

Teaching and Learning During and Beyond the Pandemic

Simona Laurian-Fitzgerald, PhD

University of Oradea

Carlton J. Fitzgerald, EdD

New England College & University of Oradea

For comments or questions for the authors, contact

Carlton J. Fitzgerald, EdD at cfitzgerald@nec.edu

Abstract

Although educators and students around the world are still dealing with the effects of the COVID-19 pandemic, college and university professors are moving forward with the lessons we have learned since March 2020. Like all teachers throughout the world, college and university instructors were forced to change how we taught and how our students learned during the pandemic. Many of the results of the pandemic have been traumatic, and many of us will never be the same again. We, the authors of this article, believe that the traumatic results of the pandemic, though, cannot cause us to just become victimized by the awful events of the past 2 ½ years. We must use our experiences to make us better instructors and our students better learners. In this article, we share our experiences and the lesson that we learned during our time working with our students during the pandemic. The three biggest lessons for us included:

1. As we developed our skills as online instructors, so, too, did our students develop their skills as online learners.
2. Our students are unique, and, as we adapted to the different needs of our students, they became more effective learners.
3. If we are going to deliver equity to learning for our students, we must give students options for how they learn, how they are assessed, and what they learn.

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

In this article, we share some ideas about how HyFlex learning might assist instructors and our students in gaining more equity in education.

Keywords: HyFlex learning, student-centered learning, student choice, flexible education, equity, pandemic teaching and learning

There are events in our lives that periodically reshape our world in profound ways, negatively and positively. March of 2020, for us, was the beginning of such traumatic and life-changing events. Fortunately for us (the authors), we had been teaching in online asynchronous programs and hybrid programs for several years. Therefore, we had experiences to help us and our students, when we received the emails from the college and university about moving completely online. At first, we were thinking this would not be an astronomically difficult process for us to move to synchronous online learning. We also believed our experiences would help our students in their transitions to synchronous online learning. Wow, were we in for a surprise!

All of our lives were changed dramatically almost overnight. As an older person, in our town in Romania, I (Carlton) was allowed 1 hour per day to exercise, and I had to make sure that I did not go near other people. Police were patrolling the streets, telling people to go home. We were allowed one trip per week to the grocery store and we had to fill out a form online to verify where and when we were shopping. This became much more than watching, on tv or on our phones, other people in other places losing their freedom of movement, losing people they love, and suffering in many different ways. People we knew were losing family members, and we lost some friends. This pandemic was directly and negatively affecting the lives of most of the people we know. The stress caused by the pandemic was astronomic, peoples' lives were turned upside down, every non-essential business was closed: the malls, restaurants, local stores, coffee shops, salons—closed.

As essential workers, teachers had to, almost overnight, overhaul how they taught and how their students learned. Students, who had never engaged online in their schools before,

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

also had to drastically change their lives as learners. Nobody knew what we were going to face, and many educators and parents prepared themselves and their students for some short-term emergency learning. Little did teachers, parents, and students know about how drastic this pandemic would become. According to Hassan (2022), as of May 12, 2022, in the United States, more than one million Americans had died from COVID-19, and the 7-day average was still more than 300 deaths per day.

At the beginning of the pandemic, teachers in the United States were being lauded for their efforts to adapt their teaching so quickly for their students. Soon, though, many of those cheers were changed to jeers, as parents began to demand more and more face-to-face learning for their students. Some parents were unable to be home to help their children and daycare was difficult, if not impossible to find. Other parents felt their students with special needs were falling even further behind. Many students were displaying signs of stress and even depression, and many parents were overwhelmed with the whole process of the pandemic.

Significant numbers of teachers began to retire or quit their teaching jobs; some because of fear of the threats of physical harm aimed at them; some because of fear of COVID-19 for themselves and their families; some who had reassessed their lives during the pandemic and decided their families or their own emotional health was more important than working with other peoples' children; some teachers decided to change careers (Goodrich et al., 2022; Sainato, 2021). According to Sainato (2021):

Nearly 10% of teachers in Providence, Rhode Island, either quit or retired early from the city's school district before the school year began. Public schools in Michigan saw a 44% increase in midyear teacher retirements this past school year over the 2019-2020 school year. In Fort Worth, Texas, the school district had 314 vacant teacher jobs at the beginning of this school year, compared with 71 at the 2019-2020 school year, before the pandemic. (para. 9)

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

Now schools are struggling to hire enough people to teach and to run other aspects of their schools. For example, three of our grandchildren in the United States have had their bus rides to school go from 15 minutes to 50–60 minutes, due to a lack of bus drivers. Our need to adapt as parents, teachers, and students is not yet complete.

