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Evolving HyFlex from Emergency Measure to Sustainable Program: Northern State University

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Introduction

Like many institutions of higher education, Northern State University (Northern) began offering Hybrid-Flexible courses in response to the COVID-19 pandemic. During Spring 2020, the University switched to remote learning. Just a few months later, in Fall 2020 students, faculty, and staff returned to campus, and administration encouraged faculty to offer their courses as HyFlex in order to navigate the pandemic. The University offered training in HyFlex throughout that academic year, and student surveys indicate that quality of HyFlex instruction improved drastically as the year progressed. In Fall 2020 16% of students said HyFlex led to poorer content delivery whereas only 8% said that in Spring 2021 (Office of Institutional Research and Assessment "SOI Results: Spring 2017-Spring 2021"). Despite these improvements, implementation of HyFlex remained inconsistent throughout the 2020/2021 academic year, and faculty interpreted HyFlex in myriad ways. In response, during Summer 2021, Northern's Academic Affairs division, led by the provost, decided all faculty wishing to offer HyFlex courses in the future must complete a year-long certification program offered by the University's Center for Excellence in Teaching and Learning (CETL). Upon completion of the program, faculty would be able to offer any of their courses as HyFlex, pending approvals. The inaugural HyFlex Certification cohort was launched in Fall 2021 and was limited to ten faculty to ensure each participant could richly engage with the content and receive high-quality feedback from the Director of CETL and the CETL Instructional Designer. Now that the first cohort has completed the program, 70% of its members plan to continue offering HyFlex courses and seven courses are being offered in Fall 2022. Additionally, several faculty members who were not in the original cohort have shown interest in completing the training because they see HyFlex as a way to make their courses more accessible to the students at our small, rural South Dakotan university.

Written from our perspectives as the leaders of Northern's CETL, this chapter explains how Northern State University used primary and secondary research, federal and local grant monies, in-house training programs, and a bit of trial-anderror, to move its HyFlex course offerings from a COVID-19 emergency measure to a robust, sustainable, and growing program that includes several course options for students, training for faculty, and a graduate certificate in HyFlex pedagogies.

Northern State University—A Geographic and Demographic Overview

Northern State University is a regional comprehensive university and predominantly undergraduate serving institution located in Aberdeen, South Dakota. In Fall 2020, the total enrollment was 3,431 students, 87% of whom were undergraduates. Of those 2,968 undergraduates, 61% were part-time, 66% were enrolled in at least one distance education course, and 37% were dual-credit high school students. Of the 1,149 full-time undergraduate students, 18%

were first-generation and 28% were receiving Pell grants due to financial need (NCES). In other words, Northern serves a small student population with diverse needs.

In that same semester, 34% of Northern's degree-seeking undergraduates were from Aberdeen and the surrounding area, which is normal for the University. This trend of local enrollment means that the regional geography and demographics greatly impact the University, so it is important to understand the area (Mammenga, "Question"). With a population of 28,315, Aberdeen is the third largest city in South Dakota. The National Center for Education Statistics (NCES) designates Aberdeen as a remote town surrounded by rural communities. The nearest metropolitan areas (Fargo, ND and Sioux Falls, SD) are about 200 miles away and a three-hour drive by car. Ten percent of Aberdeen's population lives in the city center, which is designated an opportunity zone—i.e., a community so distressed that investors receive special tax benefits for supporting economic development within them (Opportunity). The poverty level in Aberdeen and the surrounding county is slightly above the national average at nearly 12% (US Census).

Moreover, 68% of Northern's full-time undergraduate students come from the state of South Dakota (Mammenga, Personal interview), meaning that many have grown up in rural communities where it is difficult to recruit and retain teachers because of location, low salaries, large classroom sizes, and increasingly politicized criticism and animosity toward public education (Pfankuch). While South Dakota's teacher shortage has been an issue for over a decade, it is currently at a five-year high and is projected to worsen (Pfankuch). The most recent South Dakota Department of Education Report Card for K-12 schools claims that factoring for grade level, only 53% of students are proficient in English, 43% in math, and 42% in science. Additionally, the report found that only 57% of graduating high school students met the state's criteria for college and career readiness.

