LeTourneau University *as* the Christian Polytechnic University

Embracing the Saga of Our Unique Organizational Calling

A Provost's Perspective

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LeTourneau University | the Christian Polytechnic University

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Dear LeTourneau University Colleagues,

I have interacted with enough faculty and staff over the years to know that our identity is important to each of us. Our university identity is a product of our distinct mission, and it reflects back to us, both individually and collectively, our context, trajectory, and expectations. It is a way of representing the gifts and goods we offer our world. It articulates who we are and what we are called to do as an organization. The congruence between who we say we are, who we actually are, and who we aspire to be within higher education is, above all else, a matter of institutional integrity.

So, what does it mean to adopt the identity "The Christian Polytechnic University"? Does this align with our mission? Does this take our school in a different direction? Is there a place for all academic disciplines? Are we narrowing our scope and reach? Are we expanding it? Most important, is this trademark a promise we can keep?

This essay is an attempt to address these issues and the university we have all come to love. My hope is that it helps us see that "The Christian Polytechnic University" is not only a fitting identity for our institution but also names the unique educational calling we have inherited and that now presses us forward. In fact, we fulfill our

vocation as a university only if we fully embrace it as an emblem of our "organizational saga."

Blessings,

Steven D. Mason, PhD
Provost & Vice President for Academic Affairs

"ORGANIZATIONAL SAGA"

LeTourneau University is a special institution. By "special" I mean two main things. First and foremost, our institutional commitment to Jesus and the gospel is becoming increasingly rare. We are a place that is decisively devoted to both the practice and proclamation of the gospel through the integration of Christian faith and learning and living. Customary patterns of life at LeTourneau are atypical within higher education, such as an extra five minutes added to each class period for prayer and a devotional moment; an annual faculty commissioning service that is similar to sending missionaries off to the mission field; and "all campus chapel" every week, where both faculty and staff are invited to close their offices to join the students in a community gathering of worship and Christian fellowship. And these are just a few of the ways we hope to reflect a thoroughly Christian academic ministry. LeTourneau University is a special institution in this way, and as we stay the course, we will continue to grow in these distinctives.

LeTourneau University is a special institution for a second (and not unrelated) reason. We have a unique DNA and history as an organization. While no two schools share the same reasons for their founding nor the circumstances surrounding growth, change, and sustainability, the more one knows about the LeTourneau University story, the more one understands how distinctive this story is. In fact, LeTourneau's unique life might be told more like a *saga*, a long narrative of events and incidents of historic achievement often involving a legendary hero or family.[1]

Sociologist Burton Clark published a book in 1970 called *The Distinctive College*. This influential work reflected Clark's observations of successful colleges and how they were able to endure the challenges of the time. As the title of his book would suggest, the colleges that became top-tier were the truly distinctive ones. And the central feature of the most distinctive ones was a clear "organizational saga." An organizational saga, as Clark defined it, is an institution's collective narrative of past and present that, when embraced with great fervor and loyalty, births an identity transcending the brute facts of its life story. The

1. According to Merriam-Webster, a saga originally referred to "a prose narrative recorded in Iceland in the twelfth and thirteenth centuries of historic or legendary figures and events of the heroic age of Norway and Iceland."

saga takes shape through historical developments, unique conditions, key events, and special memories connected to the institution's mission and role. Organizations with a fully-embraced saga enjoy an institutional fortitude made of deep roots and a compelling future. Clark comments,

> Successful missions in time become transformed to some degree into organizational sagas. Initially, the mission is simply purpose, something [people] in the organization hold before themselves. But the mission tested and successfully embodied through the work of a number of years does not remain a statement of intent, a direction, a guidepost. It becomes a saga that tells what the organization has been and what it is today—and hence by extension what it will be tomorrow. . . . The institutional saga is a historically based, somewhat embellished understanding of a unique organizational development. It offers in the present a particular definition of the organization as a whole and suggests common characteristics of members. Its definitions are deeply internalized by many members, thereby becomes a part, even an unconscious part of individual motive. A saga is, then, a mission made total across a system in space and time. It embraces the participants of a given day and links together successive waves of participants over major periods of time. . . . Indications of an organizational

> legend are pride and exaggeration; the most telling symptom is an intense sense of the unique.[2]

Does LeTourneau University have a genuine "organizational saga"? Our university mission statement reads:

> LeTourneau University is a comprehensive institution of Christian higher education where educators engage learners to nurture Christian virtue, to develop competency and ingenuity in their professional fields, to integrate faith and work, and to serve the local and global community.

Is our institution's mission so proven at this point that it is now a storied, internalized, embodied, and even legendary *raison d'être*? Is there a longstanding and shared sense of the unique education (and experience) we offer such that we, the members, behold common characteristics—and even linked in this way with members of the past? Do we relish our organization's development through the tests and trials we have confronted over the last seventy-five years? Have we achieved true differenti-

2. Burton R. Clark, *The Distinctive College*, 2nd ed. (New Brunswick, NJ: Transaction Publishers, 1992), 235. The impact of Clark's "organizational saga" idea has been highlighted by many students and scholars of higher education since his sociological analysis. See for example, John R. Thelin, *A History of American Higher Education*, 2nd ed. (Baltimore: John Hopkins University Press, 2011), xxviii.

ation as a university within the industry of higher education? Do we express organizational pride—and at times even exaggeration?

The answer is yes. Though our genuinely humble membership may feel uncomfortable admitting it, LeTourneau University has indeed achieved saga status as Clark defines it. Even common knowledge of LeTourneau University's history speaks to a mission transformed through the years into an organizational saga.