Trauma, the Pandemic, and Learning

At the beginning of this process, teachers, parents, and students were telling us that they could handle the drastic short-term changes we were forced into by the pandemic. Teachers moved quickly to learn how to run the applications to organize and implement online classes for and with students (e.g., Google Classroom, Zoom, Moodle, Blackboard). We all moved as rapidly as we could to learn the applications and then learn how to adapt our curricula to the apps. At the beginning, many of us thought we were embarking on a short-term process. Many of our colleagues from the public-school sector told us they had been asked to develop a few weeks' worth of lessons. Colleagues at the university used meeting applications (e.g., Zoom) to run their classes, figuring they and their students could get through the short-term adaptations and get back to normal classes in a few weeks. Unfortunately, it quickly became clear that we were facing much more than a short-term interruption. The institutions for which we teach communicated that we would be teaching and learning remotely for the rest of the 2019–2020 academic year. That rule turned into another semester, a third semester, a fourth semester, and for us, a fifth and a sixth semester of a combination of remote and hybrid learning.

It was obvious that the pandemic was having a major negative effect on many people. Burke Harris (2018, 2020, 2022) explained in great detail what the effects of constant trauma have on children, young adults, and adults. She explained that it is imperative to help students deal with their stress, and that teachers and professors should be part of that assistance in schools. Burke Harris (2022) described how the traumas caused by the pandemic were

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

negatively affecting adults. During the pandemic, Burke Harris described how the extraordinary amount of stress placed on everyone was making matters worse, and she explained how important it is for the adults who work with students of any age to help students and to teach them how to care for themselves and their families. We heard the reports of teachers who were retiring, quitting their jobs, or changing careers during the pandemic (Sainato, 2021). Goodrich et al. (2022) described how teachers were observing that students were finding it difficult to be enthusiastic about and resilient in their learning. Many teachers also reported they were unable to teach the quantity and quality of their teaching efforts prior to the pandemic. We verified (Laurian-Fitzgerald, et al., 2022) that second and fourth grade student achievement scores in reading and mathematics had been significantly negatively affected during the pandemic.

Sousa (2017, 2022) has reviewed the research related to how the brain works in relation to learning and described the role that emotions play in the teaching and learning process. Not surprisingly, the brain works more effectively under positive conditions than it does under negative conditions. When a person is facing stressful and/or traumatic situations, their brain concentrates on survival. When the brain is in survival mode, it reduces or shuts down other aspects of thinking. Thus, under great stress, people find it more difficult to learn and retain information. Burke Harris (2018, 2022) explained how constant or long-term stresses have negative impacts on people emotionally and physically. Therefore, it was important for us as educators to try to develop ways to help our students (and ourselves) to positively deal with the stresses of the pandemic and the abrupt and ongoing changes to our lives in schools at every level.

Remote Teaching and Learning

We (the authors) had been teaching online in an asynchronous fashion for a number of years, so, we thought we would easily adjust our lessons and other kinds of experiences for and with our students. In some ways, we think our transition was easier than some of our colleagues

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

who had never worked online with students. For our asynchronous classes, the transition was easier in the sense that the technology and applications did not change. What was different was the amount of stress that our students faced, compared to their normal stressors of life. Most of the graduate students already work in schools as teachers, administrators, or paraprofessionals, and many of the students are married with a significant number of students who have young children. These students are used to dealing with the normal stresses of families, work, raising children, and going to school. Consequently, we already had begun working to develop ways to make our experiences together with our students be more flexible, to help students be successful in school while taking care of business in their jobs and in their families.

With the onset of COVID-19, it seemed like everyone was dealing with more stress and with more severe issues in their lives. People lost their jobs, people became ill, and many people lost loved ones. Another major issue was social isolation caused by the closing of schools and many businesses. This was not a short-term emergency but an ongoing and ever more severe world-wide pandemic. It seemed like everyone had someone close to them who either became severely ill or who lost their life. As the pandemic dragged on, the pressures seemed to only increase in most families. We had to, as teachers, first, deal with our families and the stresses with which we and our loved ones were dealing. Second, we had to figure out ways to help students cope with the pressures they were facing. In one of our surveys that we used to gather information from our students, two of the questions we asked students included: What are instructors doing that you want them to keep doing? and what are your instructors not doing that you would like us to know that we should be doing? The overriding responses to these two questions were the same—be empathetic and help us to be successful in spite of everything with which we are dealing. For instructors who were already becoming more flexible and understanding (i.e., more empathetic), students shared how grateful they were. One student wrote, “Tell the teachers that we love them for helping us.” Students also asked us to

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

tell teachers who were not being as flexible to “please understand that we need their help.”

During the pandemic, even teaching and learning in an asynchronous manner was a different experience for everyone, because life was so different, and the added stresses from the pandemic changed people’s ability to concentrate and be motivated to learn.