The low proficiency levels of SD high school graduates are evident in Northern's student population: 16% of first-time, full-time, degree-seeking students are placed into developmental, zero-credit courses in English, math, and/or reading. Specifically, 5% of first-year students are placed into developmental math, 12% into developmental English, and 2% into developmental reading (Mammenga, Personal interview). The student demographics, combined with the remote location of the University, create unique educational challenges. Faculty must ensure their courses are accessible to students with different levels of college preparation and different accessibility needs related predominantly to their economic and geographic backgrounds.

Aberdeen's remote location also creates a unique problem for student-athletes. Thirty-two percent of Northern's fulltime students are involved in collegiate athletics and may miss up to twenty class days, or a quarter of the semester, due to travel, depending on their sport. The NCAA Division II Northern Sun Intercollegiate Conference to which Northern belongs covers over 137,000 square miles and teams regularly travel vast distances for competition. This extensive loss of academic hours is challenging for both students and faculty. Though faculty strive to accommodate student needs, they often struggle to make sure athletes can retroactively make up course content and receive the guidance and support they need.

All of these data indicate that even before the pandemic, Northern faculty could have benefitted from a course design method that would accommodate the unique needs of students who live in rural and remote areas, have varied levels of college preparation, and have responsibilities to their teams, employers, and families; however, this is not why the University initially adopted HyFlex course design.

COVID-19 and Remote Learning

Like most universities in the US, Northern pivoted all courses to remote learning in Spring 2020, though the process took some time. On March 12, 2020, Northern's president sent an email to the entire campus stating, "Due to the continued spread of the COVID-19 virus, the Board of Regents has decided to extend spring break an extra week for students at Northern and all regental universities . . . We are currently assessing how to proceed from that point forward" (Downs, "Message from President Downs"). Later that same day, the provost emailed faculty, suggesting they, "use this extra week to prepare for the strong possibility that we will take all instruction online March 23" and directing

them to the available instructional design resources (Wanous, "Academic Planning"). Four days later, on March 26, the NSU News sent an all-campus email stating, "Beginning Monday, March 23, S.D. Board of Regents institutions, including NSU, will move all classes online for a two-week period. On-campus, in-person classes are currently scheduled to resume on Monday, April 6" (NSU News). Eight days later, on March 24, the president announced, "Today, the Board of Regents has determined that all South Dakota public universities will transition classes online for the duration of spring semester" (Downs, "NSU-Update"). After this announcement all courses remained remote, some synchronous, others asynchronous, but all courses were remote.

While students and faculty largely understood the need for remote instruction and did their best to adjust to the unexpected change in modality, concerns arose because faculty had not initially designed courses to be online and many students had not signed up for online courses. Despite the ad hoc nature of emergency remote instruction, however, the number of students who rated their courses and instructors as excellent remained consistent with the previous three-year averages. Though the number of responses was substantially lower than in previous years, the office of Institutional Research and Assessment saw "absolutely no evidence that the Spring 2020 scores were impacted by COVID-19 adjustments" (Office of Institutional Research and Assessment search and Assessment "SOI Results: Spring 2017-Spring 2020"). We believe that this consistency in instructional quality is largely because before March of 2020, 80% of Northern's faculty had gone through the online teaching certification program taught by CETL's Instructional Designer and had experience teaching at least one online course (Northern State University). This experience and training made the difficulty of remote instruction more tenable than it would have been otherwise and allowed for consistency in educational quality.

Despite Northern's success with remote education, the SDBOR announced On May 1, 2021 that all universities under its governance would be returning to campus in the fall:

The South Dakota Board of Regents announced today its commitment to on-campus operations this fall, with the resumption of face-to-face teaching and learning across the public university and special schools' system . . . they will be guided by safety, science, and the institutions' educational mission, with a priority to balance the significant value of on-campus teaching and learning with an equal responsibility to protect community health and safety. ("Public University System")

The claims that face-to-face education is inherently more valuable than online learning and that on-campus experiences are necessary for creating intellectual communities were reiterated by Northern's president, who explained:

At the heart of this decision [to return to campus in the fall] is community, because Northern is truly a great community. We pride ourselves on being a place that feels like home – where students feel supported to pursue their passions; encouraged to unleash their potential as scholars and citizens; and prepared to develop the skills needed to succeed in their careers and in life. On-campus collaboration and commiseration are such an important part of the college experience, which has become even more evident due to our turbulent spring semester. (Downs).