It does not take long after first stepping on campus to gain a sense of the legendary and exceptional, both academically and otherwise. As a new faculty member, I quickly noticed that our educational culture is distinctly technical and applied. But I also soon learned about "the Flooders," the expansive use of R.G.'s machines in World War II, the "Mom and Pop" conversation in flight over Harmon General Hospital, R.G's relationship with Billy Graham, the time students lifted a Volkswagen Bug on the dining hall, how close the school was to folding in the 1980s, and our pioneering success of online and adult education in the late 1990s and early 2000s that helped revolutionize the residential campus. I continue to enjoy learning of the eras and events and heroes of our institution's past, including the ups and downs inherent in our history. These and other chronicles like it are part of the

important artifacts that contribute to our story that would qualify us a "distinctive college" according to Clark.[3]

I do have a caveat, however. I wonder about the *definitions* that Clark refers to. A deeply rooted organizational saga characterizes a place where definitions "are deeply internalized by many members, thereby [becoming] a part, even an unconscious part of individual motive." It seems that over recent years we have faced somewhat of an identity concern, if not a crisis, with the words we (and others!) use to describe LeTourneau University—and not just the words themselves but their meaning. This is no small concern since words matter, and they create certain realities and expectations for understanding who we are and our core purpose. I have personally witnessed a range of descriptors of our institution in both conversation and print, such as "engineering school," "STEM school," "liberal arts school," "technical school," "online school," "Christian college," and more recently now, "polytechnic school." Maybe you have encountered others. Each of these has its rationale and justification. But if an organizational saga "tells what the organization has been and what it is today—and

3. See Thelin's insightful section on the role of architecture in an institution's saga (Thelin, *History*, xxix). This recalls how preservation of the metal buildings and the creation of the berm around the Memorial Student Center (now known as the Nursing Building) are examples of the ways our campus structures contribute to the organizational saga.

hence by extension what it will be tomorrow," it is vital that the language we use to refer to our institution—our "saga"—be well-defined and understood.

And so we come to the purpose of this essay. For all of us to embrace LeTourneau's organizational saga, it is important that we have a shared understanding of our distinct university mission and identity as *The Christian Polytechnic University*, especially as we embark upon the milestone of our institution's seventy-fifth anniversary. The most fundamental question at the fore is, *Does this identity truly fit our organizational saga?* If so, what does it mean as a differentiator, and what boundaries are being set by the moniker? Do we each still have a role in the story moving into the future? And finally, what opportunities are on offer if we fully embrace this saga?

In what follows, I address our university identity and its component parts to answer the questions stated above. In so doing, my hope is that this brief treatment will show that *"The Christian Polytechnic University" is indeed a fitting descriptor for LeTourneau University because it names the particular organizational saga God has authored for our institution.* Moreover, we can only fulfill this unique calling when we contribute all of our gifts and areas of expertise collectively.

OUR SCHOOL AMID THE RISE OF TECHNICAL AND "POLYTECHNIC" HIGHER EDUCATION

There really is no true consensus about the definition of polytechnic or the parameters for what constitutes a polytechnic university in America.[4] The term *polytechnic* is often used to refer to the "practical arts" or "useful arts"; its etymology means "many arts," and yet it arose as a sort of alternative to the pure liberal arts canon upon which the medieval and modern university was founded.[5] The liberal arts as a canon of study have traditionally had little to do with direct industrial outcomes, while "polytechnic" gen-

4. See L. Preston Mercer and Judith A. Ponticell, "Polytechnic Education: A Proposed Key to Regional Economic Development," *Synesis: A Journal of Science, Technology, Ethics, and Policy* (2012): 45–51. The term seems to be used much more loosely in America than in England and Europe. Some of the history of polytechnic schools in the US and beyond was retrieved by Mercer and Ponticell by accessing the history sections of particular institutions' websites. They name, for example, École Polytechnique: History and Heritage (2011), www.polytechnique.edu/home/about-ecole-polytechnique/history-and-heritage/History; Rensselaer Polytechnic Institute (2010), rpi.edu/about/history.html; History: Rose-Hulman Institute of Technology (2011), www.rose-hulman.edu/about/history.aspx.

5. S. G. Brint, M. Riddle, L. Turk-Bicakci, C. S. Levy, "From the Liberal to the Practical Arts in American Colleges and Universities: Organizational Analysis and Curricular Change," *The Journal of Higher Education* 76, no. 2 (2005): 151–80.

erally is used to connote an applied science or technology intended to garner economic benefit with a precise, professional target.

To find the beginning of the polytechnic university, some reach back to Napoleon's establishment of École Polytechnique in France in 1794, the first university with "Polytechnic" in the name. The intent was to bolster France's military status through scientific advancement as well as pursue future economic prosperity.[6] Most scholars of higher education in America attribute significant credit to the Morrill Act of 1862, which established land-grant colleges for the rise of professional and technology-centered education in the United States.[7]

> The 1862 Morrill Land Grant Act is conventionally described as an influential piece of federal legislation that fostered access to useful public higher education. . . . The state government was then required to dedicate land sale proceeds to establishing collegiate programs in such "useful arts" as agriculture, mechanics, mining, and military instruction—hence the "A&M" in the name of many land-grant colleges. . . . Its institutional legacy was the accessible state college and

6. James Martin and James E. Samels, "Polytechnic Renaissance: The Rise of the Polytechnic University," *University Business* 18 (October 2012).

7. See Thelin, *History*, 75–83, 86, 104–5, 135.

> university, characterized by a curriculum that was broad and utilitarian.[8]

Other government legislation, such as the Hatch Act (1887), the second Morrill Act (1890), and the Smith-Lever Act (1914), continued to direct funding of education toward applied fields and broader student populations. These efforts, as well as the response to the Industrial Revolution and changing social class hierarchy in the early to mid-twentieth century, began to shift higher education's focus to the teaching of agriculture, science, and engineering rather than the historical emphasis upon the liberal arts. This shift changed the role of professional education in relation to one's upward mobility and success in society. Traditionally, pursuing education in professional fields was perceived as narrow and delimiting, while a liberal arts education served as the doorway to financial security and social advancement.

