

One Size Fits None

Delgado Community College and Louisiana Community & Technical College System

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In 2014, Jeanne Samuel discovered a model for delivering courses that extended the hybrid model already in use at Delgado. The new model, HyFlex, solved several institutional challenges: (1) meeting enrollment demands without enough physical space, (2) creating a flexible class schedule to support the needs of our part- and full-time working students and for 'life happens' moments, and (3) attracting more students by appealing to adult learners' preference of choice (LCTCS, 2019) and control in their learning environment. HyFlex course design meets the needs of active military and veterans, an important student group at Delgado Community College. In 2015, HyFlex was a form of personalized learning in use at Delgado Community College before the term was in vogue. With an increase of New Orleans area school closures due to weather events, HyFlex design has been discussed as an important part of our disaster recovery plan.

Institutional Goals for HyFlex

1. Serve more students in the same physical space.
2. Increase student enrollment (by appealing to students' desire to control aspects of their learning environment).
3. Increase student retention (by providing student participation flexibility).
4. Prepare for business continuity in the event of a natural disaster.

Flexibility to Serve the Needs of Growing Demographic

By Fall 2018, 68% of our student population was female, the average age of our students continues to rise. Fall 2018 data show that 34% of our students were age 25-34 with the average age of 27.9 years. Our part-time student population is growing while full-time student demand is decreasing. From Fall 2014 to Fall 2018, full-time student enrollment decreased from 43% to 36% while part-time enrollment rose from 57% to 64%. In addition, from Fall 2017 to fall 2018, although a low number, we experienced a decline in demand for degrees and certifications and an increase in non-degree seeking students. Students taking any online class rose 13.8% between Fall 2014 and Fall 2018 (36% of all students in Fall 2018). And, students attending fully online rose 14.2% during the same period (13% of all students in Fall 2018). Importantly, although Delgado has a presence on average in 20 states, 68% of students enrolled and attending at the main City Park campus live close to the campus. 85% of students attending our West Bank campus live near the campus. The data show that HyFlex course design is a good fit for Delgado Community College and may become an important part of our course delivery and marketing strategies.

Serving More Students

During the Fall 2014 semester, two instructional designers and one assistant dean from Delgado Community College's Business and Technology Division met to discuss the merits of adopting the use of the HyFlex delivery model for business courses. The Business department was already employing a space-sharing model for their hybrid courses. Typically but not exclusively, at our institution hybrid delivery requires students to attend one day face-to-face (F2F) and the rest online. Unlike the flipped classroom model, the day that students meet face-to-face was not necessarily lecture-free. Face-to-face classes are scheduled (1) Monday and Wednesday (2) Tuesday and Thursday. For our HyFlex model, two different classes were scheduled in the same room during the same time slot on different days, one day each week. This meant that the number of students served in the classroom raised to a maximum of 50 from 25 for two courses. Had the additional two courses (four sections) in the HyFlex pilot shared the same timeslot, this would have raised the physical space gain overall from 150 to 300 seats. The pilot was conducted on the institution's West Bank campus, which has a four-day work week Monday - Thursday. Please see Table 1 below.

Table 1

Room Capacity by Delivery Mode

Typical Room Use for Hybrid Course	HyFlex Room Use
<ul style="list-style-type: none"> · 1 room · 25 seats · 1 class meets Tues and Thurs 	<ul style="list-style-type: none"> · 1 room · 25 seats · 1 class meets on Tues · 1 class meets on Thursday
Number of students served = 25 students	Number of students served = 50 students

Improved Student Success

Since 2017, all courses in the Business programs are delivered as fully online, F2F, and hybrid options per term. Students may also register for 8-week terms rather than 16-weeks. In other words, students have the option to register for "full term" courses (16-weeks) or "shorter-term" courses (8-weeks). The 8-week option provides additional flexibility to students by enabling sequential or concurrent completion of courses. Furthermore, the sequential option allows students to register for courses in the second 8-weeks as a result of completing a related pre-requisite course in the first 8-weeks of the semester.

In addition to the aforementioned benefits of adopting the HyFlex course delivery model, we also anticipated that improved student success (retention, progression and completion) might be an additional benefit. Delgado is a member of a 12-institution community and technical college system, the Louisiana Community and Technical College System (LCTCS). As with similar institutions, only 18% of LCTCS students withdraw for academic reasons (LCTCS, 2019). Research regarding the achievement gap in higher education between students enrolled in online courses compared to those completing face to face courses is mixed. (Carrone, 2008; Helms, 2014; Jaggars & Bailey, 2010) Although this gap at Delgado Community College is closing, looking at the aggregate data, students who attend fully online are less successful than those who attend fully F2F. Delgado is in the process of reviewing course delivery mode and student success by instructor to identify opportunities for improving student success online. Preliminary results are consistent with previous studies; the relationship between delivery mode and student achievement is mixed. However, anticipated outcomes for HyFlex course delivery is promising. A 2010 metadata analysis of research comparing the achievement gap between online students and student attending class in-person cited one study that found that students perceived that the face-to-face course better prepared them (qualitative). (Jaggars & Bailey, 2010) Another study citing a United