While accommodations were made for some faculty who could not be on campus because of their health or that of their families, and while some students (mostly international) would not be able to return to Aberdeen, it was decided in May that most everyone would be returning to campus and face-to-face instruction in August. The return came with unique challenges.

HyFlex Course Design and the Return to Campus

Returning to campus was a demanding task, and in May 2020 the University established a Return to Campus COVID-19 Taskforce to coordinate the efforts. This task force included members from all parts of campus—academics, administration, athletics, facilities, student affairs, technologies, etc.—each of whom needed to take on their own roles to ensure that students, faculty, and staff could return to campus safely. Our role as the Center for Excellence in Teaching and Learning was to determine how on-campus faculty could best teach when some students could not return, some students would not feel safe being in the classroom, some students and faculty would be out sick, and certain rooms would have social distancing configurations that would not enable all students enrolled in a course to be present in the same room at the same time.

In response to these challenges, and at the urging of the provost, Northern decided to implement a voluntary HyFlex initiative that would enable any instructor to teach their courses HyFlex if they desired. In turn, we at CETL would provide an introduction to HyFlex pedagogies, training on HyFlex technologies, and additional HyFlex programming throughout the year. The faculty were first introduced to this initiative during an event we hosted with Jenni Hayman of Cambrian College on Monday June 22, 2020 that we called "No Stress HyFlex." (See Fig 1.) During that event, Hayman discussed the pedagogical philosophies underlying HyFlex, showed a few activities she uses in her courses, and shared some of her successes with HyFlex course design.

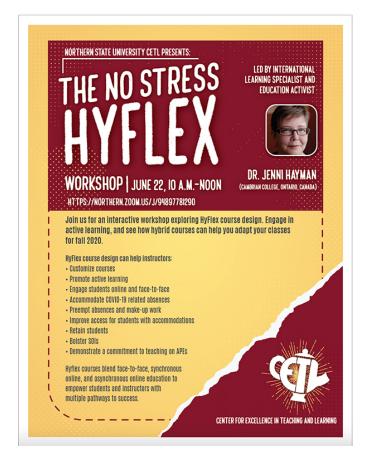


Figure 1. No Stress HyFlex Flyer

Three days after the Hayman presentation, we hosted a "HyFlex Techs" workshop in conjunction with Media Services (MS) and Instructional Technology Services (ITS). During this workshop, we explained how to use hardware (e.g., computers, document cameras, touch monitors), software (e.g., Zoom, Notepad, Panopto, D2L), and embodied performance (e.g., acknowledging Zoom students, looking to the camera occasionally) to successfully run a HyFlex course. To model the work and make it accessible to everyone, we conducted the workshop HyFlex—with faculty participating face-to-face, via Zoom, and asynchronously using a shared learning management system (LMS) page.

Attendance was high at both training events–86 faculty (67%) and 49 faculty (37%) respectively–and in Fall 2020, 48 faculty members (about 37% of Northern's total faculty) were signed up to teach a combined 121 HyFlex courses (Lapka); however, because the training was so rushed, and because we ourselves were still learning about HyFlex, there were inconsistencies. What *HyFlex* meant varied widely among faculty. While we in CETL maintained that HyFlex was meant to give students the freedom to choose their attendance mode for any given class period, most faculty viewed the online attendance options simply as COVID workarounds, not as valid choices for students in their own right.

A popular HyFlex modification used by faculty was the A-group/B-group strategy, which served those whose COVID classrooms could no longer accommodate their full course roster, due to new COVID room configurations. These faculty alternated which groups would attend in person and which would attend synchronously via Zoom. They continued to take attendance and required students to provide notice from the University if they were going to miss class due to COVID quarantine. Similarly, some faculty modified HyFlex so that online synchronous and asynchronous options were only available to students who had written excuses. In short, what counted as HyFlex was inconsistent in the level of student choice, as faculty did their best to modify face-to-face courses.

