

## HyFlexK12

### A Hybrid and Flexible Learning Option Given the Appropriate Circumstances and Conditions

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*More educational models are needed to help address the new educational needs in K-12 learning environments. HyFlex education provides learning options in-person, asynchronously, and synchronously online, simultaneously. The pandemic has changed how K-12 schools, and institutions of higher learning in the United States and abroad are approaching and adopting this pliant model in allowing learners to choose both their learning experiences and environment (Beatty, 2019). However, many schools view HyFlex learning as an emergency solution to a pandemic problem. How can we dispel or reframe the myths associated with HyFlex education and transform it from a short-term learning solution to a lasting form of educational practice that allows for equitable, accessible, and innovative models and choices that benefit all students?*

## Introduction

In this chapter, we will share our experiences and research focused on HyFlex K-12. Our interest in HyFlex heightened from the urgent need to pivot to flexible learning options for K-12 students during the pandemic. As higher education faculty members who work with both in-service and preservice educators, given our 50+ years of remote and in-person teaching and learning experience, we were able to quickly adapt and adjust pedagogical approaches and modes of delivery to best meet the needs of our learners.

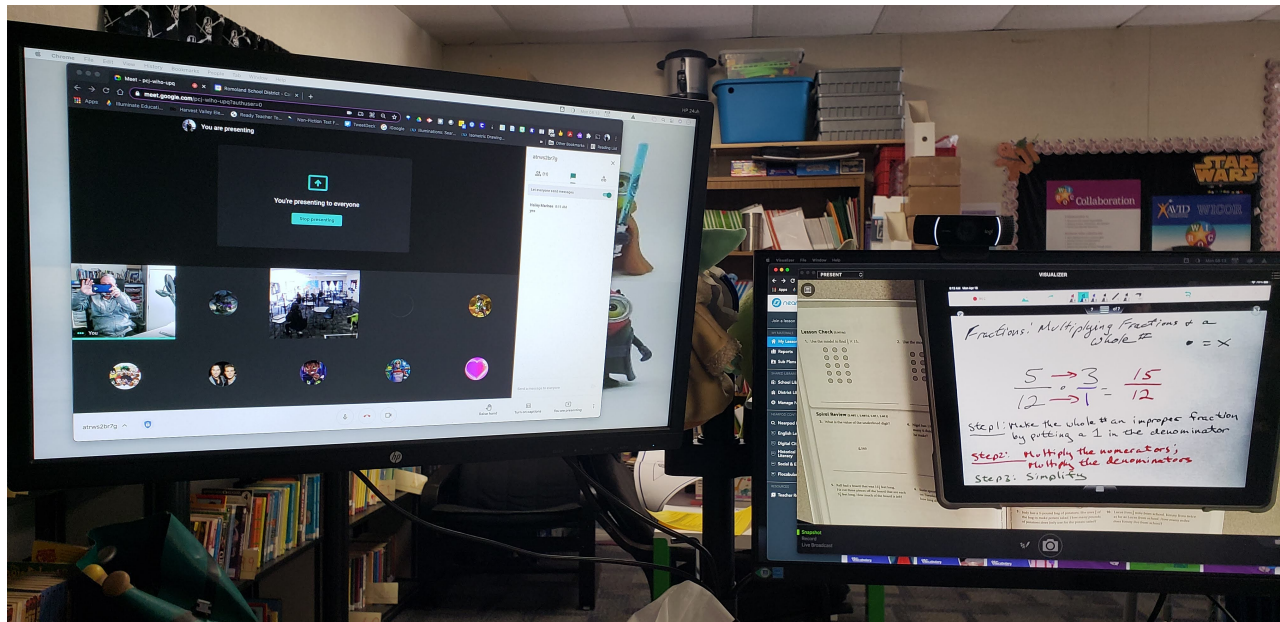
HyFlex instruction began as a way for colleges and universities to provide in-person and fully online students at the same time (Beatty, 2019). HyFlex found renewed purpose post-pandemic, as K-12 schools, colleges, and universities attempted to transition students back to brick-and-mortar schools, while still adhering to social distancing mandates (Riley, Baecher, & Guy, 2022). An advantage of HyFlex is that it allows schools to maintain instruction when previously classes would have been cancelled, because with HyFlex learning, remote instructional options are already in place (Maloney & Kim, 2020).