> Liberal arts institutions generally offer a curriculum "aimed at imparting general knowledge and developing general intellectual capacities, in contrast to a professional, vocational, or technical curriculum."[9]

8. Thelin, *History*, 75–76.

9. Mercer and Ponticell, "Polytechnic Education," 46, quoting C. J. Ducasse, "Liberal Education and the College Curriculum," *The Journal*

> Liberal arts studies often include literature, languages, philosophy, history, mathematics and science. Perspectives in these fields are studied broadly, while vocational and/or technological education had historically been perceived as "insularizing" and "provincializing" rather than "liberating."[10]

By the mid-twentieth century, technical education was no longer perceived as limiting, however, but rather liberating; and the US government's stimulus efforts and industrial progress amplified the need for institutions to meet the demand. This only intensified after World War II, when thousands of returning veterans sought educational opportunities that suited their interests and experience. By 1946, the year of LeTourneau's University's founding, two million veterans enrolled in college through the GI Bill, which amounted to approximately half of all college students in the US.[11] This totaled a federal government payout of over $5.5 billion.[12] In fact, "The federal

of Higher Education 15, no. 1 (1944): 1–10, and then Brint et al., "From the Liberal to the Practical Arts," 151–80.

10. Mercer and Ponticell, "Polytechnic Education," 46.

11. William C. Ringenberg, *The Christian College: A History of Protestant Higher Education in America*, 2nd ed. (Grand Rapids: Baker Academic, 2006), 202.

12. Thelin, *History*, 263. This was also the time when the federal government began accepting institutional team and self-evaluations on a ten-year cycle by regional accrediting bodies like SACS-COC.

government realized the tuition payments did not provide for all of the costs of educating students, and, accordingly, it gave war surplus land, buildings, and equipment to nearly seven hundred colleges."[13] Enter R.G. and Evelyn LeTourneau and our *organizational saga*. Harmon General Hospital in Longview becomes LeTourneau Technical Institute of Texas for one dollar.

> On January 30, 1946, LeTourneau Technical Institute of Texas officially took possession of the hospital property consisting of 156 acres and 232 connected barracks buildings. The hospital had cost $5 million but was essentially donated to the fledgling school. The government handed over the entire facility to LeTourneau Technical Institute for a lease price of $870,000, less a one hundred percent discount with a one dollar down payment. The property came with some stipulations. For a period of ten years, from January 28, 1946 to January 27, 1956, the U.S. government could repossess it during a national emergency. As a lessee, the Institute had to operate a nonprofit technical school for veterans and submit semiannual curricular and financial reports with the War Assets Administration. Also, the Institute was prohibited

There was a need to sieve the diploma mills that quickly sprouted from the colleges and universities worthy of receiving federal funds for GIs (265).

13. Ringenberg, *Christian College*, 202–3.

> from selling or leasing any of the property during the ten years without obtaining permission from the War Assets Administration. Failure to comply with all requirements could cause the government to demand the full $870,000. At the end of the ten-year period the War Assets Administration would have twelve months to assess the value of the property and require payment of its assessed value less depreciation. If the government failed to assess the property during that eleventh year, the Institute would take full title to the property by default, without payment, on January 28, 1957. But with help from local leaders, the government chose not to assess the property, and the Institute took full title without further payment.[14]

This wave of higher education students was seeking practical and hands-on programs that would readily launch them into the workforce. As Thelin notes,

> The pragmatic, impatient GI collegians shaped curricular enrollments by voting with their feet—that is, by opting for courses and majors in such employable fields as business administration and engineering. At times there was a substantial difference in perspective

14. Kenneth R. Durham, *LeTourneau University's First Fifty Years* (Virginia Beach, VA: Donning, 1995), 48–49.

> between professors (especially in the arts and sciences) and GIs.[15]

This was the general higher education context in America that created the ideal environment for the beginning of LeTourneau University's organizational saga (with all of R.G.'s particular aims and objectives). And yet, while LeTourneau was one of many new schools meeting the GI and industrial movement, it has from its inception been, well, *strange*. In addressing what took place in Christian higher education during this era, Ringenberg notes,

> A few other *unusual* types of Christian colleges were appearing. Very few Christian institutions offered engineering curricula, primarily because of the costliness of the necessary laboratory equipment. While such schools as John Brown, Geneva, and Valparaiso operate programs of varying degrees of thoroughness, no Christian college has placed such a high percentage of its resources in technical education as has LeTourneau (TX). The school was founded by Robert G. LeTourneau, an inventor-industrialist widely known for designing heavy-duty earth moving equipment and off-shore drilling platforms and then donating most of his earnings to missionary and evangelistic organizations. LeTourneau operated his school as a technical institute from its begin-

15. Thelin, *History*, 266.

> ning in 1946 to 1961, when it became a liberal arts college, adding baccalaureate programs in electrical engineering technology, industrial management, mechanical engineering technology, welding engineering technology, and flight technology; and two-year programs in automotive technology, aviation technology, and design technology.[16]

There are a few interesting points to glean from Ringenberg's brief rehearsal of LeTourneau University's history. The first has already been highlighted. LeTourneau Technical Institute of Texas was "unusual." It was like a Christian college in that it had a thoroughly Christian ethos and intentionality within the academic experience but focused specifically on technical skills and applied education, most notably the expensive enterprise of engineering that had been atypical (unviable) for a small Christian college. According to Durham, "R.G. LeTourneau began purchasing millions of dollars of war surplus engines and supplies which were unloaded all over the campus. Much of this war surplus material was $4 million worth of LeTourneau earthmoving equipment that R.G. repurchased from the government for resale. The Institute was based on R.G.'s philosophy of education, which combined strong academics with practical experience."[17]

16. Ringenberg, *Christian College*, 188; emphasis mine.
17. Durham, *First Fifty Years*, 25.

Due to the equipment on campus as well as the practical experience gained in RG's factory, LeTourneau students received a one-of-a-kind, co-op experience. Ringenberg puts LeTourneau in a league by itself among Christian institutions for the amount of resources devoted to technical education.

