to enter email addresses one by one.

If instructors need to manually assign breakout rooms or adjust them during a live session, we recommend that they offer a mini-activity to students while they wait. This mini-activity should serve as a warm-up exercise that provides a jumpstart on the group activity in which students will soon perform. The education literature refers to using class activities to support broader learning objectives in this way as scaffolding (Pea, 2004), and it constitutes a particularly effective strategy in online courses to help students not become bored or disengaged with the live session during the transition periods that the complex multimodal delivery mechanisms of COVID-19 HyFlex teaching necessitate (Sardo & Sindelar, 2019).

As our third tip, we suggest that breakout room group presentations to the whole class be pivoted around in-person students, which will result in greater flexibility in how small group discussions can feed into whole class discussions. Instructors could ask student groups to present from their breakout rooms through their in-person group member. For example, if the instructor called on a particular group to present their business process model, the group's in-person member could walk to the front of the class with their computer and project their own and their group members' screens for everyone else in the class to see using the classroom podium technology.

We advise instructors to remember that some tips that we discuss above may place an added burden on in-class students. However, over the academic term, this effect will likely balance out as cohorts in the COVID-19 HyFlex design rotate between in-class and remote attendance.

The group work strategy that we describe above can fit many different types of content. Faculty at our university have successfully used this approach to enable smaller deliverables on semester-long projects where the group compositions stay the same throughout the semester. They have also used it to support ad hoc group projects with changing or emerging group compositions. The group work itself could comprise anything from answering questions on a topic collaboratively to building a concrete solution (e.g., an entity-relationship diagram or a business process model) or debating an issue from multiple angles.

In Section 3.3, we discuss some more tips for instructors to encourage a positive work ethic during group work in a COVID-19 HyFlex setting.

3.3 Additional Tips to Facilitate Effective Group Work in the COVID-19 HyFlex Classroom

Some faculty members in our school experienced a situation where students placed in breakout groups did not collaborate and instead worked alone. To increase engagement, instructors can experiment with self-selected breakout groups by allowing students to use an online sign-up sheet. Also, in our experience, breakout rooms in general can sometimes offer a safe haven for undesirable shirking behaviors. Students may find it harder to act in this manner if one group member in each breakout room physically attends the class with the instructor because it keeps the breakout room's inner workings constantly visible to the instructor. Additionally, instructors could also pop into breakout rooms electronically to help students stay vigilant and disciplined in their breakout room work ethic. Still, instructors may deploy additional strategies to improve breakout room participation to save them from having to play "bad cop" for all breakout group work during live sessions.

As perhaps the most effective way to ensure that breakout groups avoid shirking behaviors, instructors can require them to turn in a small deliverable at the end of each live session so that they can assess what they worked on during that session. Also, as instructors walk around the classroom during group work, they can cold call on the remote members in each group, especially those with their cameras off, to make sure they are participating. Instructors can set aside time every once in a while for "candid peer conversations" in which they can encourage students to share with their groups what they generally like and dislike about in-person group members' behaviors when they attend class remotely and remote group-members when they attend class in-person. This peer feedback can help discourage shirking behaviors more effectively than "nagging" or "punishment" from instructors.

We caution instructors from recording these Zoom class sessions for students to view later. For one, the group work-focused class sessions would create only sporadic instructor-led material, which students viewing later may find little value in; additionally, not having such recordings to fall back on would further disincentivize shirking behavior in the classroom. However, students may find value in recorded breakout room conversations.

Whatever methods instructors use, they should set clear expectations of appropriate student behavior, especially for remote students. For example, we have set the same rules of classroom etiquette for students joining remotely as we would expect for in-person students. Setting and enforcing expectations helps disincentivize shirking behavior during group work and allows all students to feel like they must adhere to the same standards no matter how they participate in class. We summarize the practical tips that we discuss in this paper in Table 1.

Table 1. Summary of Practical Tips for Engaging Group Work in the COVID-19 HyFlex Classroom

Practical tip	Anticipated benefit
Ensure that all groups comprise students from different teaching modalities (in-person and remote) via videoconferencing technologies' breakout room functionalities.	● Enables more integrative learning experiences and peer support for students across HyFlex cohorts. ● Allows instructors to better integrate a COVID-19 HyFlex classroom across modalities. ● Instructors can better monitor and support breakout room activity in familiar pre-COVID-19 ways.
Pre-assign students to breakout rooms before class starts using technology features. When instructors need to assign students to breakout rooms during class, offer them warm-up exercises that lead into group work.	● Keeps up students' interest in classroom activities by ensuring a smoother classroom experience with less "dead air" time, especially for remote students. ● Engages students in learning experiences even during the transitions that instructors need to use to manage the multiple modalities in a COVID-19 HyFlex classroom.
Have student groups, including remote students, present their work to the rest of the class from their breakout rooms using the in-person member's computer and standard classroom audio/visual technology.	● Ensures that students smoothly complete live group work and reconnect with overall live session learning objectives. ● Disincentivizes shirking behavior during group work. ● Takes advantage of the digitized group work that collaboration over an electronic platform necessitates.
Allow students to self-select peers for group work by using online sign-up sheets.	● Encourages active participation in group activities by incentivizing students to actively interact with other students whom they have selected, although instructors should be vigilant about excessive socialization within self-selected groups.
Assign small deliverables that students need to hand in at the end of each group session. During the group session, cold call remote students, especially those with cameras turned off, through in-person group members' computer screens.	● Encourages students to be vigilant during group work. ● Disincentivizes shirking behavior in breakout rooms.
Set aside classroom time for "candid peer conversations" in student groups about what students find as acceptable versus unacceptable group interaction behaviors from their peers across teaching modalities.	● Peer pressure can help students engage in more civil and productive behaviors during group work when connecting via different modalities. ● Candid feedback from colleagues can alert them to how students' actions in one modality impact their peers in a different modality. ● Hearing from their peers rather than just from instructors would likely more strongly deter students from shirking and other negative group behaviors.
Do not worry about recording the main Zoom class sessions for students to view later. However, students may find value in recorded breakout room conversations for future reference.	● In a group work-focused class session, instructors would not be "lecturing" much, so students observing later would find little value in the occasional/sporadic in-class comments, announcements, or interactions between instructors and students in the main Zoom classroom. ● Incentivizes students to pay attention in class. ● Student groups can benefit from being able to review past breakout room work as they need to, especially in the case of longer assignments that may span more than one session.

4 Conclusion

In this paper, we discuss how teaching restrictions due to the COVID-19 pandemic have created a new teaching mode that, while similar to HyFlex, has removed a key component from the HyFlex model (i.e., student choice). Without choice, students and instructors alike have to approach semesters in a new way. In such an environment, we offer practical tips on how instructors can leverage the COVID-19 HyFlex structure to facilitate effective peer collaboration in the classroom.

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