

# DESIGN + K12

## Using Human-Centered Design to Create Large Scale Change in K12 Education

How the HCD Process Helped Parish Episcopal  
School Reimagine Its Schedule

Reimagine school. Those words are a mantra at Parish Episcopal School, an independent, PK-12 school in North Dallas. The school projects its ambition and adaptability through its Midway Campus, an angular former corporate research center designed by the renowned architect I.M. Pei. The school's activity all takes place within a bold design.

Parish is a relative newcomer, founded in 1972 and graduating its first high school seniors in 2007. Without long traditions, the school's leaders say that they're free to experiment. As Dave Monaco, who serves as Parish Episcopal's Head of School said, reimagining school would mean having "to reimagine the use of time" – developing a schedule that would foster the autonomy and engagement the school wants its students to experience.

But when it came time to turn ambition into reality, Monaco found himself in a committee meeting in 2015 rehashing ideas that educators had been trying for decades. "We're talking about reimagining school, and what we're actually doing is recreating school," Monaco said, recalling that meeting. What frustrated him was the common problem of path dependence, the human tendency to follow traditional patterns. We like what's familiar, but what's familiar isn't always what's best. That's especially true as the goals of education change; old paths will not necessarily lead to innovation.

In the words of Megan Wittmann, Assistant Head of Middle School for Academics, "To get your brain around something you've never experienced, that's hard. It's hard to imagine something other than what we've done and succeeded at."

**"We need to have a day where we live as a kid."**

To forge a new path for the school, Monaco turned to the SMU's Design + K12 initiative, asking its team members to teach the school how to think about its questions in a new way, so that it really was reimagining the school day and not replicating familiar models for the sake of familiarity. Rather than bringing in scheduling consultants who might try to reproduce a different school's results, Parish would attempt what Head of Middle School Jay Riven called a "home-grown solution" by developing its staff's ability to diagnose their needs, design and implement their solution, and adapt as they get feedback from users.

Michelle Lyon, Assistant Head of School, convened a Reimagine Time Committee from faculty and staff across grade levels and subject areas. The committee first spent time learning the Human-Centered Design process with the the SMU's Design + K12 initiative. An early lesson for the committee was that the school wasn't ready to create a new schedule, because it didn't even know what its problems were yet, Lyon said. Finding that out would be the committee's first step in the process of Human-Centered Design.

The workshops prompted committee members to change mindsets. “The kids are the users,” Lyon realized. “We need to have a day where we live as a kid.” So with training in design research methods from the SMU team, the Reimagine Time Committee members each shadowed a student throughout an entire school day, including after-school extracurriculars. They also interviewed all constituents of the school: teachers, administrators, support staff, families, and students.

The shadowing experience was eye-opening. Riven learned that “it’s hard to sit through an 85 minute class.” Lyon shadowed an eighth grader who, in her science class, had finished the day’s assignment well before the end of class. Lyon said, “She was done, and the teacher had signed off on the work. She had a major Spanish assignment due and wanted to go work on it. She turned and asked me, ‘Why can’t I leave?’ I didn’t have an answer. I thought, ‘Why can’t you?’”



Teachers brainstorm ideas for the new programs.

## Reimagining Time

Once the shadowing and interview data was gathered, SMU’s Design + K12 initiative team and the Reimagine Time Committee reconvened to synthesize that data to reveal patterns and tensions present across constituent groups. The SMU team then helped the committee develop themes that would act as guiding principles for the design process. From those themes, the committee framed new questions that would open them up to innovative possible solutions.

The SMU team then led the Reimagine Time Committee, along with parents and students, through a collective brainstorm to generate ideas, guided by the committee’s design principles, including a commitment to honoring student voice and choice and enabling students to attain new levels of mastery as they are ready. The most transformative ideas were selected for further development, eventually becoming Concept Cases, such as “Student-Determined Learning Pathways” and “Dashboard of Student Learning,” that laid out these new ideas in detail.