## Rationale

During the pandemic crisis, education at every level was forced to be more “elastic” minded about how students could gain access to education. How institutions of learning were able to pivot to create alternative learning options took a number of forms depending on resources and access. This type of emergency learning unmasked another pandemic, the widespread epidemic of inconsistent, inequitable, and inaccessible education to all. For most K-12 schools and or

districts, systematic educational learning systems varied, and for some, were nonexistent. The constant adaptations and unpredictable expectations coupled with a world filled with human and economic loss caused chaos for children, families, and teachers resulting in long and short-term emotional and educational scarring (Anderson, Flaverio, & McCain, 2021). This difficult time in history forced many educational settings to urgently adopt more flexible learning options that did not require students to learn under the same roof and four walls (see Figure 1). This included using various learning management systems and modes of instruction without training or support. Despite the academic setbacks due to learning loss, many lessons were gained from education as a result of the pandemic that can inform future academic structures (Brooks, 2023).

Figure 1. Example of Technology Used for HyFlex Teaching. Photo Credit: Jay Greenberg, Romoland School District, California USA



There are many pedagogical and personal reasons why students, parents, and teachers may choose a HyFlex modality. HyFlex learning allows individuals choice regarding the style in which they learn. It also has benefits in terms of accessibility, giving students and teachers with mobility issues, students who are not feeling well, or students and teachers with visible or invisible disabilities an alternative way to learn and access the curriculum. HyFlex classroom environments naturally follow the major principles of Universal Design for Learning (UDL) (CAST, 2022), creating innovative, engaging, and equitable classroom spaces (Riley, Baecher & Guy, 2022).

Post-pandemic, education needs a revolution (Brooks, 2023). The K-12 classroom can no longer be seen only as a physical space. Instead, there needs to be a new type of classroom, allowing students agency and preference in the way they want to learn and attend school. HyFlex learning recreates and redefines the classroom in a way the world hasn't seen in years. This change parallels what is happening in spaces of higher education and in the workforce, where remote or HyFlex work, and school, are becoming more popular (Penrod, 2022).

Funds and resources must be invested to make HyFlex work. Parents, students, administrators, and other stakeholders need to buy into the model, through parent and professional development information and workshops. HyFlex teaching involves preparation and support (Riley, Baecher, & Guy, 2022). This includes developing K-12 teacher skills in technology, pedagogy, and student engagement specifically for the HyFlex modality (Romero Hall & Ripine, 2022), as well as making sure working HyFlex technology is available in classrooms for teachers who choose to teach in this modality. Equally important, educational technology support staff must be available to assist teachers and students to ensure a seamless school experience (see Figures 2 and 3).



Figure 2. Example Technology (Tablet) Used for HyFlex Teaching. Photo Credit: Jay Greenberg, Romoland School District, California USA