For our face-to-face classes, in addition to everything else with which people had to deal during COVID-19, instructors and students had to drastically adapt how we taught and learned. Meeting remotely was fairly easy to schedule and begin to implement but engaging in classes remotely was a very different process. At the beginning, we (the authors) attempted to understand how to make the process work for students and for us as teachers. Many students were very uncomfortable being on a video camera and did not want to turn on their cameras unless it was absolutely necessary.

There were many reasons for students to not turn on their cameras in addition to the uncomfortable feelings of being on camera. Some students did not have adequate quality of their internet connections. Other students had children in the room for whom they were babysitting. At times other family members were in the room where the students were online. Some students were driving from work to home or from one job to their next job. These different issues meant that as instructors, we should have been empathetic for our students, and not just consider students were being passively aggressive in their in-class attention. To add to the issues, many students were uncomfortable to communicate with professors about their internet or other issues, making it difficult for students to turn on their cameras.

For the instructors, not being able to see the students was frustrating. We tried different ways to communicate—turning cameras on to take attendance, when a student was speaking, while in a chat room, and as students were leaving class. Students were asked to respond online (anonymously) to polls we developed to see what they were thinking during class; then we shared the overall results with the class. During classes, we asked students to create visuals

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

in response to a question or a prompt and turn on their cameras to show their products. In the chat rooms, we asked each group to choose a student to share their ideas with the class (so just the speaker turned on their camera during sharing times). As we all became more comfortable with meeting through a video camera, the process began to work more effectively.

Quickly, it became apparent that long lectures were excruciating for students online. We learned to chunk our work into smaller components and to create ways for students to do something with each chunk of information (e.g., meet in a chat room and create a list or a visual, create a visual for each student's own classroom, write a definition, create a chart or a symbolic representation of their ideas). We offered bonus points for their work in class; we asked students to take pictures of their work and post them on our class forum. Students were also assigned to use what they had accomplished in class to complete homework assignments. One of our colleagues has suggested to use screen shots of student work to share on the platform, so students could see examples of what their colleagues were doing. In order to keep the energy high in our classes, we integrated what we thought were motivating videos, music clips, movie clips, sections of speeches, artwork, graphics, TED Talks, clips from the Got Talent shows, etc.

Educational Equity

Education is supposed to be the great equalizer, but during the pandemic, we found that equity became an even bigger issue for many students. We define equity in our teaching and learning as the assurance that every student has access to a great education, and that our job as teachers is to help each student be successful in learning the curriculum, social skills, and emotional self-regulation to be successful in life. Every student, in our eyes, is unique, and unique students require unique opportunities and assistance to graduate from school ready pursue their life dreams and goals.

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

Although we understand that schools are not equitable in many ways, teachers and schools have been working to enlarge the net of teaching and learning to catch more and more students. Educators are all familiar with the important legislation (e.g., Individuals With Disabilities Act, No Child Left Behind, Anti-Discrimination, Title I Reading and Mathematics, Title 9, Race to the Top) to help every student earn a free and appropriate education in K–12 schools and an appropriate education in colleges and universities. Educators have been working hard to create inclusionary schools and classrooms, develop universally designed teaching and learning activities, differentiate for students in need, and assist students and their families to connect with public agencies to help with healthcare, food and housing insecurities, economic insecurities, and other social and emotional issues with which people of poverty, racism, gender bias, religious discrimination, homophobia, language barriers, disabilities, and other discriminatory mistreatments must deal.

During the pandemic, we (the authors) learned, as college instructors, that we must use a larger tool box of ideas and techniques for and with our college and university students. Teaching at the higher education level is becoming more inclusive, less restrictive, and more equitable, though we still have a long way to go. For example, more institutions of higher education are implementing different programs to make college experiences more equitable [(e.g., credit bearing classes instead of remedial classes (Andrusiak, 2020), HyFlex (Beatty, 2007; 2019) learning opportunities, student-centered teaching and learning (Laurian-Fitzgerald & Fitzgerald, 2019)].

Equity and the Pandemic

According to the Organisation for Economic Co-operation and Development (OECD, 2020):

School closures related to the current COVID-19 pandemic mean that students from diverse backgrounds who are more at risk of increased vulnerability are less likely to

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

receive the support and extra services they need, and the gap between students that experience additional barriers and that do not might widen. (para. 1)

Educators have been concerned about equity in schools for a long time, and the pandemic appears to have made those concerns loom larger at both the K–12 and higher education levels.

Hough (2021) explained:

Our educational system in the United States was already highly inequitable and plagued by opportunity gaps in learning that have widened during the pandemic. Although we may see the light at the end of the tunnel on the coronavirus crisis, the educational equity crisis is just beginning. (para. 11)

What we have been trying to accomplish in our classes must be the beginning for us and our students. As we move forward this academic year (2022-2023), we want to continue to grow as instructors so that our students continue to grow as learners and as educators.

