A decade ago, the concept for Baylor Research was developed. Can you please explain the history of this program? What was the “why” behind this initiative?

BAYLOR STARTED BAYLOR RESEARCH FROM TWO FOUNDATIONAL BELIEFS. THE FIRST IS A BELIEF IN THE ABILITY OF ITS STUDENTS TO DO GREAT THINGS, AND THE SECOND IS A BELIEF THAT LEARNING IS BOTH CLEAREST AND MOST ENDURING WHEN A STUDENT LEARNS IN THE CONTEXT OF “DOING” A THING.

In terms of learning science, Baylor believed that its students would be able to learn science through being scientists. The mission statement of Baylor Research states that science is more than just a body of facts; rather it is a process, a way of thinking. By immersing students in real-world science or engineering applications, they see dynamic learning and adaptive thinking in the face of failed experiments or new knowledge. And while students walk away from the program with hard skills and confidence that could position them to work in a collegiate-level lab, the program ultimately trains students to be resilient thinkers, and that trait translates into any field they might pursue.

EMA: Please describe how Baylor Research has positioned Baylor School academically within the independent school market.

DJ: Baylor Research operates as one of Baylor's “signature programs.” As such, it is a clear differentiator for Baylor in comparison to other independent schools and their academic programs. Like all independent schools, Baylor offers a curricular science program, but families would be hard-pressed to find another school that affords students the opportunity to pursue real-world research alongside professionally-trained research scientists; to develop and pursue their own lines of inquiry over a number of years; to present at local, regional, or national symposiums; and possibly, to publish papers. Baylor also stands out, in that it is developing ways to infuse its curricular science program with Baylor Research elements so that all students can learn from and have research experiences, even if they’re not in the Baylor Research program. Finally, Baylor has developed a “Scientific Research Scholar” track so that students can direct their high school course progression in a way that focuses participation in the Baylor Research program. This allows a student to graduate with the special designation of a Research Scholar.
EMA: Beyond creating fantastic research opportunities for your students, can you please describe any other positive outcomes of Baylor Research?

DJ: Beyond its research opportunities, Baylor Research has had several positive outcomes for the students who participate in it. Students learn how to read, write, and present scientific literature; they become more critical in assessing information presented to them in a variety of platforms; they learn the skills of metaphor and translation through presenting their own scientific projects to a variety of audiences; and they learn public speaking skills through presenting at on-campus, local, regional, or even national conferences. These students learn how to convey their projects to peers, friends, family, and professionals; they learn how to answer questions, take criticism, and see it as growth; and they learn the skill of self-directed study, independence in learning, decision-making, and confidence in their own abilities. Finally, Baylor Research students get a real glimpse of science and engineering.

Baylor Research has also had other positive outcomes for the school. On one level, the program has allowed Baylor to attract talented and highly trained faculty to join the school. The lab these faculty created, and the skills they brought to it, also positioned the school for great things—most recently, the ability to have an in-house and on-campus COVID testing/processing site and the ability to offer COVID testing to the larger community. Other achievements include NASA choosing a Baylor-designed solution for one of its satellite needs. Finally, the work that Baylor students have done and participated in has generated regional and national attention and recognition for Baylor.

EMA: Are there other community partnerships that have formed as a result of Baylor Research?

DJ: Partnerships and collaborations are critical to moving science forward. Baylor Research has had previous partnerships with institutes ranging from the Georgia Cancer Center (Atlanta, GA) to various departments at the University of Tennessee at Chattanooga, to scientists at the Tennessee Aquarium Conservation Institute. One key difference to these relationships is that they are partnerships, not outreach relationships, and are therefore mutually beneficial and create authentic experiences for the students. For example, Baylor Research students have designed and created therapy technology that graduate students at a partnering university then assessed in patients. Similarly, Baylor Research students have tested treatments and provided data to the partnering institute. Baylor students share agency and authority in these partnerships.

EMA: You have described Baylor’s Board of Trustees as “Strategic Doers.” Can you explain how this leadership mindset has contributed to the innovative partnerships that have ultimately impacted the value of a Baylor School education?

DJ: Baylor Trustees talk a lot about “having momentum.” The Board thrives on action and energy. They are comfortable with spontaneity and speed over process, and the idea of meetings upon meetings before getting to work is not an option. We are encouraged to be adaptable and think outside the mental boxes created by outlines, progressions, and timelines. They often mention that a good idea is only good for a limited period of time, and we should work fluidly and fast.

Having a board with a “Strategic Doers” mindset allowed the institution to quickly marshal resources in March 2020 to provide COVID-19 testing to the community. Throughout the spring, Baylor processed thousands of COVID-19 tests for Hamilton County and other community partners. In July, we were able to expand services with the opening of the new Baylor Esoteric and Molecular Laboratory in the Tennessee Aquarium Conservation Institute (TNACI). In addition to processing tests for Baylor, we were able to work with other schools, including the University of the South, Woodberry Forest, Dalton State Community College, and the University of Tennessee at Chattanooga. Finally, by providing tests for a variety of community partners, such as CHI Memorial Hospital, Galen Medical Group, One to One Health, and Clinical Medicos, Baylor’s mission of “making a positive difference in the world” was on display.