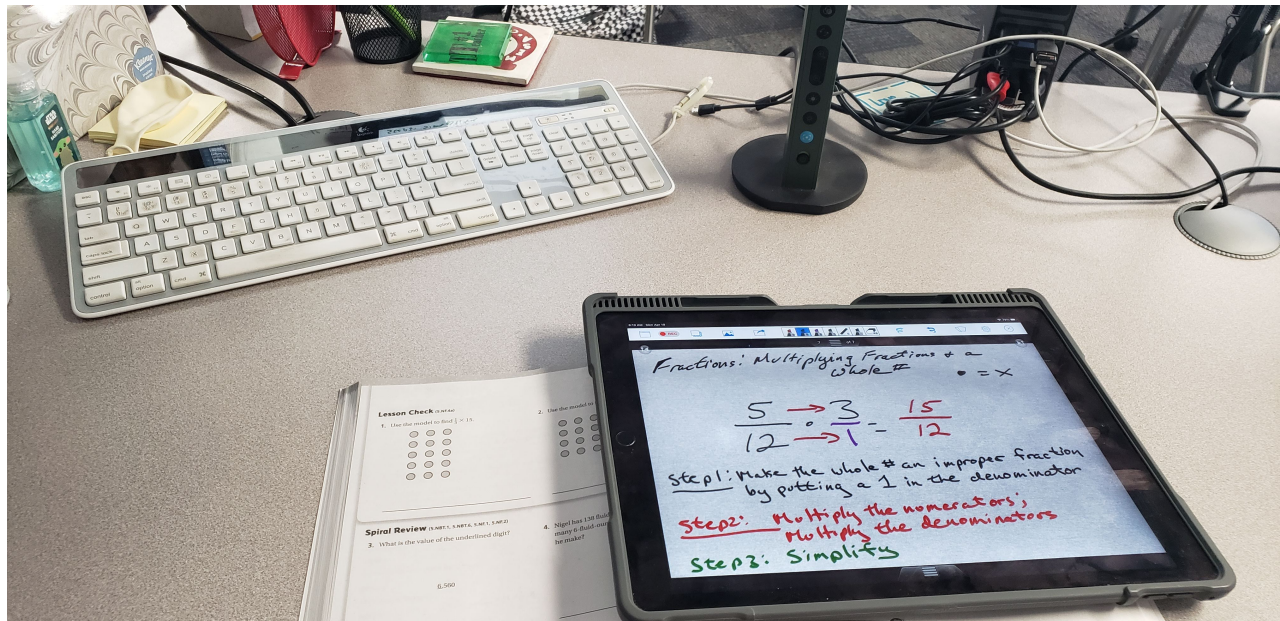
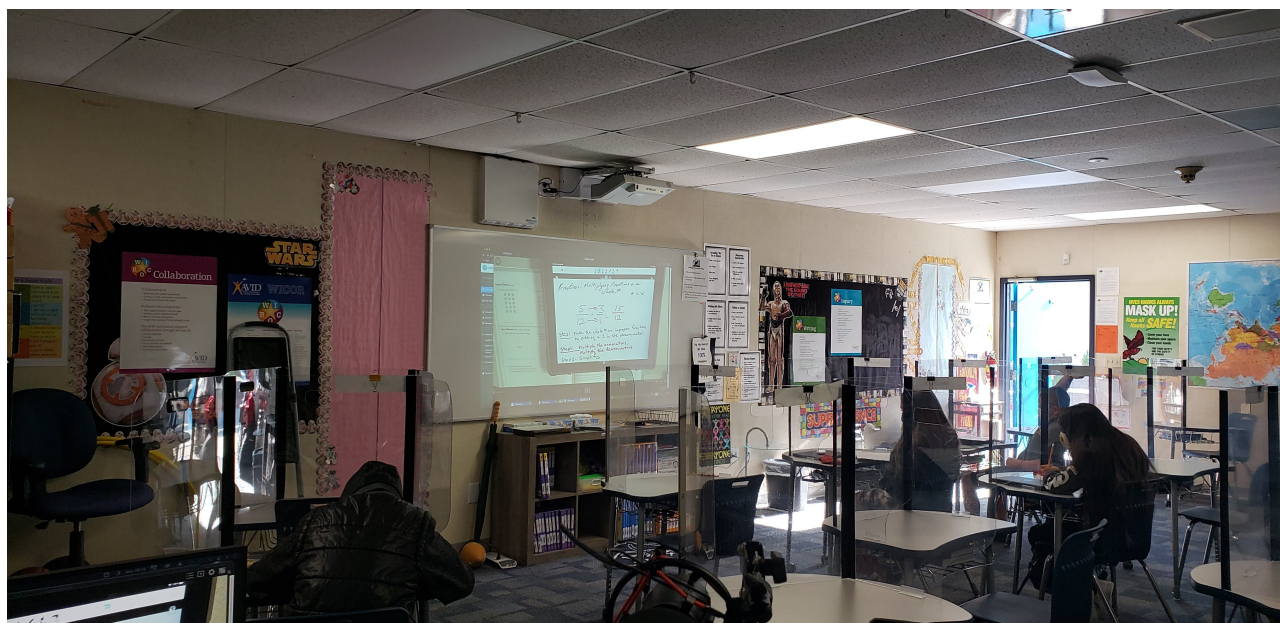


Figure 3. Example of Technology in the HyFlex Classroom. Photo Credit: Jay Greenberg, Romoland School District, California USA



## Benefits of HyFlex K-12

A HyFlex learning environment allows K-12 students to attend and engage with their class virtually or within a traditional physical classroom space. HyFlex learning also provides equitable access for students with a range of physical, learning, and/or emotional dis/abilities. As an example, a student who temporarily has to use a wheelchair or crutches