Collaborating with MS and ITS, we created tutorials, shared resources, and met individually with faculty to troubleshoot specific issues. These efforts improved the quality of HyFlex education on campus, and we believe they contributed to faculty delivering high-quality instruction throughout the pandemic (Office on Institutional Research and Assessment, "SOI Results: Spring 2017-2021). Despite this sucess and despite CETL, MS, and ITS staff working 70+ hours per week, some faculty still remarked to us that they felt as if they were on their own.

To further support faculty and to make Northern's HyFlex course offerings more consistent, while also honoring faculty autonomy and academic freedom, we continued to present faculty with a variety of HyFlex-related programming throughout the year. Our events in the 2020/2021 academic year included Chris Gilliard on digital equity, Maha Bali on community building across modalities, Marcia Dixon on communicating with online students, Stephanie Kerschbaum on accessibility, and several HyFlex panels featuring Northern faculty, staff, and administrators on Northern specific issues. (See fig. 2.) Through these events, all of which were held as HyFlex to model best practices, we encouraged faculty to think about how to design and execute high-quality HyFlex courses.

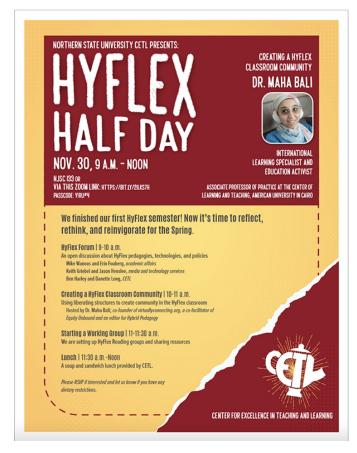


Figure 2. HyFlex Half-day Event

Researching Faculty Experiences

To better understand the issues that faculty were facing with HyFlex, in Fall 2020 we conducted an IRB-approved interview study with ten faculty who were implementing HyFlex in their courses for the first time. We were lucky enough to receive volunteers from each of Northern's four colleges: Arts and Sciences, Business, Education, and Fine Arts. From September through December we—along with undergraduate research assistant Tony Mangialetti—met with each of the faculty volunteers individually once a month and conducted hour-long interviews about their experiences with HyFlex. From these interviews, we learned how faculty were running their courses, where they were struggling, where they were seeing success, how students were responding, and how we could better support teaching and learning.

We are still coding and interpreting the data from this study, so we cannot make any definitive claims at this time; however, it quickly became apparent that Northern faculty were struggling in part because they were not receiving the immediate feedback and validation of their work that face-to-face classrooms provide. Many of the faculty struggled to see if students were listening to them, engaging with the course, and learning the course content. Faculty reported missing the ability to see their students smile, nod, take notes, and look engaged (Participant A, Dec.). They missed the ability to read over shoulders, glance at classroom work, eavesdrop on small groups, or touch a student on the arm (Participant I, Dec.).

One of our participants was a first-year faculty member, who was diligently trying to keep track of excused absences; he was becoming disheartened as he realized students with COVID-excused absences were not returning to his courses after their mandated quarantines. Several of these students were still doing well in his class, but he felt as if they were not engaging with the content as much as they may have in a traditional course: "I don't feel like I've had a chance to make my sell on it-here's why this matters and here's why it's actually pretty interesting . . . I want to make it relevant to them . . . and I feel like I am having a hard time accomplishing that" (Participant B, Oct.). Another faculty respondent who heavily relies on small group work in his classes claimed, "I like the in-person dynamic . . . because it holds people, I think, naturally more accountable because the Zoom crowd is still-I'm still having a lot of problems with people who are just logging in and then they're really not there. They're in the background doing something else, and I'll admit it's at a point now where it's getting kind of aggravating" (Participant C, Oct.). These faculty perceived that their online students were not engaging in course material with the same amount of depth as their face-to-face peers.