The description of R.G. himself as an eclectic and unique individual, and certainly as an unlikely founder of a school, adds to the peculiarity of a place like LeTourneau. The hands-on and practical, factory-learning approach best fit what one would find at a "technical school" or "institute." But LeTourneau Tech was a four-year, bachelor's degree–granting institution from the beginning.[18] In 1946–1947, LeTourneau offered bachelor's degrees in majors like electrical maintenance, building trades, combination welding processes, metallurgy, machinist, mechanical maintenance, lithography, and others. It also offered courses in nontechnical fields such as English, math, economics, and natural sciences, and the campus experience always involved chapel services. Bible cours-

18. There was a general misperception that LeTourneau Tech was a junior college because the Texas Department of Education only accredited the first two years of courses, and LeTourneau thus only competed against junior colleges in intercollegiate athletics. For LeTourneau's first two years of existence, it offered three tiers of education: high school diploma degree completion, junior college level, and bachelor's ("senior") level. See Durham, *First Fifty Years,* 29–30.

es were added to the curriculum in 1948, and in 1951 a Christian service degree was added to the slate of majors. Other curricular innovations, such as aviation, continued through the 1950s as well as efforts to create devotional time within the classroom.[19]

Yet it is also interesting that Ringenberg describes the transition in 1961 as "becoming a liberal arts college." It is true that at this time an intentional liberal arts program of majors was added to the degree offerings at LeTourneau Tech since the Southern Association of Colleges and Schools did not grant accreditation to "trade schools" like LeTourneau but only to schools with at least eight or more liberal arts majors. So LeTourneau Tech added degrees in Bible, English, history, math, physics, chemistry, education, and business.[20] These changes, in addition to the creation of an independent LeTourneau College Board of Trustees (apart from the "Foundation Board" that governed both R.G.'s factory and campus), culminated in the official changing of the school's name from LeTourneau Technical Institute to LeTourneau College

19. The aviation department was added when courses in airframe and engine repair began in the fall of 1956, before expanding to ground and flight schools in summer 1961. See Durham, *First Fifty Years*, 30–32. For the expanding commitment to Christian devotional practices, see 44–47.

20. Durham, *First Fifty Years*, 48.

in July of 1961. The state of Texas issued new Articles of Incorporation. In summarizing the growth and expansion of LeTourneau during the period of 1961 to 1986, our own Dr. Kenneth Durham also refers to LeTourneau becoming a "senior engineering, technological, and liberal arts college," achieving both regional accreditations through the liberal arts program as well as professional accreditation of our engineering program.[21] He also notes LeTourneau being named as "one of America's best liberal arts colleges" in the early 1990s by *U.S. News and World Report*.[22] This was after LeTourneau officially changed to "University" on September 1, 1989, to reflect the comprehensive nature of the school it had become over the decades.[23] And yet, referring to ourselves as a "liberal arts" school is not something commonplace on our campus today.

21. Durham, *First Fifty Years*, 123.

22. Durham, *First Fifty Years*, 137.

23. The change from LeTourneau College to LeTourneau University was purely a strategic move of nomenclature to enhance public perception rather than a mission or curricular shift. See Durham, *First Fifty Years*, 128. The old distinctions between colleges and universities have now been dissolved (as illustrated in the *U.S. News and World Report* categories). There are a number of examples of comprehensive institutions with a range of academic degrees and graduate programs that have elected to retain the name "College" (e.g. Wheaton College, Gordon College, Calvin College, Boston College, etc.).

How one defines and/or determines when or how one is classified as a *liberal arts college* is debatable and perhaps best left to the "eye of the beholder." According to the Carnegie Classification of 2015, a liberal arts college is one that emphasizes undergraduate education where at least 50 percent of the undergraduate degrees are conferred in academic majors of the fine arts, humanities, social, and hard sciences. But not everyone feels bound to this way of measuring. Other common ways of categorizing a liberal arts college include emphasizing distinct student outcomes like critical thinking, moral reasoning, intercultural competence, leadership, and other conceptual skills useful for diverse contexts. Still others emphasize a small residential environment with a low faculty-to-student ratio and where teaching is the focus over research. Evidently, any or all three foci—number of majors, particular educational outcomes, or a specific learning environment—are used to define a liberal arts college.[24] This can keep the

24. See N. S. Graham, Cindy A. Miller, Mark Archibald Kilgo, and Ernest T. Pascarell, "Amending the Liberal Arts: An Analysis of Learning Outcomes for Professional Majors," in *The Evolution of Liberal Arts in the Global Age*, ed. Peter Marbe and Daniel Araya (New York: Routledge, 2017), 35–38. Interestingly, the main purpose of this article is to argue that students in professional programs (i.e., engineering, business, and nursing) score just as high in learning outcomes as those in the pure liberal arts, thus showing that growth in learning is not discipline specific.

lines blurry, however, depending upon who is making the judgment call. At least for Ringenberg (and Durham), the small, residential undergraduate environment, even with the expansion of technical majors, constituted LeTourneau as a "liberal arts college."

Before we are quick to correct someone on this point, even as a comprehensive university today, our membership as part of the Council for Christian Colleges and Universities (CCCU) and the Council of Independent Colleges (CIC) is dependent upon the shared trait of a commitment to the liberal arts (and sciences).[25] According to Hal Hartley, current president of the CIC,

> Traditional, residential, undergraduate, small size, small classes, rooted in the liberal arts, close student-faculty relationships, a co-curricular program that supports classroom learning, tuition dependent—these are characteristics that typify the independent colleges CIC serves.[26]

25. The CCCU talks about its governing members being committed to an education "rooted in the arts and sciences" (among other criteria). The CCCU has approximately 180 full and affiliate members, and the CIC has approximately seven hundred institutional members.

26. Harold V. Hartley III, "An Overview of the Independent College Sector," in *The Challenge of Independent Colleges: Moving Research into Practice* (Baltimore: John Hopkins University Press, 2017), 3.