due to an injury can attend class remotely and not lose class time. They also don't have to worry about accessible transportation to their school or waiting for an "elevator key" to get to their classroom. A student who suffers from anxiety or school refusal may have the opportunity to attend class asynchronously or synchronously and would still be able to form relationships with their teacher(s) and classmates. Post-pandemic, a student who tests positive for COVID will be able to access coursework and instruction through the HyFlex modality. The HyFlex classroom space is also helpful for students with a variety of learning preferences. Students who prefer more interpersonal learning experiences have the opportunity to attend in-person or synchronously; students who prefer more self-paced classes can participate asynchronously (Riley, Baecher, & Guy, 2022). HyFlex learning environments also allow for continued instruction given specific circumstances including snow days or state/city-wide emergencies (CAT Subcommittee on Enhancing Teaching, Learning, and Support, 2022). A significant benefit of HyFlex instruction is the ability to open up language or AP classes to students in rural districts, providing learning opportunities that may not be readily available to some students. For example, a Chinese language class offered in a large urban high school can be opened up to those attending classes at a school in a rural area. Community colleges can also partner with local school districts to provide options for high school students to take college classes and earn college credits via a HyFlex modality.

Another helpful benefit of HyFlex learning in K-12 settings is the facilitation of intrinsic motivation it naturally provides. Within education, curiosity and engagement are essential to academic success (Akey, 2006). The more choices students have regarding their learning environment, the more intrinsically motivated they become (Dec & Ryan, 2000). HyFlex learning is one way to facilitate intrinsic motivation in learning, allowing students choice and flexibility in the way they learn, naturally adhering to basic principles of Universal Design for Learning (UDL) (Hodnett, Gryta, Schnell, & Riley, 2022). This increased flexibility has ripple effects, allowing for greater student engagement and investment; as well as a possibility for increased enrollment. Post-pandemic, parents of K-12 students are looking for more choice and flexibility regarding their child's educational experience (Eggleston & Fields, 2021), and allowing for HyFlex learning options in public schools may provide parents and students with an innovative, attractive option.

## Challenges of HyFlex K-12

There are many benefits to HyFlex teaching and learning in the K-12 environment, but there are also many challenges. For example, teachers will need assistance and training in developing their classes in multiple modalities, including the asynchronous modality. There may also be cognitive overload issues in both teachers and students; because of the need to attend to synchronous and in-person modalities all at once (Huang, 2017). Students and parents/guardians must also learn how to work with the element of choice in a HyFlex environment, and there is an educational component associated with this. One of the most noted challenges within HyFlex teaching and learning is the challenge associated with technology, including technology acquisition; technology use; and technology support (Hirschmann & Riley, 2023; Riley, Baecher, & Guy, 2022).

Hirschmann and Riley (2023) have noted four challenges to HyFlex teaching and learning from the following perspectives: Physical space challenges, technology challenges, pedagogical challenges, and student challenges. We have added one for consideration in the K-12 environment, namely, attendance challenges.

### Physical Space Challenges:

A HyFlex equipped room may look different than your average K-12 classroom. If portable technology like OWLs or cameras on tripods is used, attention needs to be paid to the placement of these instruments for accessibility and safety, as well as for ease of repair. If mounted cameras and mics are used, educational technologists or technology support staff need to be available during class time for any issues that may come up during class.

Figure 4. Example of HyFlex Classroom Space. Photo Credit: Jay Greenberg, Romoland School District, California USA





## Technology Challenges:

Even the most advanced of HyFlex classrooms may encounter audio, video, and connection issues. It is important for teachers to have a protocol for “getting students back” if this happens. The protocol may be for the teacher to engage in troubleshooting activities first, and then call on technology support. The teacher may also need to have set plans regarding how to review missed classwork with students who encountered an audio or video-based issue while engaging synchronously or asynchronously online.

Figure 5. Example HyFlex Teaching Workstation. Photo Credit: Jay Greenberg, Romoland School District, California USA



## Pedagogical Challenges:

Along with teachers needing support in creating class activities and lesson plans in multiple modalities; there is also the cognitive overload and teaching anxiety that can happen when an instructor must attend to both synchronous and in-person students. Teaching assistants and co-teachers can provide assistance and support here. For example, teaching assistants or co-teachers can monitor chat or backchannel conversations; as well as technical issues, as the lead teacher focuses on content.

## Student Challenges:

Not much has been written regarding the student experience in a K-12 HyFlex environment, however, this is so important to consider. In every classroom space, students, teachers, and parents or guardians must be partners in learning; and this is especially important within a HyFlex environment. Well-designed HyFlex courses are ones where all students have relationships with each other; relationships that transcend modality choice. A teacher must specifically plan a time when synchronous students can chat casually with their in-person peers; and when asynchronous students can be involved in synchronous and in-person student conversations (Hirschmann & Riley, 2023).