Even when faculty knew their students were engaging material, they often felt as if they themselves were not doing enough to respond to students. Faculty felt as if they were failing to oscillate between the students in different modalities. As one faculty member suggested, "I think it could work out if I could just do one modality, but both is just a killer, and it's so draining right now . . . it is taking more mental energy" (Participant D, Nov.). Another faculty member stated, "I found it very difficult to juggle the Zoom people and the face-to-face people during class time. It is hard for me to concentrate on more than one thing at a time. It's hard for me to switch tasks . . . And so I oftentimes in class didn't feel like I was at my best" (Participant I, Dec.). For these faculty, the multiple modalities made their courses more accessible but also made it more challenging to provide each student with the direct and immediate attention they may need to be successful. At the end of this semester, faculty in the study reported feeling burned out, drained, exhausted, and having low morale (Participant A, Nov.; Participant B, Nov., Participant D, Dec.; Participant I, Nov.; Participant J, Oct. and Nov.).

Faculty found it particularly draining to try and engage with asynchronous students, many of whom checked out of the class for prolonged periods of time and fell behind their peers. A faculty member told us about her experience working with one such student: "It started with COVID, and then it started with going to Zoom classes, but then she would go to interviews or her internship, and she would tell herself, 'Oh, I'll just watch the lectures later' . . . but she never did go back later, and so she's trying to teach herself" (Participant E, Oct.). In response to this situation, the instructor tried to come up with alternate assignments and schedules for the student, so she could still pass the course. This kind of story about a student choosing asynchronous attendance but falling behind and leaving faculty to try and re-engage them and find novel ways for them to still learn course content and be successful was very common in our research. Faculty tried a variety of strategies to reach students–direct emails, invitations for on-on-one Zoom meetings, and flagging students

on student success software that alerts advisers and other stakeholders-but the results were varied and often unsuccessful (Participant A, Nov.; Participant B, Dec.; Participant D, Oct.; Participant E, Oct.).

Our discussions suggested that the faculty who were most successful in engaging students were those who were willing to let go of traditional classroom structures, who were able to see the HyFlex classroom as more diffuse than the traditional classroom, and who were able to lean into the principles of accessibility, choice, and flexibility. These folks were better able to see student engagement, learning, and growth because they were focusing on what students were creating rather than the modes in which students were participating. In other words, faculty who leaned into HyFlex values-who respected student choice and created equitable assessments for students attending face-to-face, via Zoom, and asynchronously-felt less stress and more validation because they were embracing HyFlex as its own mode of education rather than trying to force it to look like traditional face-to-face courses. For example, one faculty member learned to lean into the fact that some of her art students would choose to attend her course via Zoom so they could do their studio work at the same time. She said, "Oh, you're still working in the studio but listening to [my lecture]? Alright. I'm not mad. It's kind of like a podcast . . . Hey, you're still in class. You can still speak up if you want to" (Participant F, Oct.). Another instructor who eventually embraced student choice, learned to focus on creating a singular community: "I just try to keep it positive, which is kind of tough to do . . . I just try to keep it like this fluid system where if they want to come in person and then come and sit on Zoom, it doesn't matter. I try to keep it like one classroom" (Participant F. Dec.). As these participants learned to accept student choice, flexibility, and fluidity-their HyFlex experiences became more positive.

Technology and Grant Funding

The idea of using technology to create one classroom community despite the different modalities in which students were participating was common for respondents. Many of them wanted to "use that platform to create a sense of community, somewhere [students] could interact with others and engage with others" (Participant G, Dec.). They suggested that creating "lots of activities that would work with HyFlex [could get] students engaged because that is what they want; they don't want to sit there passively listening" (Participant A, Dec). Respondents suggested that this kind of community-building active learning work needs to start at the beginning of the semester in order to get students used to multiple modes of engagement and multiple ways of participating in a learning community (Participant D, Dec.). Faculty participants suggested that their peers should embrace HyFlex. One went as far as to say, "don't be afraid of it. You know, it's a little uneasy at first . . .[but] once you get used to it, it's really fine" (Participant H, Dec.). It seems that given enough training and experience, faculty found ways to engage students and build community using HyFlex course design.