Hartley's characterization does not seem to consider the rapid growth in higher education of the nontraditional (or "post-traditional") student populations, online platforms, micro-sites, and commuter campuses, which are significant parts of colleges and universities. In fact, at certain points of LeTourneau's history the student body, technically speaking, has been more heavily weighted in the nontraditional category—from those who worked full time for R.G. to recent years when we have had more adult and online students than residential undergraduate students. (See, for example, the university enrollment numbers in the year 2006, when our online and nontraditional programs peaked at almost 2,500 students.)

CATEGORIZING LETOURNEAU UNIVERSITY

Even the brief survey above outlining the atmosphere of higher education when our institution was founded, as well as a sampling of how our school has been described, attests to the fact that LeTourneau University has, in many respects, forged a category of its own. And perhaps this is fitting for a place with a founder who is also difficult to describe. Was R.G. primarily an entrepreneur? Engineer? Inventor? Evangelist? Missionary? It may depend on one's point of contact, but it is also unnecessary to choose, since any would be true. Nonetheless, there is

something to the way an institution begins that forever impacts its ongoing life and personality.

Though LeTourneau Tech eventually broadened into a comprehensive university, the circumstances of its establishment and the passions of its founder created a particular and lasting DNA (and culture) for the life of our organization. Even in becoming a comprehensive university, being hands-on, practical, professional, technical, and Christian—the foundation stones of our institution—remain deeply embedded in all that we do, as the apostle Paul might say, "from first to last" (Rom. 1:17).

When exploring the aims and initiatives of the country's most well-known polytechnic schools, it is clear that LeTourneau fits within the same milieu.[27] The core identity of our institution has been technical, applied, and Christian. This reality combined with the drivers of LeTourneau University's founding and the sustained core competencies in applied and technical sciences quite genuinely leads to the identifier "polytechnic."

When one assesses current ways of describing a "polytechnic" education, we find a legitimate way of describing LeTourneau University.

27. See, for example, the famous quote of Stephen Van Rennselaer reflecting his original vision for Rennselear Polytechnic Institute highlighted on their website: "instructing young persons 'in the application of science to the common purposes of life.'"

> "Polytechnics are comprehensive universities offering professional, career-focused programs in the arts, social and related behavioral sciences, engineering, education, and natural sciences and technology that engage students in active, applied learning, theory and research essential to the future of society, business and industry," according to Chancellor Charles W. Sorenson, University of Wisconsin-Stout (Polytechnic).[28] Polytechnics are designed to blend theory and practice to solve "real world problems for the benefit of society."[29]

According to Mercer and Ponticell, features emphasized in polytechnic training are:[30]

- Emphasis on science, technology, and professional and technical programs, complemented by arts, humanities, and social sciences
- Smaller class sizes

28. Mercer and Ponticell, "Polytechnic Education," 47.

29. Mercer and Ponticell, "Polytechnic Education," 47. Here they are quoting the then–newly elected governor of Florida, Rick Scott (2010).

30. Mercer and Ponticell, "Polytechnic Education," 48, table 2. For a list of ten universities in the United States with "Polytechnic" in the name, see table 1. Yet there are a number of strong schools across the country that reflect polytechnic characteristics but without "polytechnic" in the name, such as the state, land grant schools with "Tech" or "A&M" as modifiers.

- Integrated curriculum, practical and theoretical exercises throughout programs
- Hands-on, project- and team-based learning environment
- Applied, collaborative research and technology transfer
- Cross-disciplinary and co-curricular experiences, internships, and service learning across disciplines
- Social responsibility
- Civic engagement
- Innovation, entrepreneurship
- Leadership in scientific, economic, and community development
- Adaptation/responsiveness to needs/demands of business, industry, and society

Most of these features are central characteristics of a LeTourneau University education, traits that have naturally grown out of our institutional hard coding. LeTourneau University has been especially well-known for two leading technical and professional programs: Engineering and Aviation. LeTourneau was the first ABET-accredited Christian university in the country (1978).[31] ABET

31. Discipline-specific engineering majors were EAC-ABET accredited (back to 1978). The general engineering B.S. program at

accreditation is proof that a collegiate program has met standards essential to provide graduates ready to enter the critical fields of STEM education. Graduates from an ABET-accredited program have a solid educational foundation and are capable of leading the way in innovation, emerging technologies, and in anticipating the welfare and safety needs of the public.[32]

At LeTourneau, we build upon this foundation in a number of ways. For example, LeTourneau's SafeHome senior design engineering project won first place in 2018 in the Annual Disaster Shelter Design Competition sponsored by Samaritan's Purse International with a lightweight shelter that withstood 130 mph winds. LeTourneau University is the only comprehensive university aviation program in the state of Texas, sustaining more than sixty years of aviation excellence. Our students won first place in Professional Aviation Maintenance Association (PAMA) competition in 2018, and our STING Precision Flight Team won fifth place in the nation (ahead of the US Air Force Academy) in the National Intercollegiate Flight Association (NIFA) competition in May

LeTourneau University was implemented in the 1987–1988 academic year and was first accredited by EAC-ABET in October 1988.

32. See "Why ABET Accreditation Matters," www.abet.org/accreditation/what-is-accreditation/why-abet-accreditation-matters/, accessed April 4, 2019.

2018. The university was awarded the Loening Trophy for having the best collegiate aviation program in the country in 2009.

As of the fall of 2018 enrollment statistics, 63 percent of LeTourneau University's residential and undergraduate student body majored in engineering, aviation, or computer science.[33] So almost two out of every three students on campus focus upon one of these three technical and applied majors. When you add the other math and sciences students, the percentage of residential undergraduate students in STEM majors climbs to 79 percent.[34] That's 10 percent higher than California Polytechnic Institute, which has a total undergraduate STEM percentage at 69 percent.[35] And it is 8 percent higher than MIT, which has

33. See LeTourneau University's *Fall 2018 Enrollment Statistics*, published by the Office of Institutional Research and released on September 28, 2018. The enrollment numbers were: Engineering (475), Aviation (195), Computer Science (93). There were also 88 students in the graduate and online programs in engineering (9 graduate), aviation (48 online), or computer science (31 online).