Student Centered Teaching and Learning

We (Laurian-Fitzgerald & Fitzgerald, 2019) had previously developed ideas for teaching and learning employing a student-centered philosophy. We developed 10 elements that were generated from asking our students and other teachers what they thought were effective ways to become more student-centered. Table 1 displays the ten student-centered ideas with a short example for each element. The goals are to attempt to proactively remove as many barriers to learning as possible and to work with students through their interests and strengths so students feel their work is meaningful and worthwhile. During the pandemic, to help students who were learning in very different ways, we believed, more than ever, that we should attempt to create ways to implement our student-centered elements in our classes; the key for us was to develop effective ways to be student-centered in an online environment. At the same time, we realized that we had to attend to the social and emotional (SEL) aspects of our students.

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

Table 1

Student-Centered Teaching & Learning Elements

Student-Centered Element	Example
Constructivist Activities	Using curriculum learned, create a proposal for a school garden and waiting area
Metacognitive Reflections	Working with a partner, students assess where they are on a project, what they are doing well and where they need more work or help. Create a plan of what to do next to move forward.
Student/Teacher/Professor Partnership	Teacher and class develop and implement a proposal for a class community service project
Collaborative/Cooperative Efforts	In small groups college teacher preparation students develop and run a Future Teachers Fair for high school students
Authentic Assessments	Science students identify a local environmental issue and develop a plan to work on the issue (e.g., plastic waste, lack of green space, energy waste)
Active & Ongoing Student Engagement	Students identify an interest or a passion, and, in communication with the instructor, students develop a project to meet curriculum standards and become skillful in their area of interest.
Explicit Teaching	Take an essential skill, teach an element, give time to practice, rehearse, and receive feedback; refine; generalize the skill set into an authentic project
Student Control of Some Learning	Help students learn to develop and set and implement their own goals (e.g., for a semester/term).
Peer and Instructor Feedback	Teach students how to give explicit and useful feedback; Teach students to implement feedback in their learning (e.g., writing a research paper)
Learning Based in Part on Strategic Student Effort	Students develop a portfolio of their goals, progress, reflections, and learning actions. End with a student-led Portfolio conference with peers, instructor, advisor

To address some of the SEL needs of our students, we decided to include fun and motivational experiences for and with our students. Since we work with teachers and future

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

teachers, we included education videos (usually TED Talks) with experts in the field [e.g., Angela Duckworth (2013, 2021); Carol Dweck (2014); Rita Pierson (2013); Sir Ken Robinson (2015, 2020); Tony Wagner (2013)]; we also included videos of other experts [e.g., Daniel Goleman (2013, 2018); Simon Sinek (2010, 2021)]; we used music [e.g., Shakira (2018), *Try Everything*; Louis Armstrong (2011), *What a Wonderful World*; Phil Collins (2010), *Another Day in Paradise*]; we used movie clips [e.g., *E. T.: The Extraterrestrial* (1982) leaving scene; Tom Hanks (1995) *Apollo 13*]; and we used a variety of speeches [e.g., Martin Luther King, Jr. (1963), *I Have a Dream*; J. K. Rowling (2008), *Commencement Speech at Harvard*]; we used anything we could find with artwork and poetry to help us help our students with their SEL needs. Simona created a monthly birthday page for her students. One class per month, the classes sang happy birthday to their colleagues. For a short period of time, students could laugh and wish each other well. One of our colleagues has students introduce their pets to the class to help students feel good and to make more bonds among the professor and the students.

As we developed our skills to become more effective online instructors, we found that our students were also becoming more effective online learners. We found, for our master of education and undergraduate weekend students, that online attendance was higher than when we had solely face-to-face classes. Since most of our graduate and weekend students worked full-time and have other obligations, attending classes online became easier for a significant number of students. Many of our students also had more family obligations, dealing with ill family members or helping their elderly relatives survive the pandemic (e.g., shopping or picking up groceries for elderly relatives that had underlying health concerns). To gather information from our students, we developed surveys to give students opportunities to give us feedback about how they felt they were doing in our classes. In one of our student surveys, 97% (76 of 78 responses) of our students indicated that it was easier for them to attend classes on a regular basis in their online classes.

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

It became clear that we had to create more ways for students to be successful in our online classes, and we believed that giving students more options for their work would help more students be successful. When surveyed, 96% (75 students) of our student respondents indicated they wanted to have some freedom to choose their learning, and 99% (77 students) reported they wanted to learn from some of their personal goals. These responses were in line with what Knowles (2015) had described in his work with adult learners. Our students had very specific goals for their future lives, they were or were working toward becoming teachers. One student wrote: “I want to eventually be a reading specialist. It would be great to use our program to begin gaining some of the knowledge I will need to become a reading specialist.” Our students who were teaching wanted to be more effective with specific students or with specific issues they had struggled with in their classes. One teacher wrote:

I have a student who was diagnosed with dyslexia. It turns out his real disability is dysgraphia. So, now we are developing new strategies to help this boy. It would be great to be able to work on these real issues in some of my special education classes at the university.

