1.1

Beginnings

Where Does Hybrid-Flexible Come From?

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The Origins of Hybrid-Flexible (HyFlex) Course Design

Surfacing the Need - 2005

The development of the Hybrid-Flexible (HyFlex) course design in the Instructional Technologies (ITEC) graduate program at San Francisco State University was driven by several important institutional, faculty and student factors. Institutional factors include the location, instructional history, and enrollment characteristics of the university. Faculty factors include the capacity and capability to teach online and in the classroom and the motivation to try something new to better serve students. Student factors included the academic interests, technical abilities and time and location constraints/restraints of the current student enrollment. Many of these factors are more fully described in other chapters of this book, specifically in Chapter 1.2. Costs and Benefits for Hybrid-Flexible Courses and Programs, Chapter 2.1. Teaching a Hybrid-Flexible Course (faculty perspective), Chapter 2.2. Learning in a Hybrid-Flexible Course (student perspective), and Chapter 2.3. Supporting Hybrid-Flexible Courses and Programs (administrative perspective).

We began this journey after a department meeting in the 2005 academic year where we realized that enrollment concerns had to be addressed, and that our successful residential MA program needed to change to attract more students and to provide more participation options for current students. A suggestion was made that we “move the program online” to increase enrollment by opening up access to the instructional program to students who could not attend class in person. As it became clear that we needed an online option in our MA program, we were faced with the significant challenges of 1) no institutional support to build and grow a fully online program, 2) no proven faculty expertise in teaching fully online courses or serving fully online students, and 3) all current students were regionally located and their interest in a fully online program (which in a small program like ours would mean giving up the classroom program) was unknown but not expected to be high. Trying to implement a fully online program within even a few years seemed like an impossible task, given our conditions.

We first looked at what was already being done (and written about) in higher education. Did a course or program design already exist that would meet our needs?

Blended and Hybrid Learning Environments ca. 2006

As it became clear to us that some combination of online and classroom instruction would be needed, we assessed the current understanding of best practice. Blended learning in hybrid courses was well established as a legitimate (and sometimes superior) instructional format in higher education. (Means, Toyama, Murphy, Bakia, & Jones, 2010) As we

sought solutions to the problem of needing to serve regional students with online and classroom options that allowed maximum student choice in participation mode, we searched for methods already being used successfully elsewhere. We wanted to build upon the work of others, even if all we could find was a solid foundation from which we could craft our own design.

Within the blended/hybrid literature, we found excellent design guidance for creating teacher-directed blends or hybrid formats, but nothing that seemed to provide the student-directedness we wanted to provide. Most academic discussion and design guidance for blended and hybrid formats also required students to participate in both classroom and online activities or sessions, so there was no explicit support for students who want or need to be always online or always in the classroom.

- Sands (2002) provides a principle-based approach to designing a hybrid environment that blends classroom and online instruction under the control of the instructor. Students are expected to participate in the specified mode for each activity or lesson as designed by the instructor (or course designer).
- Orey (2002) describes a format that includes both classroom and online (distance) students in the same course sections. These online students typically are always remote and seem to have no opportunity for attending class in person (due to geography rather than teacher control). In this situation, we find more useful guidance for HyFlex, since there are always online students and always classroom students, but there is no discussion or guidance for supporting student choice of participation mode.
- Martyn (2003) describes a hybrid online model which is essentially a traditional classroom with online instructional activities; participation mode directed by the instructor. Like others, the presumption of faculty (or course designer) knowing what is “best” for every student largely ignores individual student factors (schedule or location conflicts) that are often more powerful in controlling participation than is faculty direction.
- Rasmussen (2003) presents an interesting and robust study of student and instructor interaction in a blended learning environment that mixes "always online" students with "always classroom" students. Online students in this case are remotely located and participate synchronously (at the same time) with classroom students. There is no reported flexibility for students to change from one mode to the other from week to week. (No “Flex”.)
- Bonk and Graham (2006) provides a comprehensive handbook of the blended learning landscape in the early 2000’s with many specific cases of localized solutions to challenges which are well-addressed by unique blends of online and face-to-face instruction. Graham (2006) defines blended learning, explains three primary axes of blending and provides a framework of design guidance to support instructors and instructional designers in creating “best” blends for given situations. Like other design guidance, the assumption for most (or perhaps all) situations is that all students will participate in all activities, whether online or in the classroom, presumably leading to effective learning for all.
- Power (2008) represents another direction for blended learning development in the mid-2000’s; blending asynchronous and synchronous instructional modes for online students. This approach, usually called “blended online learning” could potentially provide more “at a distance” flexibility for students but only if the student is given control over their participation (synchronous or asynchronous). Additionally, since this design was developed as a more effective approach than classic video-conference-based distance education for students who are always remote, there is no provision for a classroom learning environment.

