THE MODERN ACADEMIC LIBRARY

PEPPERDINE UNIVERSITY CREATES A MORE VISIONARY LEARNING SPACE.

BY DAN DALEY

The university library, long the most venerable of academic environments, is undergoing a fundamental makeover. The Payson Library, at Pepperdine University near Malibu CA, in Los Angeles County, is a good example of that. Certainly not the most tweedy of collegiate libraries to start with, given its surfer-centric location that overlooks southern California's legendary beaches, the Payson Library was nonetheless nearly 50 years old when the school recently undertook an extensive renovation of the 71,000-square-foot building. It was also one of the last buildings on Pepperdine's Malibu campus with its original building systems.

The intent of the renovation, according to Mark Roosa, Dean of Libraries at Pepperdine, was to create "a more visionary learning space," *Academic Impressions* magazine reported in January, "…and [to] examine how the academic library can support both emerging academic trends and social formation on campus." The effort would go beyond simply "clear-cutting" the stacks of books the library had accumulated over the decades, he said, using the bibliotechnical phrase that connotes replacing traditional bookshelves with research and learning spaces that are more open. It would reflect what he called "a blurring between the library and the dorm experience, between the library and the café," and "a domestication of library spaces, where learners crave study spaces that resemble the living room."

Laid-Back High Tech

The Payson Library, which reopened in September 2017 after the $18.8 million renovation had been completed, retains a very SoCal feel, architecturally speaking, with plenty of glass through which to contemplate the nearby Pacific breakers. It also includes a new flex space called the Surfboard Room, with a collection of historic surfboards, showcasing local culture. Further, it received more than a dozen new classrooms and study and lecture/seminar spaces, all of which were ready for the 2017-2018 school year. And a pair of Panasonic projectors and JBL Control 28 surface speakers can turn this quintessential Malibu facility from a study and lecture hall to a special-events flex space.

Among a list of new creative enhancements, the library now includes expanded and varied study areas—soft seating, historic tables, a learning commons, individual study carrels and triple the number of study rooms.

The renovated library has plenty of glass and natural light, which affected projection choices. Projectors that produce 6,500 lumens, like the one seen here, are laser-light-source devices. They replaced the bulb-light-source projectors used previously throughout Pepperdine classrooms.

The Payson Library reopened in September 2017 after an $18.8 million renovation of the 71,000-square-foot building was completed. The renovation included significant AV systems integration.

"That was a big part of what we did here: We added and integrated the AV technology that would set the pace for future classrooms on the campus, and we adapted all of the learning spaces in the Payson Library for changing trends and technology for higher education," Max Brown, Account Manager in charge of the project for ClearTech Media, said. The Altadena CA-based AV systems integrator has been the school's technology partner for several years. "It was an underutilized space on campus, so this was an opportunity to update the classroom AV technology," Brown continued. "And it was also a chance to make another part of the campus more attractive to students and everyone else—part of keeping up the appeal of the school and a sense of 'return on tuition.' All of that factors into an AV project now. It's not just projectors and screens."

Creative Enhancements

Among a long list of new creative enhancements, the library now includes expanded and varied study areas—soft seating, historic tables, a learning commons, individual study carrels and triple the number of study rooms. There also have been upgrades to the special collections and archives spaces, along with a centralized student academic assistance center, a maker lab, fireplaces, a patio and—hey, this is L.A., after all—a Starbucks.

There was, in fact, a lot more space with which to work, because the 70,856-square-foot library had moved as much as half of its complement of books and other print material to its Calabasas CA campus a few miles north, on the other side of Malibu Creek State Park. "The intent was to make the library more focused toward the study needs of today's students," Brown explained, "and that meant more use of technology to accomplish that goal."

The classroom AV updates are part of a larger renovation—"Pepperdine University Libraries: Developing a Sustainable Preservation Environment for Humanities Collections." The 15-month renovation started in May 2016, and it concluded last September as classes began. ClearTech Media's crews arrived on July 7, 2017, facing a deadline of August 1. During that narrow time window, a few change orders were issued; the most notable one saw all the originally specified Extron MediaLink button-touch control panels replaced with the company's newer seven-inch TouchLink touchpanels. It was, according to Brown, an example of how the "optics" of AV technology are often considered alongside the components' actual performance. "The school came to the conclusion that students are just more used to touchscreens in other aspects of their lives now, so it made more sense to have the AV control use that, too," Brown explained.

Ben Veenendaal, Executive Director, Campus Master Planning and Design, Department of Design and Construction, Pepperdine University, has a lengthy title and a complicated job to go along with it. He is charged with taking the vision of the school's administration, as well as the technical desires of its faculty and students, and then balancing those with the options that AV vendors bring to the table. The switch out of the button-based controller in favor of the touchpanels is one of many examples of that. "We have to keep in mind what the faculty are used to, what the students expect from AV technology and where that technology is moving, all at the same time,"

The library moved as much as half of its complement of books and other print material to its Calabasas campus, leaving more open spaces for study.

he explained. "It's a moving target."