“Synthesizing the material and turning it into concept cases was super helpful,” Megan Wittmann, Assistant Head of Middle School for Academics, said. She said the process enabled greater creativity. Administrators like her “would have filtered some ideas out if they had done it themselves,” she said. Lyon agreed. “The whole com-

mittee needed permission to think outside the box," she said.

After SMU's Design + K12 initiative team developed the Concept Cases, the Reimagine Time Committee used an engagement chart to see which of the Cases' ideas attracted the most energy and excitement. From there, the SMU team broke the Concept Cases into smaller-scale prototypes. Ultimately, that produced a two-day prototype schedule, a school-wide experiment meant to answer the Reimagine Time Committee's questions and bring unanticipated questions to the surface.

The prototype would be a bold step into uncertainty. Monaco said that throughout the process of breaking the school out of path dependency, the SMU's Design + K12 initiative team members "were Sherpas, guiding us up the cloud-shrouded mountainside. They're just OK with the uncertainty."

## Prototypes and Playlists

The committee's prototype schedule would allow the students like the one Lyon shadowed to leave class when they were done. It would break away from a very well-worn path: the standard school schedule. "Education has been about a standardized model for more than a century: divided by discipline, August to May, eight to three-thirty, forty minute classes," Monaco said. He sees the mission of Parish Episcopal as breaking out of that standard.

The prototype schedule had students follow a "playlist" of assignments to complete at their own pace. Teachers would be available during several study blocks, and students would check in to classrooms electronically so that administrators could know where they were at all times. Three brief advisory periods – one at the beginning, middle, and end of the school day – offered students a chance to plan their day with their advisors and track their progress.

Over two days in April 2017, the entire school dove into the prototype schedule. Students tackled their playlists even before the first bell, at a seven a.m. physical education session instituted for students who wanted to get that requirement out of the way and free up more of their time later in the prototype days. During this P.E. session, students came in, completed their workout and went off to work through the rest of their assignments. At morning recess, 120 Middle School students stayed in the library – usually empty at that time – to work on assignments, occupying every carrel and chair and clustered in groups on the floor.

Playlist assignments focused on completion and mastery of discipline-specific tasks. For fifth-grade humanities, playlist tasks included activities that were already familiar to students and built upon content they had previously learned, like "Sentence of the Day #1 and #2," "Civil War content vocabulary," and "Preposition activities." Students could meet with their teachers for instruction and help with tasks as needed.

Educators might wonder if it's good for students to skip recess to keep working. But students expressed that they enjoyed the freedom to decide when and how to get their work done. Two students doing worksheets in the library on the first prototype day found the new schedule to be fun. According to one fifth-grade girl, the playlist made the learning process more transparent. "It shows how much work you have to get done," she said. Another fifth-grade girl added that if she finished an assignment early, she "didn't have to spend a whole class waiting" for her classmates to finish. "I think we're getting more done."

## The Teachers' Experience: "I've been waiting for this for years."

The prototype schedule allowed teachers to try new pedagogical approaches to foster students' autonomy and meet students' diverse needs. Dance teacher Dru Stine assigned students in her classes to watch a video on their own to learn a choreography. Afterward, students had to visit her studio at some point to demonstrate the choreography and be videorecorded. Finally, students watched their own performance, wrote a self-critique, and submitted it to Stine.

Stine said that the prototype schedule helped her manage a class with a wide range of ability and experience. Her students who get dance instruction outside of school can demonstrate their learning quickly and then spend some extra time on another class. She can then focus on students who need personal instruction. "It allows extra time for students to learn who don't have as much experience," she said.

Ashley Wilson, a Spanish teacher who served on the Reimagine Time Committee, echoed Stine, saying that "Human-Centered Design has heightened my awareness of students' needs and experience." With that knowledge, she has become more comfortable allowing students to spend time on what they need help with. In fact, she said that she would have benefited from this approach when she was in school.

