Enhancing HyFlex Instruction for Multiple Learning Modalities

At Purdue University, the HyFlex Instructional approach blends face to face and online instruction. This approach allows the on-campus students, in-class students, and fully online students to participate in class during real time live class sessions. To make the HyFlex Instructional approach successful, the technology in the classroom needs to be available and performing with minimal disruptions. Our challenge consisted of investigating and testing potential hardware solutions to integrate into the current infrastructure of 3 facilitated classrooms at Purdue University. Our team ultimately decided to install the Blackmagic Web Presenter to help facilitate HyFlex Instruction for faculty members teaching graduate level engineering courses.

Device Features

The Blackmagic Web Presenter is a flexible device that can easily be implemented in classrooms, video production facilities, conference rooms, campus offices, and home offices. Features of the web presenter include:

- Easily Connects to Classroom Computer or Personal Device
- Can be used with any web conferencing software (MS Teams, Zoom, WebEx, etc)
- Includes high quality audio/video inputs

Student Opportunity

The installation of this device provided students flexible and equitable learning opportunities. Those

opportunities include:
- *Real-Time Interaction and Personalization*-Online students, in-class students, and the faculty member can see and interact with each other in real time using the classroom infrastructure.
- *Questions and Discussions*- Online students and in class students can ask questions and participate in discussions. All students can participate in backchannel discussions via the native chat function in the web conferencing software.

Impact Metrics

In Fall of 2021, our team estimated approximately 20% of the 45 faculty members who taught in the three (3) facilitating classrooms utilized a version of the HyFlex format. The faculty's use of the video conferencing tools that connected to the web presenter was one of the largest indicators the HyFlex approach was being utilized in these classrooms. We discovered that out of the 20% utilization there were 4 faculty members that used these tools during each of their live in-class course sessions for 16 weeks. Each course includes 3 different course sections; 1 in-class face to face section, and 2 online sections. The total number of students participating in the HyFlex environment among the 4 courses and in all of the sections was 248.

Looking Ahead

The need for flexibility and equity amongst the many face to face and online course offerings will only drive us to continue to develop and refine our current classroom technology infrastructure. HyFlex can be most effective when there is updated technology infrastructure and campus support staff is available to train faculty members. Moving forward, our team will continue to investigate technologies that can be implemented in the classroom to support the HyFlex Instructional approach.