In the case of the controller, the conversation continued even after it had been decided to move to the touchscreen model. Veenendaal said that ClearTech Media's programmers had initially presented him with what he thought was an overly complex menu of functionality—one that put too many choices in the hands of users. "Most users are not going to have to vary the brightness or the keystone of the projector, so why make that part of the options they face every time they turn on the system?" he asked rhetorically. Instead, he asked ClearTech Media to simplify the menu, basically to on-and-off functionality. If certain users—mainly instructors—wanted more operational granularity, they had a code they could enter into the system on the controller that would reveal another, more highly dense layer of functionality. "Now, one touch can turn on a room's entire AV system," Veenendaal said. "If the user needs more than that, they can go deeper. But most don't."

The time crunch posed a few other challenges, as well. Coming in behind the construction crews putting up walls, ClearTech Media's integrators discovered that the gangplate cutouts they had left behind would fit only single-gang plates—not the double-gang plates that had been specified. Instead of cutting new holes in the wall, they opted to change the plates that would go into the wall to single-space plates, eliminating what would have been the VGA inputs on them. "That was fine," said Brown, who looked at the circumstance as serendipitous—like the disappearance of serial ports, for instance. It was just another small step

EQUIPMENT

CLASSROOMS 143, 153, 163, 167, 172, 176
- 6 Chief CMS440 Speed-Connect above tile suspended ceiling kits
- 6 Chief RPMAU RPA Elite universal projector mounts
- 6 Da-Lite 37571LS Contour electrol motorized projection screens (60"x96")
- 6 Extron BB 710M back boxes
- 6 Extron Cable Cubby 202 cable access enclosures
- 6 Extron IPCP Pro 350 IP Link Pro control processors
- 6 Extron DTP HDMI 4K 230 Rx DTP receivers for HDMI
- 6 Extron DTP T UWP 232 D 2-input DTP transmitters for HDMI and VGA
- 6 Extron FF 220T full-range flat-field speakers w/low-profile enclosures
- 6 Extron IN1608 MA 70 presentation switchers w/100W, 70V mono amps
- 6 Extron TLP Pro 720M 7" wall-mount TouchLink Pro touchpanels
- 6 Middle Atlantic clamp kits for RSH shelves
- 6 Middle Atlantic MFR-2027GE MFR series racks
- 6 Middle Atlantic MFR-FANKIT-2 rack fan kits
- 6 Middle Atlantic PD-920R-SP rackmount power, 9-outlet, 20A, series surges
- 6 Middle Atlantic RSH4C rack shelves
- 6 Middle Atlantic UD2 utility drawers
- 6 Panasonic PT-RW430UK WXGA DLP projectors
- 6 Yamaha BD-S477 Wi-Fi Blu-ray disc players

Touchpanels were selected to replace the originally specified button-touch control panels. The choice better reflects a millennial predilection for touchscreens.

CLASSROOMS 147, 157
- 2 Chief CMS440 Speed-Connect above tile suspended ceiling kits
- 2 Chief RPMAU RPA Elite universal projector mounts
- 2 Da-Lite 34595 Advantage deluxe tensioned electrol motorized front-projection screens (60"x96")
- 2 Denon AVR-X3000 amps/receivers
- 2 Extron BB 710M back boxes
- 2 Extron Cable Cubby 202 cable access enclosures
- 2 Extron DTP HDMI 4K 230 Rx DTP receivers for HDMI
- 2 Extron DTP T UWP 232 D 2-input DTP transmitters for HDMI and VGA
- 2 Extron FF 220T full-range flat-field speakers w/low-profile enclosures
- 2 Extron IN1608 MA 70 presentation switchers w/100W, 70V mono amps
- 2 Extron TLP Pro 720M 7" wall-mount TouchLink Pro touchpanels
- 2 Extron XTP PI 100 power injectors
- 2 JBL CSA1300Z single-channel 300W amps
- 2 Middle Atlantic clamp kits for RSH shelves
- 2 Middle Atlantic MFR-2027GE MFR series racks
- 2 Middle Atlantic MFR-FANKIT-2 rack fan kits
- 2 Middle Atlantic PD-920R-SP rackmount power, 9-outlet, 20A, series surges
- 2 Middle Atlantic RSH4C rack shelves
- 2 Middle Atlantic UD2 utility drawers
- 2 Panasonic PT-RW430UK WXGA DLP projectors
- 10 Tannoy CMS401 DCe ceiling speakers
- 2 Tannoy CMS 801 SUB BM 8" compact ceiling-mounted subs
- 2 Yamaha BD-S477 Wi-Fi Blu-ray disc players