Teachers wanted to take what they were learning in our classes and directly implement those ideas with their students. Students asked for specific advice to help specific students in their classes.

Our adult students were, in general, much more independent than younger students, and as they (and we, their instructors) were becoming more comfortable meeting and working online, they were gaining confidence in their academic work. Unlike the second and fourth grade students whose scores we reviewed, the majority our adult students were learning as effectively or more effectively as they did in their traditional face-to-face classes. When asked if their grades were higher in their new online classes, 44% (34 students) indicated their grades were

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

higher in their new online classes; 36% (28 students) of respondents indicated their grades were the same; and 21% (16 students) indicated their grades were lower.

From our review of the results from our student surveys, we determined that online learning was a viable and valuable platform for our master degree and weekend program students. We also realized that a significant number (16) of our students (21%) did not feel as comfortable online as they did in their traditional face-to-face classes. For our undergraduate students, from our discussions with our education students, it appeared that a significant number of the younger undergraduate students were not as independent as our graduate students, and more undergraduate students preferred face-to-face learning. Since one of our important goals in education is to move students along the continuum from dependent to independent learners, it makes sense that we consider how to help our younger students become more independent as learners. Our university also runs a hybrid weekend program for undergraduate students. The students in the weekend program tend to be older, more have full-time jobs, more are married, and a significant number have family obligations. The data from the weekend program indicated that these students align more with the graduate student results than with the younger undergraduate students. Our review of our data and discussions with our students led us to conclude that there is not one perfect way to help all students to be successful. We determined that we needed to consider ways to approach students that offered options for how students learn.

Student Voices

We asked our students in our master of education and undergraduate weekend program to rank their agreement to the following five Likert-style prompts: When we return to our new normal, I would like to have:

All face-to-face classes;

Online classes that meet synchronously;

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

Hybrid – F2F and online work;

Asynchronous online classes and work;

Multiple options for how I do class and work.

Table 2 displays the responses for the students. The student ratings were very interesting. All of the master students were already working in schools. Many of the weekend program students also worked full-time. All of the students in the survey were older than students in the “traditional” day program for the university. This group of students had its own needs and outside responsibilities, compared to the traditional undergraduate students. Our results indicated that the course option that most students agreed they would like to experience was having multiple options (84.7% agreed/totally agreed), followed by synchronous online classes (70.5% agreed/totally agreed). The next highest option chosen was hybrid—face-to-face and online work (46.1% agreed/totally agreed), and 44.2% of the participants agreed/totally agreed they would like to engage in asynchronous online classes. Trailing far behind these choices, only 3.8% of the participating students agreed (with no students totally agreed) that being in all face-to-face classes was their preference.

Table 2

Student Choices for Upcoming Classes

When return to our new normal I would like:	N	Totally Disagree	Disagree	Neutral	Agree	Totally Agree
All face-to-face classes.	78	38 (48.7%)	24 (30.8%)	13 (16.7%)	3 (3.8%)	0 (0%)
Online classes that meet synchronously.	78	1 (1.3%)	9 (11.5%)	13 (16.7%)	13 (16.7%)	42 (53.8%)
Hybrid – F2F and online work.	78	7 (9%)	14 (17.9%)	21 (26.9%)	16 (20.5%)	20 (25.6%)
Asynchronous online classes & work.	77	5 (6.5%)	11 (14.3%)	27 (35.1%)	15 (19.5%)	19 (24.7%)
Multiple options for how I do class and work	78	3 (3.8%)	0 (0%)	9 (11.5%)	19 (24.4%)	47 (60.3%)

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

The first point we took from this survey from our weekend and master degree students was that the majority of these students did not want to return to full-time face-to-face classes. 70% of the students indicated they were in favor of meeting synchronously online. Thus, the majority of students was in favor of meeting together, but their circumstances certainly make it easier to meet synchronously online rather than physically face-to-face. The results also indicated that different students have different ideas of what is best for the educational interactions. Approximately 85% of the students indicated they would like some flexibility in the schooling.

We also asked the students to respond to the following prompts: I think students should have some freedom to choose their learning and learn from personal goals. Approximately 96% (75) of the students agreed or totally agreed to the first statement. 99% (77) of the students agreed or totally agreed to the second statement. Almost all of the students indicated they would like more choice in their learning, and they would like to develop and work toward some of their personally set goals. One student, who entered the program after we had begun our synchronous and asynchronous online classes, wrote: "The online system we have been enrolled in from the beginning can certainly give us more access doors in the following for us. The teaching-learning-assessment process has been adapted according to the conditions." Another student wrote: "I would not like to lose the activity carried out on the University platform and the online evaluation method!" We were forced to become more flexible during the pandemic, and students were encouraging us to not retreat from that flexibility.