This eventual embrace of HyFlex does not mean that it was always easy to use technology to facilitate community; infact our research posits that faculty found technology to be the most challenging aspect of HyFlex teaching. Despite ITS and MS installing basic recording technologies in all the classrooms and working with CETL to train faculty on their use, the classrooms simply had not been designed for HyFlex course design; they had been emergency retrofitted. Faculty were recording videos using document cameras or monitor cameras: both of which were clunky, hard to angle, and forced the instructor to stay in a single position all class (Participant I, Nov.; Participant J, Dec.). Similarly, the computer microphones were often not sensitive enough to pick up faculty voices, so many had to wear lapel microphones provided by the University. These microphones helped the audio quality of faculty voices but did not facilitate student-to-student interactions because online students could not hear the comments made by face-to-face students (Participant F, Nov.; Participant H, Sept.). Additionally, almost all of the faculty we interviewed experienced some issues with internet connectivity, software updates, or hardware malfunctions (Participant D, Dec.; Participant E, Sept. and Nov; Participant G, Dec.; Participant J, Dec.).













Figures 3-9. Classroom Learning and Teaching Technology Setups (Various)

In response to technology issues, Northern, due to the advocacy of the provost, chose to spend a portion of its Higher Education Economic Relief Fund (HEERF) to update classroom technologies in ways that benefited students attending in all modalities. While each room required unique interventions, most were reoriented to better use space, furnished with easily-arrangeable desks and chairs, equipped with mounted cameras, and arrayed with ceiling microphones that could capture all the sounds in a room. As a result of these efforts, 22 of Northern's 37 classrooms (59%) are now optimized for HyFlex instruction.

In addition to the HEERF funds, CETL applied for and received a \$61,660 grant from the Knight Foundation of the South Dakota Community Foundation to build a pedagogy lab where faculty can practice with a variety of pedagogical ideas and technologies, including those related to HyFlex. The room is equipped with two cameras (one oriented toward the presentation space and another oriented towards the audience space), an array microphone, a projector, easily-arrangeable furniture, and a lounge space. Additionally, faculty can check out equipment such as Meeting Owls for capturing small seminar courses, ring lights for creating quality asynchronous material, iPads and Magewell USB capture devices for digital whiteboarding away from the lectern, and a variety of pedagogical books.

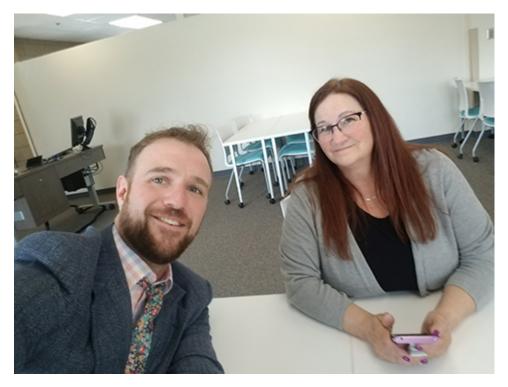


Figure 10. Welcome to the Pedagogy Lab!









Figures 11-14. Pedagogy Lab (Various)

We used information gleaned from our faculty interviews and the newly purchased technologies to improve the HyFlex experience for faculty and students. As these improvements were enacted, Northern's whole community began to see HyFlex less as an emergency COVID measure and more as an important tool for making education more accessible to every student and a way of increasing enrollment; however, the provost recognized that if the University was going to continue offering HyFlex courses, we needed to address the issue of consistency, which is why we developed the HyFlex Certification Program.

The HyFlex Certification Program

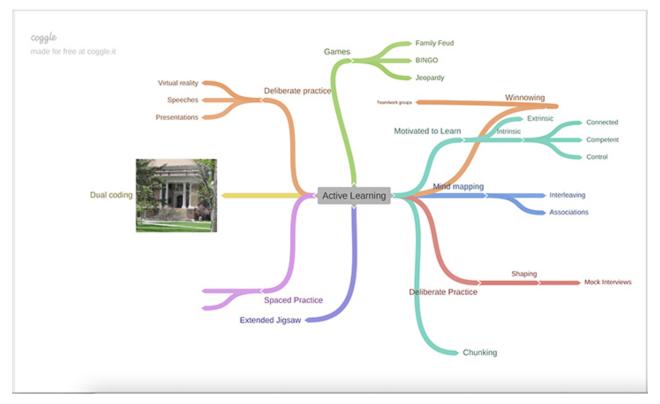
In April 2021, the South Dakota Board of Regents announced that all state schools would be returning to normal instruction in Fall 2021. This policy meant no mask mandates, no socially distanced classrooms, and no flexible attendance. In response, Northern's administration had to determine what role HyFlex course design would play moving forward. The previous year had demonstrated that HyFlex courses were valuable for all students, especially those who had obligations to their work, family, tribe, or team. Additionally, HyFlex enabled commuter students to avoid the inclement weather during the harsh South Dakota winters, and students with needs relating to mental health said they appreciated the Zoom option (synchronous online) on days when it was hard for them to attend class. Faculty also appreciated the flexibility on days they were ill and could not come to campus