LECTURE ROOM 212, OPEN STUDY ROOM 374
- 2 BMS CTAWA-LOC II close throw adjustable wall arms
- 2 Chief CMS440 Speed-Connect above tile suspended ceiling kits
- 2 Chief RPMAU RPA Elite universal projector mounts
- 4 Da-Lite 21766 tensioned Advantage electrol projection screens (60"x96")
- 2 Extron back boxes
- 2 Extron Cable Cubby 202 cable access enclosures
- 2 Extron DTP CrossPoint 82 4K 8x2 seamless 4K scaling presentation matrix switchers
- 4 Extron DTP HDMI 4K 230 Rx DTP receivers for HDMI
- 2 Extron DTP T HWP 4K 231 D DTP transmitters for HDMI
- 2 Extron FF 220T full-range flat-field speakers w/low-profile enclosures

The Payson Library retains a very SoCal architectural feel, as illustrated by a new flex space called the Surfboard Room, with a collection of historic surfboards, showcasing local culture.

2	Extron IPCP Pro 350 IP Link Pro control processors
2	Extron RGB-HDMI 300 A RGB and stereo audio to HDMI scalers
2	Extron RSU 129 universal rack shelf kits
2	Extron TLP Pro 720M 7" wall-mount TouchLink Pro touchpanels
2	Extron XTP PI 100 power injectors
6	JBL Control 28-1 high-output indoor/outdoor background/foreground speakers
1	JBL CSA1300Z single-channel 300W amp
2	Middle Atlantic clamp kits for RSH shelves
2	Middle Atlantic MFR-2027GE MFR series racks
2	Middle Atlantic MFR-FANKIT-2 rack fan kits
2	Middle Atlantic PD-920R-SP rackmount power, 9-outlet, 20A, series surges
2	Middle Atlantic RSH4C rack shelves
2	Middle Atlantic UD2 utility drawers
2	Panasonic ET-DLE250 power zoom lenses
2	Panasonic PT-RW430UK WXGA DLP projectors
2	Panasonic PT-RW630WU 1-chip laser-light-source DLP projectors
2	Shure DFR22 audio processors
2	Shure QLXD14/93 lavalier wireless mic systems
4	Shure UA505 mounting brackets and BNC adapters for remote antenna mounting
2	Shure UA844+SWB antenna distribution systems
4	Shure UA850 antenna extension cables (50')
4	Shure UA8-518-598 omnidirectional receiver antennas
2	Yamaha BD-S477 Wi-Fi Blu-ray disc players

OPEN STUDY SEMINAR ROOM 350, MATH SCIENCE ROOM 338

2	Chief CMS440 Speed-Connect above tile suspended ceiling kits
2	Chief RPMAU RPA Elite universal projector mounts
1	Da-Lite 21858LS tensioned Contour electrol projection screen (60"x96")
1	Da-Lite 37571LS Contour electrol projection screen (60"x96")
2	Epson DC-21 document cameras
2	Extron BB 710M back boxes
2	Extron Cable Cubby 202 cable access enclosures
2	Extron DTP HDMI 4K 230 Rx DTP receivers for HDMI
2	Extron DTP T HWP 4K 231 D DTP transmitters for HDMI

2	Extron FF 220T full-range flat-field speakers w/low-profile enclosures
2	Extron IN1608 MA 70 presentation switchers w/100W, 70V mono amps
2	Extron IPCP Pro 350 IP Link Pro control processors
2	Extron TLP Pro 720M 7" wall-mount TouchLink Pro touchpanels
2	Middle Atlantic clamp kits for RSH shelves
2	Middle Atlantic MFR-2027GE MFR series racks
2	Middle Atlantic MFR-FANKIT-2 rack fan kits
2	Middle Atlantic PD-920R-SP rackmount power, 9-outlet, 20A, series surges
2	Middle Atlantic RSH4C rack shelves
2	Middle Atlantic UD2 utility drawers
2	Panasonic PT-RW430UK WXGA DLP projectors
2	Yamaha BD-S477 Wi-Fi Blu-ray disc players