HyFlex Teaching and Learning

Our students indicated that, in addition to student goals and student choice, their courses should be flexible. One of our students wrote:

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

I would prefer to be flexible and be able to choose how we want to work in this semester, because for us it is something new to do all the hours physically in the context in which we became familiar with the platform, and everything goes smoothly in the activities.

Another student put it simply: “There should be flexibility.” Our interpretation, from what our students wrote and told us during our classes, was that students wanted options as to how they worked in their classes to learn the curriculum.

According to Beatty (2007; 2019) HyFlex learning is a process through which professors and their students can create courses that are flexible in terms of developing different ways for students to learn and be assessed in their work. The term, HyFlex, is derived from the terms, hybrid and flexibility. According to Beatty (2007; 2019), a HyFlex course should contain the following four elements: (a) learner choice, (b) equivalency, (c) reusability, and (d) accessibility. First, in a HyFlex system, students choose, from the available options, how they want to interact with their course. Second, whatever ways the students choose to participate must be equivalent (e.g., the students will accomplish all of the goals of the course). Third, the choices and the materials developed should be created so they can be used across the course (e.g., the same materials can be effectively implemented among the choices for students). Fourth, all students should be trained and have the availability to use each of the options developed for a course (e.g., access to training, technology, and assistance). One question about this is who is going to train the students?

In addition to the four elements for a HyFlex course, Beatty (2019) wrote:

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. (p. 18).

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

In Simona's undergraduate weekend program classes, although physical face-to-face attendance was not required (students could work asynchronously online), 32 students chose the face-to-face option for attending classes. The other 33 students decided to attend classes asynchronously online. Thus, about half of the undergraduate students chose each option. In this case, it appears that undergraduate university students understood their needs and chose wisely how to interact in the class successfully. Student attendance was great in both choices, and the average grades for students were higher than previous years when just face-to-face attendance was required. As we move forward, it will be important for us to assess how many students choose preferences for their ease of doing instead of for the best ways to learn for individual students.

The HyFlex course model is a promising process to help teachers, professors and students become more effective instructors and learners. It is important to remember, though, that every model for instruction and learning has strengths and weaknesses. One of my mentors would remind me that when we make choices, there are strengths and weaknesses to every choice. It makes sense to understand the areas of concern for any model. Implementing a HyFlex model will mean more complex work for instructors. Each choice aspect of the HyFlex process must be managed effectively. Each choice students and instructors generate will create more planning, and a variety of assignments and assessments. The more complex the system, the more complex it is to manage assignments and assessments and tracking of progress. Since technology is an important element of any HyFlex class, it is vital to ensure that the hardware and software needs are available for every student. Students also will need training for the platform, applications, and technology. Additionally, students must have access to the internet and to equipment outside of the institution. If a course is developed for in-person and synchronous online attendance, then the technology for effective access for students online must be available for each class session. It is important that each option created by students

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

and instructors will lead to equal knowledge and skills for students. Organizational skills are integral for successful HyFlex courses; students and instructors must keep accurate records of what has been accomplished and how, and appropriate feedback must be given and incorporated into student progress.

There are many forms that HyFlex courses can take, and professors and students must agree on what they are willing and able to reasonably accomplish. For example, if a professor develops options for attendance (e.g., face-to-face, online synchronously, online asynchronously), then the professor must decide what they can or are willing to accommodate. Do students have the option to choose how they will attend class weekly, monthly, or by the term? The more choices students have, the more complex keeping track of student progress becomes. Additionally, the more options a student chooses creates more complexity for the student to keep track of how they are progressing. Both students and their professors must develop a system, so they know exactly what students have accomplished and what they need to do. Thus, at the beginning of the process, it might make sense to begin with fewer options and add more options as instructors and students gain more experiences in the process. It is also important to consider when options are appropriate and when they are not appropriate. In addition to the format of attending class, HyFlex courses may offer options for the format for assignments and/or assessments. For example, for a final exam, a professor may offer students options for a face-to-face written exam or presentation or interview and/or an online version of each option. The point is, since we know that each of our students is unique and have to deal with all kinds of different circumstances and situations, it makes sense to give as many options as possible to help each student find a viable way to succeed in our classes. We found that as we became more proficient at teaching online, and as we became more proficient at working with students to develop options, we became more effective instructors, and our students became more effective learners.