States Department of Education (USDOE) meta-analysis noted that classes offering both face-to-face and online instruction had better outcomes than a course delivered with only one of the delivery modes. (Helms, 2014)

Since HyFlex affords both types of instruction via flexible attendance, the HyFlex approach should enable higher student retention and completion than single delivery mode classes. With HyFlex design, students can attend as they need or prefer without penalty for missing an in-person class. If a student is falling behind or wants in-person support, they may come to class in person. If they need to be away or are comfortable with the concepts that week, they may elect to complete work online.

Another way the team expected to see the impact of HyFlex delivery, is increased student enrollment over time. Often, online classes fill up first leaving students with only F2F and hybrid options. The more HyFlex offerings we have, the more access to the online mode we can provide to students needing flexibility, which should lead to a greater number of students enrolling overall. Ideally, we can cross-list or pair face-to-face and online classes in the Learning Management System (LMS), Canvas as appropriate to provide more participation flexibility to students.

College Priorities Shape Faculty Support

By 2018, the focus on course design and delivery shifted from HyFlex course delivery to incorporating Open Educational Resources (OER) and other affordable learning initiatives. Helping faculty create, adapt, or adopt OER exposed not only a College support need, but a System-wide support need. There are not enough instructional designers at institutions to help faculty create OER courses. As a result, with LCTCS funding, a Fundamentals of Instructional Design course was created and taught to LCTCS faculty and staff during the 2018-2019 academic year. Within the course, HyFlex was promoted as a multimodal course design model. We refer to it as multimodal because we design at one time for all delivery modes and deploy (hide/show) the course content as needed or desired. We know that reasons for students not completing courses are primarily external in nature, our principal objective for adopting HyFlex was to permit students the flexibility of when and where to attend class; online or in-person without fear of an academic penalty.

Planning and Redesigning for HyFlex Delivery

The Delgado team met during the Fall semester of 2014 to agree on our concept of HyFlex and how to implement it at our institution. During the initial meetings, the focus was on discussing the design and teaching principles, planning templates, and reviewing examples of HyFlex implementations at other institutions. A community of practice was formed that included three business faculty from Delgado Community College's West Bank Campus. The faculty were tasked with drafting new course syllabi, activities, and assessments. The instructional designers modified available HyFlex templates and assisted the faculty with course material development; for example, creating similar activities and assessments in an alternate delivery mode. One of the early challenges was how to use the HyFlex model for a course that primarily uses third-party publisher resources. Another challenge was more significant. At the same time, during the Fall 2014 semester, the institution was moving from being a Blackboard LMS institution to one that uses Canvas by Instructure. Initially, creating two different learning objects that satisfy one gradebook item was difficult in Blackboard. Mastery Paths, a Canvas feature now available, manages choice and remediation graded activities.

In early 2015, we also submitted a proposal for grant funding from the Louisiana Board of Regents to pilot HyFlex at Delgado. This grant provided compensation for the faculty and course designers. In addition, it paid for technology training, course authoring software, and a supplemental library of PowerPoint themes, graphics, and sounds. During the initial discussions with the faculty, we explained what HyFlex is conceptually. We agreed on the common definitions:

- **Face-to-Face (F2F)** learning experiences are designed around a physical environment. Learning is conducted in the same space, at the same time. There is little to no flexibility in regard to participation. This is compared with online as the *brick* (and mortar) environment.
- **Online at a Distance** learning experiences are designed around virtual participation. Both time and place (space) may differ. The class may require different time, different place or same time, different place attendance. It used to be referred to as *click* when compared to F2F. There is potentially a high level of participation flexibility.
- **Hybrid** learning environments range from partially online to almost all online depending on how an institution defines the hybrid classroom. Within this *brick* and *click* environment is the HyFlex model.
- **HyFlex** provides students the opportunity to attend fully online, fully face-to-face, or somewhere on the spectrum between the two environments depending on personal choice or need. HyFlex is a version of the hybrid model with flexible participation. Asynchronous attendance is participating at a different time while synchronous is participating at the same time.

Similar to the approaches found in our research, we decided to designate the course in the class schedule as a hybrid-delivered course and explain to the enrolled students the course participation option on the first day of class. In addition, we agreed that students could change their attendance preference weekly (topic-based week). The single course syllabus and course schedule would contain information for all modality participation options. At a glance, students would know weekly expectations and course work for either online (in-lieu of) participation or in-person participation. Providing the weekly work options by participation mode provided the course aspect of choice; students could personalize their attendance based on a preference for one type of participation activity over another. As stated earlier, HyFlex became a student-centered option to balance work and life (supporting student success) and no longer just a solution to physical space challenges.