34. Nursing (91), Kinesiology (47), Biology (28), Chemistry and Physics (27), Mathematics (10).

35. According to Cal Poly's 2018 enrollment data numbering 21,037 undergraduates: Ag, Food, Environmental Sciences (4,005), Architecture and Environmental Design (1,840), Engineering (5,921), and Sciences and Math (2,784). See their quick facts at calpolynews.calpoly.edu/quickfacts.html, accessed April 4, 2019.

almost 71 percent of undergraduates in STEM majors.[36] Moreover, polytechnic institutions report high job placement rates of graduates.[37] LeTourneau continues to score exceptionally high in job placement and ROI indicators.[38]

LeTourneau University is as authentically "polytechnic" as it comes when one considers the natural academic traits of our school. These are core gifts and competencies that we should maximize even more. And yet, embracing who we are as a "polytechnic" does not narrow our scope but rather names our genetic make-up and culture. In fact, it may surprise some that the leading polytechnic institutions in higher education are in fact also dynamic universities thoroughly committed to holistic teaching and instruction.

36. According to MIT's 2017–2018 enrollment data numbering 4,547 undergraduates: Architecture and Planning (30), Engineering (2,455), and Sciences (737). See web.mit.edu/facts/enrollment.html, accessed April 4, 2019.

37. Mercer and Ponticell, "Polytechnic Education," 48.

38. For example, Seattle-based Payscale.com ranked LETU as second only to Rice University in Return on Investment (ROI) among private universities in Texas in its "Best Value Colleges in Texas" ranking for 2018 (www.payscale.com/college-roi/state/Texas). Also, from 2015 to 2017, our residential graduate placement rate averaged 96 percent, and our nontraditional rate was 92 percent.

THE ROLE OF THE LIBERAL ARTS AT LEADING POLYTECHNICS

What becomes abundantly transparent in investigating the scope and nature of polytechnic schools in America is that by emphasizing the technical and applied arts, it is not necessary to deemphasize the liberal arts as traditionally conceived. There need not be a dichotomy between a technical and applied education and a "liberal" one. The liberal arts and sciences play a crucial academic role across polytechnic schools. In fact, the original land-grant institutions viewed the technical and mechanical programs as building upon and alongside the "classic arts," not marginalizing them.[39] Today, the leading polytechnic and land-grant universities excel in the humanities and liberal arts and view them as critical to their educational mission. For example, Dr. Jeffrey D. Armstrong, president of California Polytechnic State University, comments, "Cal Poly's distinctive Learn By Doing approach . . . provide[s] students with daily opportunities to apply classroom theory to real-world problems in the context of a comprehensive polytechnic education, *grounded in the arts and sciences*."[40]

39. See "What Is a Land-Grant College?," Washington State University, February 24, 2009, ext.wsu.edu/documents/landgrant.pdf.

40. Emphasis mine. This is a comment from the first paragraph of his welcome letter published on the university website, president.calpoly.edu/welcome-cal-poly, accessed April 4, 2019.

The single-paragraph mission statement of Cal Poly also includes, "As a polytechnic university, Cal Poly promotes the application of theory to practice. As a comprehensive institution, Cal Poly provides a *balanced education in the arts, sciences, and technology,* while encouraging cross-disciplinary and co-curricular experiences."[41]

Cal Poly's College of Liberal Arts is one of six colleges within its university structure. Massachusetts Institute of Technology (MIT) also has a School of Arts, Humanities, and Social Sciences (SHASS) as one of five schools within its academic structure. The reputation of MIT's strength in the liberal arts and humanities while also being a world leader in technology is well-documented. In 2018, the *Times Higher Education World University Rankings* rated MIT the second-best university for arts and humanities, just behind Stanford. All MIT undergraduates must take at least eight semesters of courses (approximately 25 percent of total classroom time) in SHASS as part of the General Institute Requirements for a diploma.

What these world-class polytechnics and land-grant institutions understand is that the liberal arts are not just complementary but central to educating today's leaders. Any curriculum devoid of the traditional arts and scienc-

41. Emphasis mine. This comes directly from the mission statement from the website, president.calpoly.edu/welcome-cal-poly, accessed April 4, 2019.

es is deficient for preparing graduates for a motley world of applied technologies and problem-solving. There has been quite a swell of recent commentary and literature on the importance of the liberal arts in our world of innovation, technology, and entrepreneurship.[42] Amid public comments by politicians and others about the value of studying the liberal arts at university, many return to the now-famous comments of Steve Jobs, for example, who lauded the humanities and liberal arts when he released iPad 2 in 2011: "It's in Apple's DNA that technology alone is not enough—its technology married with liberal arts, married with the humanities, that yields us the result

42. See for example, Sydney Johnson, "As Tech Companies Hire More Liberal Arts Majors, More Students Are Choosing STEM Degrees," EdSurge, November 13, 2018; Vivek Wadhwa, "Why Liberal Arts and the Humanities Are as Important as Engineering," *The Washington Post*, June 12, 2018; Richard Feloni, "Microsoft's President Says Liberal Arts Majors Are Necessary for the Future of Tech," *Business Insider*, January 21, 2018; J. M. Olejarz, "Liberal Arts in the Data Age," *Harvard Business Review*, July–August 2017; Christine Henseler, "Liberal Arts Is the Foundation for Professional Success in the 21st Century," *Huffington Post*, September 6, 2017; Yoni Appelbaum, "Why America's Business Majors Are in Desperate Need of a Liberal-Arts Education," *The Atlantic*, June 28, 2016; George Anders, "That 'Useless' Liberal Arts Degree Has Become Tech's Hottest Ticket," *Forbes* August 17, 2015; Michael Rozier and Darcell Scharff, "On Academics: The Value of Liberal Arts and Practice in an Undergraduate Public Health Curriculum," *Public Health Reports* 128, no. 5 (2013): 416–21.

that makes our heart sing, and nowhere is that more true than in these post-PC devices."