Conclusions

In any emergency situation, it is important to contemplate what we should have learned from our experiences. Hopefully, we will not wait for the next world-wide emergency to remember what it was like during the last emergency. In today's fast-paced world, it is easy to move on without considering what we have and/or should have learned from our experiences. So far, we have developed four important lessons for our work with our students, listed below.

1. Different students have different needs—young students, middle level students, secondary students, undergraduate students, “non-traditional” undergraduate students, graduate students, students with special needs all require different considerations when teaching.
2. Teaching and learning should be student-centered—students need some choice, personal learning goals, and flexibility.
3. Students and teachers/professors need social and emotional support.
4. Education must be equitable.

When we ask our students: Are your students all the same or are they unique, they always respond that their students are unique individuals. So, then the question becomes: Then, how should we change how we teach to address the unique qualities of each student? Researchers such as Robinson and Robinson (2022) and Zhao (2022) reported that the majority of schools are still organized around an industrial mentality. Zhao (2022) called the model still being used in many classrooms today the one for many model or system—one curriculum for the many, one teaching and learning system for the many, and one assessment for the many. Robinson and Robinson (2022) believed schools should be modeled around a garden metaphor instead of a factory metaphor. They argued educators should set the environment so that each plant/child is more likely to grow to their potential. They and other educators posited that we should listen to our students and give them more choice in their

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

learning, help them create and address more of their personal learning goals, and be more flexible in how students can interact with the curriculum and show what they have learned.

The pandemic has taught parents and educators that the social and emotional (SEL) support that schools offer students and teachers are critical for the wellbeing of everyone in schools (CASEL, 2022). Our recommendation is that every teacher should integrate SEL into most of what we do with each other and our students. We believe it is imperative to teach students, from a young age, how to identify their emotions and how to deal with them positively and effectively. We also believe that learning how to relate to other people should be a part of every curriculum through high school. Every student must understand how to develop and maintain positive and strong relationships throughout their education. We must help our students to grow intellectually, emotionally, and socially to become positive and cooperative citizens in our world. We cannot afford to have another generation that believes it is acceptable to demonize people who are different from them.

Finally, education is supposed to be the great equalizer. Boaler (2022) contended that we can teach and have student learn in ways that will help all students be successful in schools. Teachers and schools should not limit our students, we should provide each student with ways to learn effectively, find their interests and passions, and become the people they are meant to be. Educators should not deny access to learning to any student, we should open doors of learning and access for our students. Students want to learn so they can pursue their dreams, in spite of any barriers, and educators should help each one of them to be successful.

References

Andrusiak, R. A. (2020). Eliminating exams from gateway college mathematics courses: Going beyond corequisite mathematics. In Andrusiak, R. A., Bastoni, A., Fitzgerald, C. J., Geraghty, C., Laurian-Fitzgerald, S., & Petrino-Goguen, R. (Eds.). *From inside-out: Concrete steps to transforming education today*. Rowman & Littlefield.

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

Armstrong, L. (2011). *What a wonderful world*. [Song Video]. ABC Records 1967; 1970.

<https://www.youtube.com/watch?v=2nGKqH26xlg>

Beatty, B. J. (2007, October). Hybrid classes with flexible participation options – If you build it, how will they come? *Proceedings of the Association for Educational Communication and Technology International Conference*, Anaheim, CA, USA.

Beatty, B. J. (2019). *Hybrid-flexible course design: Implementing student-directed hybrid classes*. EdTech Books. <https://edtechbooks.org/hyflex>

Burke Harris, N. (2018). *The deepest well: Healing the long-term effects of childhood trauma and adversity*. HarperCollins Publishers.

Burke Harris, N. (2020). Dr. Nadine Burke Harris: Helping adults and children with trauma during the pandemic [Vide]. YouTube. *Trauma Informed Parent, Dr. Nadine Burke Harris: Helping Adults and Children With Trauma During the Pandemic - YouTube*

Burke Harris, N. (2022). *Dr. Nadine Burke Harris talks toxic stress in covid-19 pandemic* [Video]. YouTube. Child Counts Symposium. Association of California School Administrators. <https://www.youtube.com/watch?v=Ji0mwhJogJ4>.

Collins, P. (2010). *Another day in paradise*. [Official Music Video]. <https://www.youtube.com/watch?v=Qt2mbGP6vFI>

Duckworth, A. (2013). *Grit: The power of passion and perseverance* [Video]. TED Conferences. https://www.ted.com/talks/angela_lee_duckworth_grit_the_power_of_passion_and_perseverance?language=en

Duckworth, A. (2021). *The strongest predictor for success* [Video]. TED Conferences. <https://www.youtube.com/watch?v=GfF2e0vyGM4>

Dweck, C. (2014). The power of yet [Video]. TEDx Conferences. <https://www.youtube.com/watch?v=J-swZaKN2lc>

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

E. T.: The Extra-Terrestrial. (1982). I'll be right here. [Movie Clip].

<https://www.youtube.com/watch?v=75M1XXEZciU>

Goleman, D. (2013). *Focus: The secret to high performance and fulfillment* [Video]. YouTube.