Implementation

The faculty involved in the HyFlex pilot were asked to think about the vision for their course, the merits of each delivery mode, and how students benefit most from each learning environment. We agreed that some activities may be adapted for both environments. An excerpt of delivery mode benefits follows in Table 2.

Table 2

Learning Environment Benefits by Delivery Mode

Face-to-Face	Online
--------------	--------

- | | |
|--|--|
| <ul style="list-style-type: none"> • Establishing social presence and support • Nonverbal communication (affect and body language is observable) • Explaining assignments (access to instructor) • Negotiating expectations and responsibilities • Diagnosing students' conceptual problems and providing immediate feedback • Brainstorming • Role play • Student demonstration of psycho-motor skills • Sustaining group cohesion, collaboration, and support | <ul style="list-style-type: none"> • Reflective, on-task discourse • Broader participation in discussions • More time to think before responding • Critical analysis • Flexibility • Self-paced learning and practiceSelf-assessment quizzes with immediate feedback • Near real-time, automatic grading of multiple choice, T/F, fill-in-the-blank tests |
|--|--|

Our goal was to make activities and assessments for each week similar regardless of the delivery mode. Webcams, microphones, and software were provided to the faculty piloting HyFlex. Software such as Screencast-o-matic and Big Blue Button for recorded lecture were provided for faculty to easily narrate lectures. In 2016 we began to add touchscreens to the classroom lecterns to facilitate live annotation of presentations. Basic and advanced Canvas LMS training was provided to faculty. In addition, a self-paced course about HyFlex course design was created. Figure 1 shows an index of content in the introductory module in the HyFlex course design course. Other course information included HyFlex teaching best practices, HyFlex course and management best practices. The faculty HyFlex checklist was suggested but not completed. Tips for faculty were created and listed later in this chapter. This course was not well-attended by faculty and is now under revision.

Figure 1

Introductory Module From HyFlex Professional Development Course

HyFlex Introduction
What is HyFlex?
Introduction to HyFlex (Video)
HyFlex Introduction (Interactive Version)
HyFlex Introduction Handout (PDF) Skeletal Notes to Guide Viewing
Discussions
HyFlex Pilot Team Members
What is hyflex.pdf

The following video provides an Introduction to HyFlex presentation from 2015.
(YouTube: <https://youtu.be/Bu4aVBxf760>) Figure 2 is an example of the partial notes handout to accompany the introductory video.



[Watch on YouTube](#)

Figure 2

Partial Notes Handout for HyFlex Introductory Video

BENEFITS OF HYFLEX



- The model presents _____ through course content, which may work well for courses where students arrive with _____ levels of expertise or background in the subject matter
- Courses built on the HyFlex model help to break down the boundary between the virtual classroom and the physical one
- Provides students with options to meet the _____ of various learning needs and disabilities
- Flexibility in scheduling will make courses _____ to all kinds of learners
- _____ problems arising from having to cancel class due to weather and other issues

WHAT TECHNOLOGY IS NEEDED?

- Online technology is primarily used to provide the students with flexibility in their choice of educational experience, and to communicate with the faculty member inside and outside of office hours.
- Delgado Community College will use _____ Active Learning Platform during the Fall 2015 and Spring 2016 semesters to create a classroom environment accessible across the delivery and participation modes (Fully F2F to fully online).

The instructional designers and faculty’s emphasis was on creating online equivalent activities and assessments for transitioning hybrid courses to HyFlex. The lead instructional designer for the HyFlex pilot created a Canvas course for posting the before and after course artifacts and discussion boards to discuss the process and problems, shown in Figure 3.

Figure 3
Sample Content From Canvas HyFlex Community Course

Oct 29, 2015	Individual Meetings: If you have not sent me the information to review, please post it in the HyFlex Weekly Documents Module . 10am - Thomas 11am - DeLarge 12pm - McLean Discussion Board to Post Materials so everyone can review and share.
Oct 22, 2015	HyFlex Meeting - PreWork (please click on link to see the detail announcement)
Oct 8, 2015	Please view the Lynda.com Adult Learner course. You will receive email information about the course along with a viewing guide  . Please refer to an email you will receive about accessing Lynda.com courses. Your Sample Session Documents are posted with comments in the HyFlex Weekly Documents Module .
Oct 1, 2015	Please take some time to review the HyFlex Overview File .  This will help at the meeting to determine fixed terminology, and potential assignment scenarios. A timeline will also be discussed at the meeting.
Sept 15, 2015	Please take some time to review the HyFlex video , HyFlex interactive video or the HyFlex handout before the meeting on Thursday at 9:30 in WB1-108.