Solving our Problem: The Genesis of HyFlex

Clearly, a traditional blended learning approach was not going to meet our requirements. We decided that we needed a “bridge” to online; an approach to serving fully online students without abandoning our current classroom students. (Beatty, 2007a) With minimal college support (one course release for one term), I embarked on the HyFlex journey by adding a simple (yet effective) online student path in one of my traditional courses. (Beatty, 2006) Those early graduate students were enthusiastic design partners for a few terms as we tried new approaches, different technologies, and gathered data about participation patterns and student academic performance. (Beatty, 2007b) Within a year, we started to realize that we were doing something much more than building a bridge to a fully online program, we were in

fact building a new type of program, one that used hybrid classes (blending online and classroom participation modes) to provide flexible learning paths and allowed students to decide for themselves which path was “best” for them on a daily or weekly basis.

We needed a name for this approach, and settled on a portmanteau of hybrid and flexible: HyFlex.

There are other systemic organizational drivers that surface additional needs for HyFlex or similar approaches that provide flexibility for student participation. (See the case study chapters in Unit III for examples from other universities.) In the past decade, like many graduate programs in the U.S., many other graduate programs at SF State have been experiencing similar pressure to bolster declining enrollments by attracting new students and retaining current students. Some faculty in other programs (in multiple colleges) have use HyFlex courses to provide additional participation options for students, much like we did with the ITEC program. Within the academic leadership of the university, there has been growing interest in attracting students from outside our traditional region; HyFlex courses provide the capacity for programs to serve remote students in additional to providing convenience and alternatives to regional students.

Like many institutions, SF State has experienced challenges to maintaining university operations, including the instructional program, during local and regional emergencies such as, transit strikes, electrical outages, building closures, wildfires (and the smoke they generate), and major storms. University leadership has occasionally expressed interest in expanding the use of HyFlex, since for many emergency situations, the online instructional mode may remain operational even when the campus is locally closed, allowing instructional "business" to be continued. To date, however, no substantial strategic business continuity-related implementation effort has been launched.

With the growth of HyFlex at SF State beyond the original ITEC graduate program context, and in synchronicity with an academic senate process establishing high-level policy regarding online education at the university, we developed an official definition of HyFlex courses so that within our institution, we could ensure a consistent understanding of what HyFlex meant to students, faculty, and administrators. (This policy took several years of drafting, discussion, and negotiation. Thankfully, including the HyFlex definition was *not* a controversial aspect.)

> *“In a **Hybrid Flexible (HyFlex) Class,** students can choose to attend class either in an assigned face-to-face environment or in an online environment, synchronously or asynchronously. Online technology is primarily used to provide students with flexibility in their choice of educational experience, and to communicate with the faculty member inside and outside of office hours.” (Original SFSU Academic Senate Policy F12-264)*

Four years later, the academic senate subsequently simplified the definition language:

> *“**HyFlex courses** are class sessions that allow students to choose whether to attend classes face-to-face or online, synchronously or asynchronously.” (SFSU Academic Senate Policy S16-264, available online: https://edtechbooks.org/-pAkt*

Other Course Design Formats in the Hybrid-Flexible Genre

There have been others working on similar approaches to combining classroom students and online students; some very similar – even identical – to HyFlex and others with significant differences from HyFlex. In this section, I’ll highlight some of the major efforts I am aware of; there are certainly others not represented here. (If you think another effort should be described, please let me know in the comments for this chapter, or by other means.)