Intelligence Squared. <https://www.youtube.com/watch?v=HTfYv3IEOqM>

Goleman, D. (2018). *Emotional intelligence at work: Why IQ isn't everything* [Video]. YouTube.

Big Think. <https://www.youtube.com/watch?v=7nglFlmRRPQ>

Goodrich, J. M., Herbert, M., & Namkung, J. M. (2022, January). Impacts of the COVID-19 pandemic on elementary school teachers' practices and perceptions across the spring and fall 2020 semesters. *Frontiers in Education, 18*(2022).

<https://www.frontiersin.org/articles/10.3389/educ.2021.793285/full>.

Hanks, T. (1995). *Apollo 13*. [Official Movie Trailer].

<https://www.youtube.com/watch?v=KtEIMC58sZo>

Hassan, A. (2022, May). The U. S. surpasses 1 million COVID deaths, the world's highest known total. *The New York Times*. <https://www.nytimes.com/2022/05/19/us/us-covid-deaths.html>

Hough, H. J. (2021, April). *COVID-19 the educational equity crisis, and the opportunity ahead*. *Brookings*. Brown Center Chalkboard. <https://www.brookings.edu/blog/brown-center-chalkboard/2021/04/29/covid-19-the-educational-equity-crisis-and-the-opportunity-ahead/>

King, Jr., M. L. (1963). *I have a dream*. [Speech Video]. YouTube.

<https://www.youtube.com/watch?v=vP4iY1TtS3s>

Knowles, M. (2015). *The adult learner: The definitive classic in adult education and human resource development*. Routledge.

Laurian-Fitzgerald, S. & Fitzgerald, C. (2019). Student-centered learning in undergraduate preservice teachers. *Education Facing Contemporary World Issues*. [Paper Presentation].

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

The European Proceedings of Social & Behavioural Sciences, 67. 79-89.

<https://doi.org/10.15405/epsbs.2019.08.03.10>.

Laurian-Fitzgerald, S., Fitzgerald, C. J. & Mandru, C. (2022, June 4–5). Effects of the pandemic on mathematics and reading achievement. [Paper Presentation]. EDU World International Conference Education Facing Contemporary World Issues, University of Pitesti, Romania. *European Proceedings of Educational Sciences*. <https://eduworld.ro>

Organisation for Economic Co-operation and Development (OECD). (2020, November). *The impact of COVID-19 on student equity and inclusion: Supporting vulnerable students during school closures and school re-openings*. <https://www.oecd.org/coronavirus/policy-responses/the-impact-of-covid-19-on-student-equity-and-inclusion-supporting-vulnerable-students-during-school-closures-and-school-re-openings-d593b5c8/>

Pierson, R. (2013). *Every kid needs a champion* [Video]. TED Conferences.

<https://www.youtube.com/watch?v=SFnMTHhKdkw>

Robinson, K. (2015). *Bring on the learning revolution* [Video]. TED Conferences.

<https://www.youtube.com/watch?v=kFMZrEABdw4>

Robinson, K. (2020). *Finding your element* [Video]. YouTube.

<https://www.youtube.com/watch?v=17fbxRQgMIU>

Robinson, K. & Robinson, K. (2022). *Imagine if . . . Creating a future for us all*. Penguin Books.

Rollins, J. K. (2008). *Harvard commencement speech*. [Speech Video]. YouTube.

<https://www.youtube.com/watch?v=wHGqp8lz36c>

Sainato, M. (Oct. 2021). Exhausted and underpaid: Teachers across the us are leaving their jobs in numbers. *The Guardian*.

<https://www.theguardian.com/world/2021/oct/04/teachers-quitting-jobs-covid-record-numbers>.

TEACHING & LEARNING DURING & BEYOND THE PANDEMIC

Shakira. (2018). *Try everything*. [Official Video]. <https://www.youtube.com/watch?v=c6rP-YP4c5I>

Sinek, s. (2010). *How great leaders inspire action* [Video]. TED Conferences.
<https://www.youtube.com/watch?v=qp0hif3sfi4>

Sinek, S. (2021). *How to discover your “why” in difficult times* [Video]. TED Conferences.
<https://www.youtube.com/watch?v=iFkCMeEhs0Y>

Sousa, D. (2022). *How the brain learns*. Corwin Press. (Original work published 2017).

Wagner, T. (2013). *Reinventing education for the 21st century* [Video]. YouTube.
<https://www.youtube.com/watch?v=54gzmxlPbsA>

Zhao, Y. (2022). *Learners without borders: New learning pathways for all students*. Corwin.