HyFlex implementation varied due to the current course design and faculty teaching preference. For example, the computer application course was designed as a lab and focused on concrete skills. Students used guides, videos, and checklists, instead of higher-order thinking or problem-solving emphasized in many other business courses. Third-party materials were used for most of the coursework. In the management course, student learning was based on real-world experiences and scenarios. This allowed for more student exploration and content choice. The third-party publisher materials were supplemental. The HyFlex version of the management course used LMS tools, videos, scavenger hunts, and similar instructor-created and curated activities for both the online and in-class sessions. These materials were personalized, creative, and relevant. The process of creating materials for HyFlex delivery options improved the engagement aspect of the course materials for all course sections, not just those delivered as HyFlex.

An initial HyFlex course lesson planning template was modified by an instructional designer (refer to Figure 4) from various templates found on the web, including one by Dr. Brian Beatty.

Figure 4

Early Version of HyFlex Lesson Planning Document

Allows the instructor to plan and develop the material needed to design and implement a module.

Learning Goal(s)/Objective(s)	
Chapter or Tools to support or guide the LOs	
What the student will know after completing the learning goals	
How the student will demonstrate knowledge/understanding of learning goals	

PRE-WORK (BEFORE CLASS)

Content Description	
Activity Intended for:	<input type="checkbox"/> F2f <input type="checkbox"/> Online <input type="checkbox"/> Both
Resources Needed	
Media/Technology Needed	
Special Requirements	

Preparing for Weekly Activity Regardless of Mode

Instructions for all students	
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In Class Activity

Learning Objective	
Activity Intended for:	<input type="checkbox"/> F2f <input type="checkbox"/> Online <input type="checkbox"/> Both
Resources Needed	
Media/Technology Needed	
Activity description	
Interactivity	What type of group work or interactions will be required or needed/expected for this LO Activity to be completed

Out of Class Activity

Learning Objective	
Activity Intended for:	<input type="checkbox"/> F2f <input type="checkbox"/> Online <input type="checkbox"/> Both
Resources Needed	

Media/Technology Needed	
Technology Support	List any support links and numbers, common issues to be aware
Activity description	
Interactivity	

HOMEWORK

Activity Intended for:	<input type="checkbox"/> F2f <input type="checkbox"/> Online <input type="checkbox"/> Both
Resources Needed	
Media/Technology Needed	
Technology Support	List any support links and numbers, common issues to be aware
Activity description	

QUESTIONS/ISSUES

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The faculty ultimately created their own template. Figure 5 is an example of a completed template.

Figure 5

Example of HyFlex Lesson Planning Template

In-Class Exercise	Out-of Class Exercise
Flower Drawing Exercise <ul style="list-style-type: none"> Ask class to draw a picture of a flower on paper Some/all place flower on white/chalkboard Show picture instructor expected Why don't student drawings match instructor expectations? Apply to Communication Process (slides 3-9) <ul style="list-style-type: none"> Encode (sender) Transmit to receivers Decode (receiver) Feedback (drawings) Noise Communication medium options <p>Powerful Formal Presentations – lecture and discussion (slides 12-14)</p> <p>Listening Skills – lecture and discussion (slides 15-17)</p> <p>Direction of Communication – lecture and discussion (slides 18-22)</p>	<p>Assignment: TBD</p> <p>Option: create assignment unrelated to drawing exercise</p> <p>Create a scavenger hunt assignment. Students collect pictures based off of a key word. Once uploaded, they compare their pictures to your picture. You choose a picture that you know will not be found/used.</p> <p>Option: utilize LearnSmart objective specific</p> <p>Option: utilize Video Exercise above</p> <p>Have students find movie clips about miscommunication and post them in a DB. Have a few prompts to help them explain why they believe this is a good example. Because there is not a dynamic class discussion occurring when students are viewing the Presentations, you can have certain static images and ask the students to describe what they see.</p> <p>Then play a movie clip that has the image in it. Ask if their perception changed once they knew the backstory or understood the communication.</p> <p>Assignment/Resource: TBD; voice-over slides with fill-in-the blank questions</p> <p>Assignment/Resource: TBD; voice-over slides with fill-in-the blank questions</p> <p>Assignment/Resource: TBD; voice-over slides with fill-in-the blank questions</p>

Our methodology was to carve out as much time as we could for the content creation and curation activities, for example:

- Develop online lessons and assignments
- Produce media (e.g., production video, graphics, Captivate or Screen-cast-o-matic or Big Blue Button)
- Acquire course content that from textbooks, articles, images, and videos

Next the instructors revised the course syllabi to include:

- The organization and rationale of the course design (HyFlex)
- Expectations regarding student responsibility for learning
- List of tasks with due dates by participation option (Make it very clear which tasks are to be done in class and which are to be done outside of class and how the tasks are related)
- Time management tips
- Resources for technology support (technology and quality of audio are typical student pain points)

Faculty communicated the course design to students in various formats as seen in Figures 5, 6 and 7. Faculty laid out student learning outcomes, the activities to be completed, and the activities to do before class and after class. For activities to do during class, there was an online equivalent clearly marked. As stated earlier, often, it is not course content that prevents a student from being successful. External factors create barriers. HyFlex course design provides a solution to students for time-management as life events occur. Figure 6 shows the planning document with student learning outcomes and class assignments delivery mode by week.