Many of these instructional formats were developed during the same timeframe that we were reporting our work with the HyFlex course design, and others came afterward. All use their own branding (name, primarily) for their own purposes, whether or not they were aware of the HyFlex approach at the time. (Note: there are many other cases of

faculty and institutions using the term Hybrid-Flexible or HyFlex; just as appropriately. See Appendix A. Bibliography of Hybrid-Flexible Literature for reports from many of these cases.)

Mode-Neutral (2008)

Smith, Reed, and Jones (2008) describe the “Mode Neutral” instructional approach as one in which “progress across modes of delivery at any point throughout their study when their preferences, requirements, personal and professional commitments demand, without compromising their learning experience.” This seems to be another approach that, at least as far as student participation options and control, is the same as HyFlex.

An important distinction between the development (or at least the description) of Mode Neutral compared to HyFlex is the emphasis in Mode Neutral of following a constructivist philosophy in the design and implementation of a course. The emphasis on the constructivist philosophical underpinnings of Mode Neutral sets it apart as unique in important ways. Another interesting difference is the authors’ perspective on the applicability of their conceptual model across the curriculum: “We argue that it is possible to adopt a singular pedagogical approach to educational programmes that is suitable for all learners.” (2008, p. 2) This claim of universal applicability is not something I would ever make for the HyFlex design, nor do I agree with the presumption that one pedagogical approach is (or even can possibly be) suitable for all learners.

Miller (2011) describes the potential for mode-neutral teaching to transform teaching and help students develop transformative leadership abilities. The arguments put forth in this paper about the course format affording opportunity to impact the way students learn, potentially leading to the development of transformative leaders (an apparent goal in the study context of Public Administration) seem very reasonable. (If supporting the development of transformative leaders through the use of innovative course design appeals to you, you may want to read this article.)

This model implements a design that is essentially the same as HyFlex, though they have branded their approach with their own unique name.

Multi-Access Learning (2009)

Irvine (2009) defines multi-access learning as “a framework for enabling students in both face- to-face and online contexts to personalize learning experiences while engaging as a part of the same course.” As described and defined by Irvine, multi-access learning allows the student to choose how to participate in course activities with respect to mode (online or face-to-face). (Irvine, Code & Richards, 2013)

This model implements a design that is essentially the same as HyFlex, though they have branded their approach with their own unique name.

FlexLearning (2012)

In 2011, the Lehigh Valley Campus of the Pennsylvania State University (PSU-LV) launched the “FlexLearning” program. (McCluskey, Shaffer, Grodziak, & Hove, 2012). The mission of this program was: "Penn State Lehigh Valley will effectively address the various and diverse learning needs of our twenty-first century students through a comprehensive initiative which offers high quality, interactive, and engaging courses in a flexible delivery mode." (2012, p. 4) The core values of this program were to 1) Offer high quality academic courses, 2) Incorporate the benefits of flexible learning modalities, 3) Proactively and innovatively utilize emerging educational technologies, 4) Provide students with options through flexible delivery modes, and 5) Contribute to increased campus enrollment. In their strategic plan for FlexLearning, they begin their definition of the design by describing the experience:

“Consider the option of taking a course either in the traditional face-to-face, blended or hybrid, or completely online, that is, all these options in one and the same course. A student may even choose to start to take a course in one mode of delivery and later decide to change to a different mode of delivery with no learning deficit.

In such a course, the faculty member designs a course with the learning needs of the students as the primary concern so as to allow students to go from face-to-face to online and vice versa. The faculty member provides course content and activities within an instructional structure that would allow for maximum engagement of student appropriate for both face-to-face and online.