## Attendance Challenges:

How to “count” student attendance in a K-12 environment is something important for schools, districts, and states to consider. Student workload hours must be equivalent between all modalities within a HyFlex learning environment (Rhoads, 2021). If a student attends class asynchronously, required hours of schooling are required to be recorded. A K-12 work estimator (similar to the one Wake Forest University has created here <https://cat.wfu.edu/resources/tools/estimator2/>) can be utilized to calculate school attendance hours given teacher or technologist input of class information, class materials, and other assignments.

## Misconceptions

The most frequently mentioned misconception surrounding K-12 HyFlex teaching involves HyFlex being seen as a temporary solution to a pandemic problem. (The same misconception surrounds online learning in K-12). It is important to note that just like fully online instruction; HyFlex instruction has been used by many school districts for years. For example, Newton Public Schools in Suffolk County, New Jersey offers students a HyFlex model; as does the Xavier School in the Philippines. Many International Baccalaureate (IB) Schools also offer HyFlex models. The main issue preventing the growth of the HyFlex modality in K-12 schools is that during the pandemic, many K-12 schools cobbled together a HyFlex learning plan; thinking of it as temporary until “things get back to normal”. There was a lack of training and understanding about HyFlex, leading to non-optimal teaching and learning outcomes. The reality, however, is we are living in a “new normal”, and schools must move forward in their thinking to advance learning and success for all students (Brooks, 2023). The growth of HyFlex K-12 should continue, given new technological advances, tools, and increased training stemming from the learnings of the pandemic (Rodriguez, 2022).

Another frequently mentioned misconception concerning HyFlex teaching and learning is that a HyFlex environment creates double the planning and workload for teachers. We agree that a K-12 HyFlex classroom is a new classroom structure, with its specific challenges. However, planning a HyFlex lesson, once mastered, is not very different timewise from planning a traditional K-12 lesson, if HyFlex teachers utilize best practices and plan the asynchronous model first. Planning the asynchronous K-12 HyFlex model allows teachers time and space to reflect on how they are in person and virtual classrooms utilize Universal Design for Learning, allowing equitable access for all students, including multilingual language learners and students with disabilities. As an example, planning an asynchronous module first asks K-12 teachers to deeply reflect on the readings they give their students. Are they differentiated? Do they match lesson objectives? Do they adhere to accessibility mandates? Recording an asynchronous lesson gives the K-12 HyFlex teacher time to rehearse a lesson before giving it to their synchronous and in-person students, and allows for greater mastery of content. Finally, preparing activities for asynchronous students allows time for the HyFlex teacher to think about how each activity will also look for synchronous and in-person students. For example, if a K-12 HyFlex instructor assigns students a short oral presentation, the in-person students can do the oral presentation in class; while

synchronous students can provide the presentation via video conferencing software. Asynchronous students can choose the option of recording the lecture and posting it on the K-12 learning management system.

An additional myth surrounding HyFlex education is that all students learn best in person and that students and teachers prefer in-person learning. In reality, this is false. According to a Pew Research study (2021), 65% of teens said that they preferred in-person over hybrid or remote learning options. Nine percent stated they would prefer a remote environment; while 18 percent preferred a more hybrid experience. Seven percent of students weren't sure what type of environment they preferred. These statistics also differed by race, gender, and socioeconomic status. For example, only 50% of Black students said they preferred an in-person schooling environment, with both Black and Hispanic teenagers stating they would prefer a mix of online and in-person instruction post-pandemic (Anderson, Faverio, & McClain, 2021). Many teachers are also requesting increased remote or flexible learning options, despite union or school district hesitancy (Zimmerman, 2022). The American Psychological Association has also espoused the benefits of flexible learning options, including enhanced intrinsic or autonomous motivation, better access to telehealth or flexible mental health services, decreased school bullying, and a more equitable environment for students with disabilities (Abramson, 2021).

## Professional Development and Preparation

One of the best ways to provide training and professional development to pre-service and in-person teachers on HyFlex teaching and learning is to provide more HyFlex classes within schools of education. Gina, for example, teaches student teaching/practicum seminars within a HyFlex model, so teacher candidates get exposure to the HyFlex modality firsthand. If student teachers are further interested in the HyFlex model, clinical placement supervisors can seek out teaching environments that have a HyFlex model already in place; so that student teachers get practice utilizing the model with a cooperating or mentor teacher. Professional development can also be provided to preservice and in-service teachers regarding flexible learning environments and their benefits to students. In our experience as professors within Schools of Education, in-service and preservice educators are highly interested in providing choice, options, and flexibility for their students; and seek out opportunities to learn more about them.