Figure 6

Representation of Chapter Assignments With Clearly Identified In-Lieu of Class Assignments by Week

Week # Date	Unit/Topic and Learning Outcome <i>By the end of this week, you will know or be able to...</i>	Learning Activities and Assignments <i>...this is how you learn how...</i>	Learning Assessment, Tests or Exams <i>...this is how you will demonstrate your knowledge and this is how much it will impact your grade.</i>
Week 13 4/11-4/17 (Mon-Sun)	<u>Chapter 13 – Communicating</u> <ul style="list-style-type: none"> • Describe the communication process and various kinds of communication in organizations. (CO11) • Discuss important advantages of two-way communication. • Identify communication problems to avoid. • Describe when and how to use the various communication channels. • Give examples of ways to become a better “sender” and “receiver” of information. • Explain how to improve downward, upward, and horizontal communication. • Summarize how to work with the company grapevine. • Describe the boundaryless organization and its advantages. 	<ul style="list-style-type: none"> • Read & Study Text • Review Chapter Learning Objectives and PPT Slides • Attend Class • Actively Engage in Class Discussion and Classroom Activities • Complete Assignments in Canvas/CONNECT <p>OPTIONAL: Complete equivalent assignments in Canvas in lieu of attending class. See the Canvas chapter module for additional details. Assignments must be completed during specified timeframe and become available at time of class.</p>	<p><u>BEFORE Class</u></p> <ul style="list-style-type: none"> • Learn Smart (10pts – DUE 4/11 BC) • Is This Effective Communication? (Video Case; 10pts – DUE 4/11 BC) <p><u>DURING or IN-LIEU of Class</u></p> <ul style="list-style-type: none"> • In-Class Participation (10pts IC) - or - • Canvas Assignments equivalent to class (10pts – DUE 4/15 LOC) <p><u>AFTER Class</u></p> <ul style="list-style-type: none"> • Quiz (10pts – DUE 4/17 AC) • Communication at Cupcake Kingdom (Click & Drag; 10pts – DUE 4/17 AC)

Figure 7 offers less detail. It shows the course calendar document with class assignments and delivery modes by week (chapter).

Figure 7

Representation of Chapter Assignments With Clearly Identified In-Lieu (Online) of Class Assignments by Chapter

Part 4 - LEADING (Chapters 10-13)

Chapter 10	<ul style="list-style-type: none">• Before Class (due 3/21)• Optional In Lieu of Class (available 3/21-3/28)• After Class (due 3/28 - MON due to Spring Holiday)
Chapter 11	<ul style="list-style-type: none">• Before Class (due 3/28)• Optional In Lieu of Class (available 3/28-4/1)• After Class (due 4/3)
Chapter 12	<ul style="list-style-type: none">• Before Class (due 4/4)• Optional In Lieu of Class (available 4/4-4/8)• After Class (due 4/10)
Chapter 13	<ul style="list-style-type: none">• Before Class (due 4/11)• Optional In Lieu of Class (available 4/11-4/15)• After Class (due 4/17)

Faculty included a reference to the HyFlex delivery approach in the course syllabus. In addition, the faculty developed several handouts for students. The handouts explained the HyFlex participation options and the weekly participation schedule, instructions regarding the HyFlex "in-lieu of class" assignments, related points, and due dates. An example of the weekly handouts for students is provided in Figure 8.

Figure 8

Instruction for In-Lieu of (Online) Class Assignments

In-Lieu of Class (online material)

WEEK 13 (IN-LIEU OF CLASS) - CHAPTER 13

Complete the following assignments **IN LIEU OF CLASS** and in order to receive **PARTICIPATION** credit for this week.

1) Scavenger Hunt - Exercise (7 points)

- Complete the Find Assignment
- Complete the Unveiling Assignment
- View the Communication Process Video (7 minutes)
- Participate in the Discussion regarding what you observed

2) Formal Presentations (2 points)

- View the Formal Presentations Video (4 minutes)
- View the Nonverbal - What Do You See? Video (1:30 minutes)
- Complete the Nonverbal - What Do You See? Assignment

3) Direction of Communication

- View Direction of Communication Video (5 minutes)

4) Feedback (1 point)

- Complete a brief survey to provide feedback on what you learned and the In-Lieu of Class experience.

The items listed above must be completed in sequential order and are due by 4/15 (FRI) @ 11:59pm.

Click **NEXT** in the bottom-right corner of each page to move to the next page.