More recently, Jack Ma gave a speech at the World Economic Forum in 2018 stating that we must approach education differently if the human workforce wants to stay relevant in a machine-driven and technological age. He suggests that we must teach the soft skills to prevent an employment problem thirty years from now "so that a machine can never catch up with us."[43] Scott Hartley, a Stanford graduate and author of *The Fuzzy and the Techie: Why the Liberal Arts Will Rule the Digital World*, says it this way:

> Finding solutions to our greatest problems requires an understanding of human context as well as of code: it requires both ethics and data, both deep thinking people and Deep Learning AI, both human and machine; it requires us to question implicit biases in our algorithms and inquire deeply into not just how we build, but why we build and what we seek to improve. Fuzzies and techies must come together and the true

43. Ma is the cofounder and CEO of Alibaba Group, a multinational technology conglomerate with an open market value of $352 billion dollars. He is recognized as one of the wealthiest people in the world. See this short clip of his speech at www.instagram.com/p/BkA-ZD9AAvtA.

> value of the liberal arts must be embraced as we continue to pioneer our new technological tools.[44]

To use Jobs's metaphor, it is the healthy marriage of liberal arts and technical competencies, rather than their divorce, that top polytechnic universities recognize as vital for preparing the next generation of innovators. Rensselaer Polytechnic Institute, the oldest polytechnic in America (1824), has a School of Humanities, Arts, and Social Sciences (HASS) as one of six schools within its academic structure. In view of the institution's bicentennial, Rensselaer recently launched a comprehensive revisioning plan of priorities titled "The New Polytechnic," defined as "a

44. Scott Hartley, *The Fuzzy and the Techie: Why the Liberal Arts Will Rule the Digital World* (Boston: Houghton Mifflin Harcourt, 2017), xi. For other recent books arguing for the necessity of competency in the liberal arts for success in today's world of business and technology, see for example George Anders, *You Can Do Anything: The Surprising Power of a "Useless" Liberal Arts Degree* (New York: Little, Brown, 2017); Randall Stross, *A Practical Education: Why Liberal Arts Majors Make Great Employees* (Stanford, CA: Stanford University Press, 2017); Christian Madsbjerg, *Sensemaking*: *The Power of the Humanities in the Age of the Algorithm* (New York: Hachette, 2017); Joseph E. Aoun, *Robot-Proof: Higher Education in the Age of Artificial Intelligence* (Cambridge, MA: MIT Press, 2017); Cathy Davidson, *The New Education: How to Revolutionize the University to Prepare Students for a World in Flux* (New York: Hachette, 2017); Gary Saul Morson and Morton Shapiro, *Cents and Sensibility: What Economics Can Learn from the Humanities* (Princeton, NJ: Princeton University Press, 2017).

paradigm for teaching, learning, and research that sees the technological university as a profoundly collaborative endeavor across disciplines and perspectives." Rensselaer's HASS has a central role in fulfilling this new polytechnic vision, as articulated in a university whitepaper called *Wisdom Matters*. The whitepaper argues for the critical perspective that the arts, humanities, and social sciences play in understanding "human agency," the "immaterial," and "wisdom" in a world dominated by "technologism" and "scientism." The paper appeals to the unique opportunity of pursuing complex questions of human flourishing at a polytechnic school. Consider, for example, these statements from the paper:

> From within the techno-scientific crucible that is Rensselaer, HASS faculty pursue cutting-edge research and develop unique academic programs that bring a humanities logics to bear on the Grand Challenges. We harness the scientific and technological prowess needed to address problems of immense scale and complexity while situating them within the critically necessary socio-cultural context so often bracketed out of more conventional problem solving approaches. . . . At Rensselaer we counter these forces by seeking to produce broadly educated, practical persons who have the capacity to ask wise questions that matter: "Just because we can, should we?" and "Where is the soul in social policy?" In HASS, we embrace the "diverse world of others." Our experi-

> ence has demonstrated to us that empathy, compassion, and wisdom emerge from attending to layers of social, political-economic, and cultural complexity through multisensory experience, fine-grained interpretation, and close attunement to dissonance. Yoked to the technoscientific sophistication of our students, the translational humanities at Rensselaer are poised to be transformational.[45]

What I find fascinating about Renssellaer's *Wisdom Matters* is that with only a few Christian nuances to the document, this piece could easily resemble something we might publish at LeTourneau. It is very compelling and hits the felt needs of today's students. Secular schools and scholars are realizing that today's education, especially a polytechnic one, must address questions inherent to the humanities and liberal arts in view of alleviating suffering, solving societal problems, and promoting human flourishing.

And yet, the piece also highlights the great void, and even danger, in attempting to answer such questions without a coherent account of what it means to be a human being, what human flourishing looks like, how we define wisdom, what metanarrative of the world governs the discussion, and to whom we are ultimately accountable.

45. Access the full text from the HASS webpage at www.hass.rpi.edu/, accessed April 4, 2019.

While secular institutions and the technology industry grow more sensitive to the role of social and humanitarian factors in our world of technological advancement, LeTourneau University's unique call and contribution as an institution within higher education grows increasingly clear. If our school fits squarely into the polytechnic milieu of higher education, what impact does it make to claim the most provocative of our descriptors—*Christian?* What if there were a *Christian* polytechnic? I contend that answering this fundamental question helps carve out our God-given and distinctive vocation as a particularly polytechnic university. This is central to our organizational saga.

THE CHRISTIAN POLYTECHNIC UNIVERSITY?