## Case Studies

We provide the below case studies so districts, administrators, teachers, parents, and students can discuss the benefits and challenges of a HyFlex modality; and how HyFlex may best work in their schools. Feel free to use these studies for discussion in your own districts.

### Case Study 1: World Language Instruction

Ms. Margolis is a Chinese language teacher who teaches in a rural high school. With district approval, she decides to teach her course in a HyFlex mode of instruction for the following reasons:

- She believes in student choice in education and instruction.
- Offering the HyFlex option allows students from other districts to join her classroom.
- Her students are comfortable with online learning and are comfortable accessing a course in various modalities.

Over the summer, to prepare her students and their families, she wrote a letter and included the course syllabus, introduced herself, outlined the class format, and defined and explained the term HyFlex. Before the start of the new academic year, Ms. Margolis offered several informational sessions for parents/guardians and students synchronously and asynchronously to discuss the course and address questions. Ms. Margolis carefully and equitably modified her coursework to match the HyFlex mode of instruction. For all classes, students had the choice of which modality to

participate in the class (asynchronous, synchronous, or in-person). Most students chose an in-person modality, except for students from other districts who joined synchronously and/or chose an asynchronous learning environment. Finally, all students, during the first class, took a HyFlex learning preference assessment, to see what modality might work best for them. This HyFlex preference assessment was given electronically, so all students had equal access. They discussed this self-assessment in class.

At the beginning of a given week, Ms. Margolis would post a video lecture and all course materials within the class learning management system. For asynchronous students, she posted questions and activities that would be discussed/completed within the in-person and/or synchronous environments. All students had access to the same materials, lectures, activities, and discussion questions in all modalities. Overall, students had a positive experience with HyFlex, except for some minor technology glitches that occurred for the students who synchronously participated in the class. Ms. Margolis's students (and their parents/guardians) asked for more HyFlex class opportunities moving forward. The district was happy with the experience and agreed to offer more HyFlex classes moving forward.

**Reflection:** What are the benefits of HyFlex within this scenario? What are the challenges? If you were to create a HyFlex "self-assessment" for your students, what would that look like? What elements might it contain?

## Case Study 2: District-Provided Instruction

A parent, Mrs. Perez, reaches out to her son Fernando's school district to discuss his long-term health and academic needs. This year, the district has decided not to support any hybrid or flexible learning options while the neighboring district has decided to pilot HyFlex for the junior and senior classes to reduce the growing rate of absenteeism. Mrs. Perez shared with the district that during the pandemic, Fernando, an 11th grader flourished socially, emotionally, and academically because:

- he met with his peers and teachers regularly synchronously
- lessons were recorded and he could revisit the content as often as needed to solidify his understanding
- his academics were not interrupted when he needed to seek treatments for his chronic condition

Although the school district was aware of the neighboring district's pilot and was supportive of Mrs. Perez's suggestions to continue virtual learning options for certain classes for grades 11 and 12, they felt it would be best for at least the next two years to let everything go back to normal within their district.. Discontent with the district's response and aware of other families interested in more remote learning options, Mrs. Perez pulled a group of concerned parents/guardians and students to speak at the School Board Meeting. The group consisted of parents/guardians and students who have chosen to pursue 1:1 instruction provided by the school district for a myriad of reasons (e.g., social, emotional, and health), as well as others who were interested in having a HyFlex or Hybrid learning option for their children/teens. These individuals spoke about the benefits that HyFlex options would have on their children but also benefits to the school environment as a whole.

**Reflection:**

What do you think parents saw as the benefits of HyFlex within this scenario? What were the challenges possibly faced by the district? If you were on the school board, what would be your recommendation to the district?



## Case Study 3: Performing Arts Academy

Ben, a 10th Grader at Performing Arts Academy, has recently been selected as a vocal and movement artist to be on a national tour for musical theater. Whitney, also a 10th grader at PAA, has been selected to be one of the principal dancers for an upcoming ballet production. These two students are examples of the opportunities that students at PAA are offered throughout the year. PAA is a highly selective school for gifted and talented artists in music, dance, and visual and performing arts. As a result of this, the school has a high rate of absenteeism due to students being out for auditions or performance obligations.