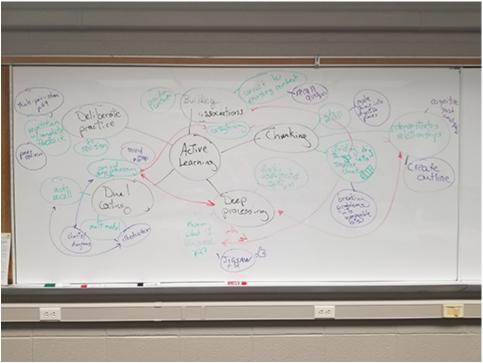
Weighing these benefits with the concerns faculty had expressed in the research we had conducted the previous fall, we at CETL proposed that the University stop offering HyFlex courses while we taught a year-long HyFlex training program using a cohort model of no more than ten faculty, who would be HyFlex certified upon completion. The certification would enable those faculty to offer any of their courses as HyFlex, provided their chair, dean, and the provost approved. Northern's interim president approved our proposal and provided us with \$50,000 of HEERF monies for the program. We dedicated \$34,000 to paying faculty and CETL staff for their work. The rest we earmarked for guest speakers and equipment. In an announcement for the new program, the provost clearly expressed why we chose to keep HyFlex instruction and why we chose to require certification:

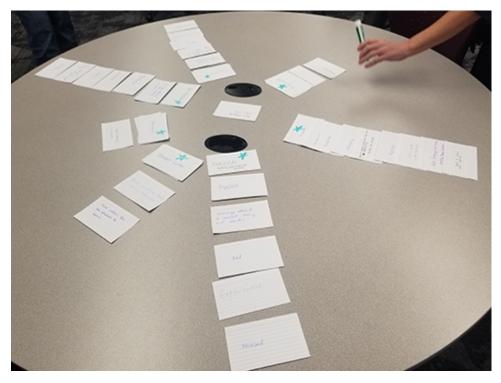
Following guidance from the SD Board of Regents, Northern is returning to "normal" this fall with face-to-face instruction without face coverings. As we look back at our experience with COVID, I am trying to find the silver lining to COVID—what did we learn that we will take with us into the future. One of those silver linings is HyFlex teaching. HyFlex has value as a teaching approach even without a pandemic, making college more accessible for students who regularly have to miss class for a variety of personal, professional, and medical reasons. This fall, Northern's Center for Excellence in Teaching and Learning (CETL) will start a HyFlex Certification Program. This training will allow faculty to utilize the HyFlex approach on a voluntary basis and ensure quality and consistency with our HyFlex courses. (Wanous, "The Future")

Throughout the summer, we fleshed out the certification course and developed the application form. We determined that the CETL Advisory Committee—made up of one representative from each of the colleges, a librarian, a student member, and ourselves—would determine which faculty applicants would be accepted into the HyFlex training program. We announced the program during in-service and gave faculty two weeks to submit applications. We were fortunate to receive more applications than we had slots available, and we were able to make choices based on who seemed most invested in HyFlex values and who seemed capable of navigating the pedagogical and technological challenges involved. Ultimately, the selection committee chose three faculty from Arts and Sciences, three faculty from Business, two faculty from Education, and two faculty from Fine Arts. A week later, we announced who had been accepted, coordinated participant schedules, and by mid-September we started meeting.