STUDENT SUCCESS CENTER ROOM 326, 328, STUDY ROOM 331A

1	Chief CMS440 Speed-Connect above tile suspended ceiling kit
2	Chief LTM1U large Fusion micro-adjustable tilt wall mounts
1	Chief RPMAU RPA Elite universal projector mount
1	Da-Lite 37567LS Contour electrol motorized projection screen (50"x80")
3	Extron BB 710M back boxes
1	Extron Cable Cubby 202 cable access enclosure
3	Extron DTP HDMI 4K 230 Rx DTP receivers for HDMI
3	Extron DTP T HWP 4K 231 D DTP transmitters for HDMI
1	Extron FF 220T full-range flat-field speaker w/low-profile enclosure
1	Extron IN1608 8-input, HDCP-compliant scaling presentation switcher w/DTP extension
3	Extron IPCP Pro 350 IP Link Pro control processors
3	Extron TLP Pro 720M 7" wall-mount TouchLink Pro touchpanels
1	Middle Atlantic clamp kit for RSH shelf
1	Middle Atlantic MFR-2027GE MFR series rack
1	Middle Atlantic MFR-FANKIT-2 rack fan kit
1	Middle Atlantic PD-920R-SP rackmount power, 9-outlet, 20A, series surge
1	Middle Atlantic RSH4C rack shelf
1	Middle Atlantic UD2 utility drawer
1	Panasonic PT-RW430UK WXGA DLP projector
2	Sharp LC-60LE661U Aquos HD 60" class LED TVs

List is edited from information supplied by ClearTech Media.

in the evolution of input and device formats.

Another element of this project was the choice to use sleek Middle Atlantic racks that are aesthetically compatible with the rest of the classroom spaces. "They look more like furniture," Brown affirmed, adding, "It was a way to keep the AV very present in the room." He continued, "In the past, they'd used other ways of storing equipment in the classrooms, such as storing it in wall boxes or in the instructors' desk racks. The way we did it here, it's not like we're hiding the technology."

Brown said that rack heights were calculated to allow users to place laptops and other source devices on top of them comfortably, and cable cubbies and input plates were ergonomically positioned in a similar way. The racks also hold each room's Yamaha Blu-ray player, the base station for a Shure QLXD wireless microphone system (in the classrooms large enough to require it) and a JBL CSA series power amplifier for the sound system. The CSA amps power Tannoy ceiling speakers in two classrooms, and the previously mentioned JBL Control 28 speakers used in the lecture room and the open-study space, which also include an Extron PoE injector. (The JBL CSA series amps were also picked for their EnergyStar rating, which, Brown said, has become more important for Pepperdine and other higher-education clients in recent years.)

Audio's Vital Role

Audio plays a vital role in the Payson Library renovation, and, according to Veenendaal, one critical aspect of the audio system had to be addressed at the drawing-board stage. The plans originally called for audio speakers to be placed on classroom walls. However, previous experience with the library indicated that sound transference between rooms was a problem, because the HVAC plenum space meant that walls reached up only to the drop ceilings of the rooms, leaving routes through which sonic energy could travel. That condition remained the case, even though the renovation put up new walls to create the new classrooms. So, although the acoustician on the project, Acoustical Engineering Services (AES), of Woodland Hills CA, did add soundproofing materials between the walls, Veenendaal asked ClearTech Media to specify ceiling-mounted speakers further

Control elements, projectors and projection screens are all well represented at the Payson Library and throughout Pepperdine's campuses. The AV department has a strategy to stick with certain brands to make maintenance and support easier and more economical.

to reduce the potential for sound transference between rooms.

That choice reduced per-speaker coverage and, thus, it increased the number of speakers needed, but the cost was worth it, Veenendaal stated. "Some of these classroom are used for language study, and the AV systems will be used to play films in French and German," he explained. "This arrangement will make it a lot easier for students who are trying to learn the language.

Equipment choices were perhaps the easiest aspect of the project. The key components—among them, JBL speakers and amplifiers, Extron control elements, Panasonic projectors and Da-Lite projection screens—are all well represented throughout Pepperdine's campuses. That is part of its AV department's strategy to stick with certain brands, thus making maintenance and support easier and more economical. What is different, however, Brown said, is that individual products within each brand and category are closer to the leading edge for this project. The Panasonic PT-RW630WU one-chip/6,500-lumen DLP projectors used here are laser-light-source devices, replacing the bulb-light-source projectors used previously throughout Pepperdine classrooms.

Brown said that kind of technological uniformity also works well for the school's teachers and instructors, who can feel confident utilizing the audiovisual technology in any of the school's teaching spaces—including the new ones at the Payson Library. "The systems installed at Payson build and improve upon the technology models that are familiar and essential to Pepperdine instructional spaces," he said. "The touch-panel controllers and mobile AV racks are the most significant developments they'll encounter here. What we've done is to streamline what they have already been doing on the operational side."

"We've worked at and with the school long enough now that we know what their AV technology preferences are," Brown related. "For instance, 90-plus percent of their projectors are Panasonics. But a project like this lets us use the most recent products in each line. And, in doing so, we're creating a template for all of the classrooms that will be built or renovated after this project. This will be Pepperdine's model for classroom integration going forward."

The Payson Library project makes one of the school's oldest buildings into its newest resource—and a guide for what will come next. "Every [AV] step we take builds on the previous one to create the next one," Veenendaal concluded. "It's an education."