That is what we are calling FlexLearning." (2012, p. 13)

This model implements a design that is essentially the same as HyFlex, though they have branded their approach with their own unique name.

Converged Learning (2012)

Taylor and Newton (2012) describes the development of the "converged learning" instructional approach used at Southern Cross University across multiple campuses in Australia. As their university was designing courses and programs to meet the needs of large populations of both on-campus and distance students, a large team of faculty (39) and designers (10) started designing for both types of students in the same courses – combining online and classroom students and providing student choice in participation mode much like HyFlex. Their report on the institutional change effort that introduced converged learning is highlighted in Chapter 2.5. Evaluating the Impact of Hybrid-Flexible Courses and Programs.

This model implements a design that is essentially the same as HyFlex, though they have branded their approach with their own unique name.

Peirce Fit ® (2014)

The Peirce Fit ® model was developed at Peirce College as a way to allow students to choose between classroom and online participation on a weekly (or session) basis, creating their own "best fit" to meet their own personal schedule and location needs. (Littlefield, 2014; Donovan, 2018; Beatty, Littlefield, Miller, Rhoads, Shaffer, Shurance, & Beers, 2016) The Peirce Fit ® format began as the "FLEX" course design, but changed as the college found success with FLEX and made strategic decisions regarding the scope of the effort, branding the approach, and implementing their Hybrid-Flexible design programmatically. The Peirce Fit ® story and their evaluation of their program's impact are presented as a case study in Unit III. of this book. (See Chapter 3.1 Fitting Flexibility Across the Curriculum.) The college also provides a comprehensive informational website explaining Peirce Fit ® to potential students and others. See https://www.peirce.edu/fit for more information about this approach.

This model implements a design that is essentially the same as HyFlex, though they have branded their approach with their own unique name.

Multi-Options (2014)

Another approach that seems to be another form of HyFlex is called "Multi-Options". As described by Edler (2018), "Multi-Options is a teaching methodology that allows students to choose the format in which they will attend class. Weekly, they have the choice of attending the face-to-face session, joining synchronously online, or viewing the class asynchronously online at their convenience. Each choice has its own requirements developed to keep the workload uniform for all students. Advantages include conservation of faculty, avoiding the cancellation of poorly populated classes, promoting student independence, and allowing for maximum student flexibility regarding learning style, scheduling needs, and lifestyle. Although technological support and changes to the faculty culture are challenges, initial trials have been successful." (p. 110)

This model implements a design that is essentially the same as HyFlex, though they have branded their approach with their own unique name.

Flexibly Accessible Learning Environment (FALE) (2018)

In 2018, the University of Georgia developed an approach to combining online and classroom students that they call "Flexibly Accessible Learning Environment" (FALE). (Hill, Yang, Kim, Oh, Choi, Branch, Lee, & Keisler, 2018). Their stated definition (found at https://edtechbooks.org/-PjR is: "Flexibly accessible means that students can attend in one of three modes: face-to-face, synchronous, and asynchronous. Further, students can change how they chose to interact within the course week to week, thus meeting real-time needs and demands of everyday life. Janette Hill." (UGA website, nd.)

This model implements a design that is essentially the same as HyFlex, though they have branded their approach with their own unique name.

Blendflex (2016)

Carol Lee, director of educational technology at Central Georgia Technical College developed an approach to combining online and classroom students with student choice (flexibility) to provide more options supporting student participation and engagement, designed to improve student success in academic programs. (Central Georgia Technical College, nd.; Leiberman, 2018; University Business, 2017) According to Leiberman, the blendflex mode allows face-to-face, synchronous online and asynchronous online experiences that students can choose to attend. They can attend as many or as few face-to-face sessions as they want, as long as they complete the rest of the course online. Lee confirms this approach: "They can seamlessly at any time during the semester move back and forth within that course delivery." (Carol Lee, as quoted in Leiberman, 2018)

This model implements a design that is essentially the same as HyFlex, though they have branded their approach with their own unique name.