Early in the term and throughout, the faculty met with students to demonstrate how the online portion of the class works. The faculty planned to create an online HyFlex student orientation. To date, the orientation has not been created. As faculty and instructional designers collaborated in developing HyFlex courses, the following were found to be helpful HyFlex faculty tips:

HyFlex Faculty Tips:

- Introduce information in a user-friendly format employing numerous headings, lists where applicable, boxes with definitions, and graphics to make it easier for students to remember the information (consider ADA-compliance)
- Provide context by illustrating how knowledge of the subject may be useful to your life outside the class today or in the future
- Accommodate various types of learners by using illustrations, visual analogies, demonstrations, graphs, diagrams, and tables, etc.

Implementation & Sustainability Issues

During our HyFlex pilot, 2014-2015, we limited the number of faculty participating; despite knowing it would slow HyFlex adoption at the College. A well-designed HyFlex course requires deliberate curation, creation, and design. These requirements are the main reason for not scaling HyFlex adoption at the College more quickly. There are competing priorities for limited resources and the College has no full-time instructional designers. We discovered that brainstorming for ideas about activities with faculty took time. In addition, we were limited by who was available to assist faculty with adding the engaging, equivalent learning, practice, and assessment content. Creating the materials from scratch is time-consuming. In fact, developing online content was the most time-consuming aspect of designing a HyFlex course since we were starting with hybrid courses. The move to HyFlex delivery required the development of the equivalent online material to replace the in-person component. In other words, the online portion of the hybrid course

already existed (publisher material, instructor created assignments, etc.) in each of our courses. However, significant time was required to replicate the in-class experience in an online format.

It also takes additional time to test and revise, as needed, the new activities. As stated earlier in the chapter, when we piloted HyFlex we had just transitioned from being a Blackboard LMS institution to a Canvas by Instructure institution. The adoption of the Canvas LMS and use of the Mastery Paths feature, provided an easier way to automatically grade multiple options for assignments

During Spring 2019, two faculty members, one who teaches history and the other English, started to plan implementation of HyFlex in their Summer 2019 courses. This is the first extension beyond the business faculty. The two instructors presented a HyFlex session during the 2019 Delgado Summer Institute. They shared that they experience difficulty in finding classrooms with working podiums (many had audio issues or camera issues). Although the College has webcams in over 100 classrooms, there is still some work needed to add similar technology to more College classrooms on all College sites. In addition, we need to improve how we communicate to faculty what resources are available to them and how to use the resources. The College has two hi-tech, multipurpose classrooms setup specifically to stream lectures to two or more different locations at the same time. The multipurpose classroom at the main campus has two microphone arrays and a high-resolution robotic camera that tracks the lecturer. The goal is to provide one hi-tech classroom per campus or site for live streaming and lecture recording for on-demand viewing or reviewing. The College provides three applications for recording lectures. Hands-on trainings is offered to faculty multiple times per year.

Impact

In summary, our HyFlex program is achieving college goals as demonstrated by the information and examples provided in the previous sections and summarized below:

Goal 1: Serve more students in the same physical space.

The HyFlex program enables an increase in number of students served in current classrooms while avoiding the expense of adding new classrooms.

Goal 2: Increase student retention (by providing student participation flexibility).

The HyFlex program enables an increase in student retention and completion by providing the flexibility students require to manage their class participation and personal schedule.

Goal 3: Increase student enrollment (by appealing to students' desire to control aspects of their learning environment).

The HyFlex program enables an increase in enrollment as students have control to pursue multiple delivery options based on their individual learning needs.

Goal 4: Prepare for business continuity in the event of a natural disaster.

The HyFlex program enables business continuity by providing the flexibility required for ongoing operations and as a critical component of a disaster recovery plan in the event of a natural disaster.

During the initial implementation, three business instructors delivered four HyFlex courses:

- Business Computer Applications
- Business Communications
- Principles of Management
- Principles of Marketing

The first HyFlex modules were introduced to students near the end of the Fall 2015 term. The business computer applications course, held in a computer classroom, piloted two content modules of Microsoft™Excel in three sections. Feedback surveys from the computer application course students reported that they were excited by the option of

choice but most preferred to attend in the F2F format. As the computer application course was transitioning from a flipped classroom, lab format, students may have preferred attending in-person in order to access to classroom computers to complete course work. One of the greatest take-aways for Dr. McClean, who piloted a marketing course and a management course, was the positive reaction from students that they were given a choice on how to manage their work/school/life commitments. In other words, the comfort in knowing they had an "in-lieu of class" option when conflicts with in-person (F2F and hybrid) class times arose was a life-saver. It is difficult, if not impossible from this small sample, to measure whether the attendance choice impacted course retention.