Although the school has policies and procedures for short-term and extended absences, students who are away from the school generally have a difficult time meeting their academic obligations and feel disconnected from the school and their peers. PAA is concerned about its students, school community, as well as its state funding. To continue to have a vibrant school where students can call their academic home, PAA is considering adopting a hybrid and flexible (HyFlex) model for students who have approved short-term and long-term performing opportunities. As a result, students will be able to participate academically in person, asynchronously, and synchronously.

PAA's rationale for the HyFlex proposal is as follows:

- Students can participate fully in their academics at any time regardless of their circumstances which will minimize academic slides.
- Teachers will be able to stay connected and monitor the student's academic progress.
- Students will be encouraged to participate via Zoom to directly benefit from instructional training classes. All lessons will be recorded and accessible at any time for students to access and revisit the content.
- Students will feel able to continue to grow artistically and academically while maintaining social and emotional relationships with their community.

### Reflection:

In this scenario, are there benefits of adopting HyFlex? What are some of the challenges? Why would a HyFlex model work or not for this school and its students?

## Case Study 4: Snow Days

Vista View School District (VVSD) has 1,500 K-12 students and is located in the foothills of a major mountain range. In the past several years there has been an increased number of snow days needed which extended the academic year past June. Parents and students are unhappy that the school calendar was constantly in flux. This past year, even after the school district took back the weeklong April break, students needed to attend school until July 1st. The Vista View area financially heavily relies on tourism in the winter and summer months. This means the community is dependent on student employees especially until after Labor Day. Also, students who wish to participate in athletic and other academic opportunities outside of Vista View are unable to do so due to the uncertainty of when the school year will end. Teachers have noticed that given the elongated academic year, student motivation and morale have significantly declined which is impacting student performance. Given that there are not many academic options in Vista View, parents are exploring online schools or homeschooling.

Since starting the school year in August is not feasible, the teachers of Vista View have requested an opportunity to share with the VVSD School Board an alternative to pushing out the school year which was vetted and supported by administration, parents, and students. The teachers would like the school board to consider adopting Emergency Remote Learning Days (E-Days), which would include HyFlex instruction.

The teachers' justification to adopt an E-Day Plan is based on the following:

- Less academic disruption and continuity in student learning can be accomplished by retaining a certain number of snow days but once exhausted, pivoting to E-Day instruction. This means, in lieu of canceling school, the district can pivot instruction in a Hybrid Flexible way (asynchronously and synchronously online). For academic continuity reasons, and to prevent learning loss, any weather-related school closure of more than a day will transition students to virtual learning.
- More meaningful learning. Tacking additional make-up days at the end of a long school year is less academically beneficial.
- Increases student morale, motivation for learning, and academic performance.
- Flexible participation mode based on student need or preference. HyFlex allows students the choice to work at their own pace and time.

### Reflection:

What are the benefits and challenges of adopting a flexible virtual learning alternative within this case study? If you served on the VVSD School Board what questions or concerns might you have? How would you vote and why?

## Conclusion

As more flexible options are introduced into the K-12 sphere, it is essential to think about how districts may utilize HyFlex teaching and learning to enhance their current offerings. We suggest a backward planning mindset, thinking first about how HyFlex can be utilized in grades 9-12 to offer AP courses, foreign language courses, and courses that give college credit. Many K-12 teachers and administrators have shared with us that they believe high school classes are the ideal place to begin a HyFlex learning option, as it would give students an opportunity to engage not only in-person, but also assist in students becoming highly proficient with online modalities that they will encounter later in their educational career (University at Albany, 2022). High schools can also collaborate with local colleges or universities to create HyFlex courses that juniors, seniors, and college students can all attend. Once high schools master the HyFlex option, flexible teaching structures can then be offered in middle schools, providing students in grades 6 through 8 with class options that may not have existed previously. Within elementary schools, different aspects of HyFlex can be introduced to the school community. For example, Parent Teacher Association or school-based presentations can be given utilizing a HyFlex option. Elementary schools can also utilize a HyFlex option in classrooms to serve students who may be absent for long periods due to illness or accident; or for students dealing with school-based anxiety or other mental health issues. Once the HyFlex option is introduced successfully, it becomes easier for parents and students alike to imagine more opportunities for K-12 HyFlex integration. Post-pandemic, education is going through a revolution, and the HyFlex option provides solutions for parents, teachers, and administrators alike. It truly is the future of education.

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