Comodal (2016)

Teachonline.ca (2017) describes an approach used by Frederic Audet (and others) at Laval University in Quebec City, Canada that allows students three options for participation: 1) attend the live class in person, 2) join the class live (simultaneously) online via a webinar, or 3) listen to the recording of the class on his or her own time. Audet reports "… no differences in learning outcomes or completion rates between the different modes of study on these courses, and found it takes no more lesson preparation time than a traditional lecture, once the system is set up." (2017) Gobeil-Proulx (2019) uses the term "comodal" to refer to Hybrid-Flexible (HyFlex) courses where the student experience was studied at four different locations of Laval University. "A course offered in the HyFlex format can be followed face-to-face or remotely by students, which allows them to choose weekly the mode that suits them best." (2019, p. 56) It seems that the authors prefer to use the term "comodal" rather than HyFlex; there seems to be no practical difference in the course design, however.

This model implements a design that is essentially the same as HyFlex, though they have branded their approach with their own unique name.

The following design approaches share many characteristics with HyFlex, but all seem to differ in at least one fundamental way so they are not truly Hybrid-Flexible as we define the term. They are included here to help us explain the HyFlex design and explore the edges of HyFlex in practice. As well, each approach is certainly a valid instructional design of its own, solving an important local need for some form of multi-mode instruction. The design guidance and research provided in the studies referenced can help HyFlex instructors and designers as well.

Flexible Hybrid (2014)

He, Gajski, Farkas, & Warschauer (2014) use the term "flexible hybrid" to describe their modified hybrid course that includes three different instructional formats: online, hybrid (student controlled), and flipped. Findings from their detailed and comprehensive study of the relationship between student choices of instructional format and corresponding performance factors (exam grades, self-reported perceptions, study effort, etc.) are reviewed in Chapter 2.5 Evaluating the Impact of Hybrid-Flexible Courses and Programs.

Synchronous Learning in Distributed Environments (SLIDE) (2011)

Stewart, Harlow, and DeBacco (2011) report on a project describing research on the student experience in multi-site graduate courses, with some instruction happening with students in the local classroom and others meeting physically elsewhere but connected to the local classroom where the instructor is located. “Classes sometimes met face-to-face in the same physical location; at other times part of the class met physically elsewhere. Yet all were linked through the virtual space. … Most of the interaction occurred between the local and distance learners by way of cultural guides, local students assigned to host a distance learner through Google Video chat. The distance learners were able to receive real-time attention from the instructor and were able to share differing perspectives that contributed to increased satisfaction in the course.” (2011, p. 357)

This design shares some aspects with classic HyFlex, though it seems that students were NOT co-located (regional) so no flexing would be likely (or perhaps even possible). This approach is a good example of the blended synchronous environment described below.

gxLearning (2011)

Verhaart and Hagen-Hall (2012) describe a course design they call “gxLearning” (geographically extended). This paper reports on the use of two forms of distant synchronous connection technologies, room-based video teleconferencing and desktop webconferencing and compares the student experience in each. Day and Verhaart (2016) reports on approximately five years of development research using three case studies of gxLearning with varying technologies, pedagogical approaches and instructional theories applied to each case. Interestingly, one of their major findings is very similar to that reported in initial studies of HyFlex, the importance of high quality audio/video. “In all cases, the quality of the hardware and infrastructure had an impact on the student experience, whether it be lesser computing power, slow internet connection, or under spec’d audio or video equipment.” (2016, p. 190).

Blendsync (2011)

Blended Synchronous (Blendsync) learning developed as an approach combining classroom (onground) students and online students with synchronous communication systems; most commonly web conferencing tools. This design tradition is a natural outgrowth of some forms of classic distance education, where remote groups of students were connected to a local group of students with an instructor using a teleconferencing system (VTC). The advent of web conferencing software and the growing ubiquity of high speed network connections allowed for more individual remote connections rather than requiring remote users to be co-located to use an expensive video teleconferencing system and its (often) dedicated connection.