A management class section and one communication class section piloted HyFlex. For the business management class:

- 70% of students felt that the directions were clear
- 88% felt that the online lesson length worked
- 63% felt online was effective but would not always choose to participate online
- 67% liked having the participation option
- n = 24 all worked online the week of the survey

For the business communication course:

- 100% of students felt that the directions were clear
- 100% felt that the online lesson length worked
- 53% felt online was effective but would not always choose to participate online
- 47% felt online was so effective that they would choose to attend class again online
- 73% liked having the participation option
- n = 15 all worked online the week of the survey

During the Spring 2016 semester, the Principles of Management instructor documented 3 sections of the week 3 attendance. Please refer to Table 4.

Table 4

Attendance Week 3 by Participation Mode for Principles of Management

Section	Total Students	F2F		Online	
		#	%	#	%
A	11	9	82%	2	18%
B	19	15	79%	4	21%
C	22	16	73%	6	27%
Total	52	40	78%	12	22%

The faculty comments about their HyFlex teaching experience were:

- Definitively will use HyFlex course design in the future since it pushes us to be more creative and explore different assignment options to promote student engagement
- Overall student performance appears to be better; some students will not work regardless of creativity, engagement, and flexibility
- Takes more time than expected to develop alternate delivery content

The student comments about their HyFlex teaching experience were:

- Students say they love the option; the ability to keep up if they missed class; do not feel abandoned as they do with many online classes
- "It allowed me to accomplish my career goals by helping me take advantage of real-world opportunities I could not have if I had been attending a traditional course"
- "I am able to graduate more quickly and keep up with my full-time job"
- "I am battling combat-related illnesses...opportunity to make up work for points rather than penalized for things that are sometimes out of my control"

In the Spring 2016 business marketing and management classes, 21 (72%) of the students attended the class online instead of attending the F2F class while 8 (28%) attended class online in addition to attending the F2F class. Overall, of the 65 combined students, 30 (46%) took advantage of the online (in-lieu of) class option. When asked whether they were likely to select the in-lieu of class option again, 24 (83%) said very likely (8) or likely (16) and 5 (17%) said not likely (3) or won't (2). Some of the reasons students were less likely to select the in-lieu of options were that they learned better interacting with others [in person] and was that for the management and marketing courses, online was perceived to be more work than attending class in person. Although the goal was to create similar alternate activities, at times working online may require a larger time commitment of students.

In addition to student satisfaction with the format, the number of students capable of being enrolled in this format increases. Before implementation, course sections had a capacity, ratio between enrollment and seats available for enrollment, of 41%. This increased to 61% during the initial implementation of HyFlex with no increase in the enrollment cap before or after implementing HyFlex course design. In regard to grades earned and progressing through the academic program, we found no significant difference between the traditional model and the HyFlex model. In other words, students were successfully completing courses at the same rate in HyFlex course sections than in sections delivered in the traditional hybrid format. This is considered a win because of the increase in enrollment translating to more students than before completing courses successfully.

Conclusion

The unique mission of community and technical colleges in Louisiana provides students with the opportunity to earn credentials in a timely fashion leading to valuable employment and/or transferability, whether the credential is the high school equivalency, industry-based certification, transferable or career technical degree. Moreover, community and technical college graduates, in partnership with business and industry, must be properly equipped to meet the ever-evolving needs of tomorrow's workforce. HyFlex presents an opportunity to provide greater access (increased enrollment), promote retention, and lead to higher levels of completion in order to accomplish this unique mission. By Fall 2020, we plan to market HyFlex programs to adult learners with some college to encourage them to return to college to complete their certificates and degrees. HyFlex is an appropriate design strategy for our demographic described earlier in this chapter.

While current business courses are not *advertised* as HyFlex, lessons learned from the HyFlex experiment continue to be applied today. For example, instructors include more flexibility into course design as a result of their HyFlex experience. As time and technology enables, business studies will continue to adopt and apply the flexibility provided by the HyFlex design in support of student success. College-wide, there is renewed emphasis for HyFlex design and delivery and we plan to one day advertise programs offering flexible attendance. As mentioned earlier in the chapter, in

2019, an instructional design course for faculty was created. HyFlex is referred to in this course as multimodal design. Multimodal in this context refers to the ability to design at the same time for all delivery modes. This enables later deployment of the course as F2F, hybrid, online, or HyFlex (refer to Figure 9).

Figure 9

HyFlex Instructional Design Lesson


HyFlex Course Design (Multimodal)


To-Do Date: Mar 10 at 11:55pm





HyFlex is a model that is a hybrid course that permits flexible participation. The design/delivery model is attributed to Dr. Brian Beatty of San Francisco State University. Institutions implement HyFlex in a variety of ways. Many student management systems do not have codes for HyFlex course delivery. Therefore, they are often coded as hybrid courses. Delgado implemented HyFlex in their Business Marketing program. It supports students when "life happens". Learners selected whether they would attend online or in-person per topic (week). The course design is efficient. You design at the same time for all delivery modes. You may then deploy the course for delivery as face-to-face, online, hybrid, or HyFlex. In other words, HyFlex is a multimodal design model. Build once and deploy for multiple delivery modes.