During the fall, we met with the cohort weekly for ten weeks to study HyFlex pedagogies. Each meeting lasted an hour and required about two hours of preparation in the form of readings and homework activities. As a group, we read and discussed Brian Beatty's *Hybrid-Flexible Course Design (2019)*, Stephen Kosslyn's *Active Teaching Online (2021)*, and a variety of supplementary texts on topics such as course objectives, assessment, privacy, and equity that prepared participants to design high-quality HyFlex courses (Caruana 2019, Fisher & Bandy 2019, Kshetri 2020, Miller et al. 2020, Moses 2020, NAME n.d., Stanford 2020, Sublett 2020). Our meetings often centered around active learning activities such as mind-mapping, discussion, and peer review. Additionally, Brian Beatty, Cathy Littlefield, and Derek Bruff held digital workshops for our cohort, each of which demanded another hour of our faculty's time. By the end of this extensive program, faculty had a firm grasp of HyFlex pedagogy and practices. They also had developed their own HyFlex courses to teach in the spring.







Figures 15-17. Faculty Active Learning Activities

In Spring 2022, faculty taught their HyFlex courses, created written reflections of their experiences, conducted independent research on HyFlex course design, and met monthly to discuss their experiences. Because they were teaching HyFlex, this portion of the program required a lot less of our cohort's time; meetings were an hour and a half each month and the outside research and reflection only took a few hours to complete. Cohort members also read Kevin Kelly and Todd Zakrajsek's *Advancing Teaching Online (2020)*, and Kelly held a workshop for the cohort on how best to design accessible and equitable courses. The faculty's independent research took on a variety of forms: some conducted secondary research, some engaged in action research with new technologies, and others conducted primary research on student motivation. By the end of the program, it was clear that each member of our cohort understood the principles, challenges, and benefits of HyFlex and were ready to engage with it more deeply. In fact, faculty presented their experiences and research at an end-of-semester in-house conference, *Distinctive Dialogues*, where Stephen Kosslyn served as the keynote speaker.



Figure 18. Distinctive Dialogue Conference Session

HyFlex Futures

Northern's initial HyFlex Certification cohort was largely a success. Eleven courses were offered as HyFlex in Spring 2022: nine were offered by faculty enrolled in the HyFlex certification program, and two were offered by the Director of CETL. Of the ten faculty who enrolled in the program, nine successfully completed it and one chose not to continue midway through the spring because he did not think the delivery method would work for his course content. In Fall 2022, seven courses will be offered as HyFlex. Additionally, our counseling program is making strides to offer all of the courses in their degree program as HyFlex. We will continue offering HyFlex certification in the upcoming academic year, but due to funding, we will only be able to train four faculty members. Finally, working with faculty from Northern's masters in Instructional Design and E-learning program, we will be offering a HyFlex training Graduate Certificate starting in Fall 2022. This graduate certificate will enable educators outside of Northern to benefit from CETL's research and experience, faculty expertise, and Northern's facilities and equipment.

Moving forward, we at CETL support Northern growing its HyFlex program because it makes education more accessible to all students, especially those who have traditionally been excluded from higher education because of their work schedules, family needs, tribal obligations, disabilities, or geographic locations. HyFlex can also make faculty's lives easier because they are already planning for multiple modes of attendance, which means they don't need to make last-minute accommodations for students who cannot attend face-to-face sessions.

Additionally, we realize that students will increasingly expect more flexible methods of instruction, since they know contemporary technologies enable them to attend their courses in a variety of modes. For example, this year, many faculty have told us that students have asked if they can attend via Zoom while they are out of town or if the faculty will record and share lectures and activities. These local anecdotes align with national data on student desires. A recent survey of students who attended college in Fall 2020 and Spring 2021 found that the pandemic learning experience

improved their perception of online courses, hybrid courses, and the use of digital tools. Fifty-seven percent of respondents said their perception of online learning improved due to the experience, 48% said their perception of hybrid learning improved due to the experience, and 52% said their perception of digital tools improved due to the experience. More importantly, these changes in perception have led to students wanting to take more online and hybrid courses. Seventy-three percent of students said they would like to take more fully online classes in the future, 68% said they would like to take more fully online classes in the future, 68% said they would like to take more hybrid courses in the future, and 68% said they would like to see more digital tools in their face-to-face courses (McKenzie 2022). If institutions of higher education want to survive, they need to meet student needs, which means faculty will need to learn how to teach in multiple modalities and to do so well. At Northern, doing this well means rigorous HyFlex training programs for interested faculty, which we believe will lead to better learning experiences for students.

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