A major design and research effort launched in Australia and New Zealand in 2011, with the stated goal: “Blended Synchronous Learning (‘BlendSync’) Project sought to investigate how three specific technology-based tools – video conferencing, web conferencing and 3D virtual worlds – could best be used to support activities that engage Higher Education students and teachers in effective real-time learning irrespective of their location.” (Bower, Kennedy, Dalgarno, Lee, & Kenney, 2014, p.12) This multi-year project, involving many faculty and staff from several universities, conducted multiple case studies looking at various aspects of blended synchronous learning environments in practice, in the education setting. (Bower, Kennedy, Dalgarno, Lee, & Kenney, 2015) The project developed the “Blended Synchronous Learning Handbook” (Bower, Kennedy, Dalgarno, Lee, & Kenney, 2014), which defines blended synchronous learning as: “Learning and teaching where remote students participate in face-to-face classes by means of rich-media synchronous technologies such as video conferencing, web conferencing, or virtual worlds.” (2014, p. 11)

Remote Live Participation (RLP) (2018)

Another approach that is very much similar to the blended synchronous online format has been called Remote Live Participation. Marquart, Englisher, Tokeida, Samuel, Standlee, and Telfair-Garcia (2018) report on a project combining online and face-to-face students in two course at Columbia University. Their guiding question was “Can online students be fully integrated into residential courses via web conferencing?” In their case report, they share major lessons learned

from their initial pilot. Though this approach does combine online and classroom students in the same course sections, like HyFlex does, there doesn't seem to be any intentional support for students making weekly or session-by-session choices about participation mode. As with other blended synchronous-type formats, this approach can provide helpful design guidance for those implementing HyFlex courses that include an online synchronous participation option.

Is your Course Design Approach Missing?

In this book, and in our work with Hybrid-Flexible (HyFlex) course designs locally and internationally, we often encounter differing approaches to blending participation formats in various hybrid approaches. At a high level, we constrain our use of the HyFlex label to those that are purposefully designed to 1) combine at least two complete learning paths; classroom and at least one online, and 2) support ongoing student choice (flexibility) among these learning paths. If a design doesn't meet these two basic criteria, we don't consider it to be Hybrid-Flexible no matter what name is used for branding.

We're certain that there are other instructional approaches being used that are similar – perhaps even identical – to the Hybrid-Flexible approaches described in this book. If you know of another effort that should be included, please let me know in the comments for this chapter, or contact be by other means.

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Dr. Brian Beatty is Professor of Instructional Technologies and co-coordinator of the Instructional Design and Technology MA program in the Department of Equity, Leadership Studies and Instructional Technologies at San Francisco State University. Brian's primary areas of interest and research include social interaction in online learning, flipped classroom implementation, and developing instructional design theory for Hybrid-Flexible learning environments. At SFSU, Dr. Beatty pioneered the development and evaluation of the HyFlex course design model for blended learning environments, implementing a "student-directed-hybrid" approach to better support student learning.

Previously (2012 – 2020), Brian was Associate Vice President for Academic Affairs Operations at San Francisco State University (SFSU), overseeing the Academic Technology unit and coordinating the use of technology in the academic programs across the university. He worked closely with IT professionals and leaders in other units to coordinate overall information technology strategic management at SFSU. Prior to 2012, Brian was Associate Professor and Chair of the Instructional Technologies department in the Graduate College of Education at SFSU. He received his Ph.D. in Instructional Systems Technology from Indiana University Bloomington in 2002. Dr. Beatty also holds several CA single-subject teaching credentials, an M.A. in Instructional Technologies from SF State and a B.S. in Electrical Engineering from Marquette University. Dr. Beatty has more than 30 years of experience as a classroom teacher, trainer, and instructional designer at schools, businesses, and the US Navy.