Resources


<https://library.educause.edu/~media/files/library/2010/11/eli7066-pdf.pdf> 

<https://www.onlineuniversities.com/blog/2013/01/the-hyflex-learning-model-online-eds-most-customizable-idea-yet/> 

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<https://journals.uair.arizona.edu/index.php/itet/article/view/16464/16485> 

https://iase-web.org/icots/10/proceedings/pdfs/ICOTS10_4H2.pdf 

Canvas Accessibility Check February 3, 2019

Faculty teaching the fully online option of Delgado's Criminal Justice program expressed concern that the enrollment in face-to-face classes is dropping as they increase the number of online sections. They are considering HyFlex as a solution to an instructor shortage and student preference for online. The Criminal Justice faculty want to continue to serve students who prefer to learn in-person. Our HyFlex experience provides us with a foundational framework to use when adopting, adapting, or creating course content for OER courses. One of our next steps includes applying design learning to improve the learner experience. In addition, design learning (use of personas and experience maps) aids in identifying HyFlex implementation opportunities.

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Jeanne C. Samuel

Delgado Community College

Dr. Jeanne Samuel is the Dean of Distance Learning & Instructional Technology (DLIT) for Delgado Community College, New Orleans, LA. Jeanne is very interested in game theory for learning and assessment for learning. As a lifelong techie, she has spent decades providing both technology support and teaching in the fields of technology and computing. She loves to learn new things and solve puzzles. Shortly after receiving her PhD from LSU with a focus on Education Technology, she became the Director of Faculty & Staff Development at Delgado Community College, New Orleans, LA. During that time, she researched and promoted HyFlex course design and delivery. She has been the Dean of DLIT at Delgado since Spring 2015. Her interests are in technology adoption (From “S” to “J”: A theoretical technology adoption rate model ([2009, IJEA, 1\(2\), 55-68](#)) and motivational strategies to promote student learning and completion ([2012, The effect of test design on student motivational strategies for learning and student retention](#)).



Amanda H. Rosenzweig

Delgado Community College

Dr. Amanda Rosenzweig earned a PhD in Curriculum and Instruction from the University of New Orleans in 2012, and has a MS in Biology from the University of Louisiana at Monroe. Teaching at Delgado Community College (DCC) since 2003, she is a professor of biology and the college-wide Biology Department Chair. Her Dr. Rosenzweig has immense contribution to the online learning community. Her current roles at DCC include Canvas Learning Management System (LMS) Administrator and Canvas LMS Training Coordinator. Dr. Rosenzweig created and currently serves as the facilitator for Teach and Learn/eProfessor, a five-course series on course development and instructional design. The courses created are a repository of ideas, best practices, analyses and other information that foster student success. Her enthusiasm and drive to ensure student success and progressive change is evidenced by the honor bestowed as recipient of the Seymour Weiss Excellence in Teaching Award.



Mark McLean

Fletcher Technical Community College

Dr. Mark McLean is the Vice Chancellor for Finance and Administration at Fletcher Technical Community College in Schriever, Louisiana. Mark previously served as the Assistant Chair of Business Studies at Delgado Community College in New Orleans and led the West Bank Campus Business Studies team. Mark was awarded the LCTCS President's Inaugural Faculty Fellowship and recently earned his Ph.D. in Human Capital Development from The University of Southern Mississippi. Mark's research focus is leadership in the evolving higher education industry. His dissertation identified and prioritized essential leadership competencies for college CEOs in a metrics-driven environment. Prior to joining Delgado and Fletcher, he spent nearly 20 years in professional services with Deloitte in a variety of director level roles, both domestic and abroad. Mark earned a B.S. in Management from the University of Pittsburgh and his MBA from Loyola University of New Orleans.



René Cintrón

Louisiana's Community & Technical Colleges

Dr. René Cintrón is, first and foremost, dad of three amazing daughters. He is the Chief Education and Training Officer for Louisiana Community and Technical College System, a public, multi-institution system serving a diverse student population seeking workforce development training, academic programs of study, and the high school equivalency. The 12 independently accredited institutions collectively serve 160,000 students, transfer 15,000 students, and graduate 32,000 individuals on an annual basis. In his role, René provides statewide leadership and is directly responsible for workforce development, academic affairs, and institutional effectiveness efforts across Louisiana. He has placed focus on accelerating the student experience from pre-application to post-graduation with tools such as data exchange, short-term credentials, compressed programs, prior learning assessments, co-requisite scheduling, and other efforts that lead to students achieving their educational goals in a timely manner. René is an Air Force veteran, grew up in the U.S. island of Puerto Rico now living in Greater New Orleans, and holds a Ph.D. in Organization and Management.

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