Rhonda Shaw, who teaches sixth grade math, said on the first prototype day, "The schedule pushes teachers toward where the school is trying to push students anyway," namely, toward becoming self-directed learners. One student who takes medication for ADHD decided to come to Shaw's morning class instead of her usual afternoon class time. Shaw said, "I like that a student could come to class at a time when her thinking is better in a class that's hard for her."

Science teacher Margaret McEwen, who has been using project-based learning for several years, simply said the prototype "works beautifully. I love it. I've been waiting for this for years."

The focus on meeting student needs is exactly what Michelle Lyon hoped the schedule would make possible. "It's not about the schedule. It's not about what students are doing from eight to nine o'clock," she said. "It's really about how we are using the time we're given to engage the students in meaningful and authentic work."





### The Students' Experience: "Stress-free, study-free."

The ultimate test of any design project is the experience of the end users – in this case, the students. On the first prototype day, two eighth grade girls shared a low-slung chair in the library, doing assignments on laptops. One said she liked how the experimental schedule meant having "more freedom in what you can do and where you can go." She continued, "It shows you how much time you have in the day. The school day is eight hours. That's a lot of time." She echoed faculty members' satisfaction with the prototype in saying, "If you need one-on-one time with your teacher, you can get it."

To collect informal, unfiltered feedback on the prototype, the school set up wall spaces for students to write "I like," "I wonder," and "I wish" comments on Post-It notes. In several notes, students said they would like more spaces open to them – showing how organizing time and organizing space are inseparable in a school. Others wished the study periods were longer. One note simply expressed a wish "that this becomes a thing."

Upper School students echoed their younger peers. One wrote in an online evaluation after the prototype days, "I got all of my work and studying done and now I am stress free, homework free, and study free for the next few days. I got ahead in my work because I used my time wisely." Another wrote about how the schedule made it possible to form their own workgroups: "I found that I enjoyed collaboration time because the first day I got to practice jazz band pieces and the second day I worked with my friends to create a physics study group." Another enthused about the whole experience: "The amount of freedom that was given was really nice. I was able to get a lot done and just not be stressed about everything!! It was just really nice and I loved it!"

For an early prototype of any Human-Centered Design, success does not mean everything goes perfectly. It means getting positive and negative feedback that will inform the next iteration of the prototype. Some students struggled without the structure of the usual schedule. One Upper School student, a self-described "free spirit," admitted to squandering the first prototype day, leaving a lot to do the next day – beginning even before the first bell. A Lower School teacher wrote in response to a survey that "Kids who struggle with motivation and self-regulation had a really hard time being productive." Upper School students with Advanced Placement exams coming up said afterward they wished their AP classes had met as usual.

Observational and survey data from the prototype days also raised questions about how best to distribute instructional strategies and assessments. The playlists seemed to need flexible, interdisciplinary, project-based learning to complement them, so that they would guide students toward greater competency, rather than just encourage them to check assignments efficiently off the list. Questions also emerged about how students' accomplishments would be tracked throughout their school years if the prototype schedule became permanent.

In fall 2017, the Parish community will continue to prototype potential solutions. Eventually, when the school feels that it has learned its way to an innovative and effective new structure of the school day, it will roll out its new model.



### A Rolling Process of Innovation

Reimagining school is a big task. The process of learning about the user's experience of a complex system, developing ideas to improve it, launching a prototype, and acting in response to feedback takes time. But it also builds up the confidence it takes to make big changes and solve ambiguous problems. A few years from now, the school day at Parish Episcopal School could look very different, and it will have the structures, spaces, and human capacity to make every day work for all its students.

Lyon said that its collaboration with SMU's Design + K12 initiative team has helped Parish become "intentional about setting up the problem, always circling back to the design principles, and getting feedback." Monaco agreed. "It's not a quick fix," he said. "It's a rolling process of innovation and advancing our model of education."