There is a slew of great books on Christian higher education that help outline salient features of the enterprise.[46]

46. The one I find particularly helpful for out context is Perry L. Glanzer and Todd C. Ream, *The Idea of a Christian College: A Reexamination for Today's University* (Eugene, OR: Cascade, 2013). See also Perry L. Glanzer, Nathan F. Alleman, and Todd C. Ream, *Restoring the Soul of the University* (Downers Grove, IL: InterVarsity Press, 2017); Joel Carpenter, Perry L. Glaner, and Nicholas S. Lantinga, eds., *Christian Higher Education: A Global Reconnaissance* (Grand Rapids: Eerdmans, 2014); Michael Higton, *A Theology of Higher Education* (New York: Oxford University Press, 2013); Phil Eaton, *Engaging the Cul-*

I would summarize the distinctiveness of Christian universities in contrast to secular ones in terms of possessing a *particular coherence*, which in turn yields a number of unique features and applications.[47] We educate with an anchor lodged in a distinctly Christian story of the world. As Alasdair MacIntyre says, "I can only answer the ques-

ture, Changing the World: The Christian University in a Post-Christian World (Downer's Grove, IL: InterVarsity Press, 2011); Perry Glanzer and Todd Ream, *Christianity and Moral Identity in Higher Education* (New York: Palgrave Macmillan, 2009); Nicholas Wolterstorff, *Educating for Shalom: Essays on Christian Higher Education*, ed. Clarence W. Joldersma and Gloria Goris Stronks (Grand Rapids: Eerdmans, 2004); Robert Benne, *Quality with Soul: How Six Premier Colleges and Universities Keep Faith with Their Religious Traditions* (Grand Rapids: Eerdmans, 2002); George Marsden, *The Outrageous Idea of Christian Scholarship* (New York: Oxford University Press, 1996); George Marsden, *The Soul of the American University: From Protestant Establishment to Established Nonbelief* (New York: Oxford University Press, 1994); Jaroslav Pelikan, *The Idea of the University: A Reexamination* (New Haven, CT: Yale University Press, 1992); Arthur F. Holmes, *The Idea of a Christian College*, rev. ed. (Grand Rapids: Eerdmans, 1985); John Henry Newman, *The Idea of a University* (Notre Dame: University of Notre Dame Press, 1960).

47. Glanzer and Ream posit at least three central and overlapping qualities of Christian universities. Christian universities educate beyond pure biblical knowledge and calls to traditional Christian ministry. They focus on not only the transmission of ideas and practices but also the discovery, search, and creation of such. And they are devoted to the worship of God and the study of theology as the center of knowledge. See Glanzer and Ream, *Reexamination*, 8.

tion, 'What am I to do?' if I can answer the prior questions, 'Of what story do I find myself a part?'"[48] And this question applies to universities too. Another way to ask it is, Within what metasaga does our "organizational saga" fit?

At LeTourneau we are unashamed in positing that our center of gravity for education is the gospel of Jesus Christ and the creating and redeeming work of the Triune God. We do not begin from a (false) position of neutrality but rather believe, "Through him all things were made; without him nothing was made that has been made" (John 1:3); "for from him and through him and to him are all things" (Rom. 11:36); and "He is before all things, and in him all things hold together" (Col. 1:17).

We believe that while modern science and society pose complex questions and problems, Scripture outlines for us not simplistic answers but rather a clear vision for what human and societal flourishing looks like, what it means to be fully human, who created the world, how God is renewing all things, and to whom we will all one day give account. So, as admirable and compelling as Rensselaer's vision is for educating students toward "wisdom" and "human flourishing," for example, we offer a cohesive and true account of God's purposes for the world and all of cre-

48. Alasdair MacIntyre, *After Virtue* (Notre Dame, IN: University of Notre Dame Press, 1984), 210.

ation. Without a coherent and true account of life's deepest and most pervasive questions, it is at best uncertain how students are being formed, including their version of flourishing.[49] Education is inherently *formation*. An educational program with loose ends prides itself on so-called neutrality and doubt as virtues of inquiry. In contrast, Christian educators work from and toward a particular version of human flourishing.[50] In this way, we teach and mentor in love, wonder, joy, and delight rather than doubt, in part because of Augustine's notion of "moving to action . . . so as to teach, to delight, to sway."[51]

49. See recent literature about Christian education as formation rather than mere information dissemination. For example, James K.A. Smith, *Desiring the Kingdom: Worship, Worldview, and Cultural Formation* (Grand Rapids: Baker Academic, 2006); Paul D. Spears and Peter R. Loomis, *Education for Human Flourishing: A Christian Perspective* (Downers Grove, IL: InterVarsity Press, 2009).

50. "A Christian university will emphasize that one's primary motivation stems not only from a concern for serving others, the common good, or the good of a particular group (e.g., citizens, shareholders), all of which secular universities will usually emphasize, but it will stem primarily from a sense of accountability to the One whose creation we are stewarding." Glanzer and Ream, *Reexamination*, 72. See also 72–74.

51. For the idea of delight and the reference to Augustine's comments in his *Teaching Christianity*, see the helpful essay by Susan Felch called "Doubt and the Hermeneutics of Delight," in *Christianity and the Soul of the University: Faith as a Foundation for Intellectual Community*, ed. Douglas V. Henry and Michael D. Beaty, 103–18 (Grand Rapids: Baker Academic, 2006), at 105.

In contrast to state and secular institutions that never held, or have lost, a true commitment to a distinctively Christian approach (and purpose) to education, a truly committed Christian university has at the very least a common and overarching denominator for living and learning. In fact, a Christian university fulfills the original idea of being a university at all. As one scholar notes,

> In the Middle Ages, the very word "Uni-versity" implied, as often recognized, the many turning toward the One: with the diversity of human labors and vocations, we return—for reference, communion, corporate self-understanding, community, and a common sense of purpose—to that One in whom all our wisdoms are hidden, and whose members, like spokes of a wheel, we are to be as the world turns.[52]

There is a particularly Christian coherence at LeTourneau University, secured to the story of the gospel, that adds context and depth to our polytechnic education. For example, by virtue of being distinctively Christian, we help students not just create or apply the latest technologies but also to evaluate them critically in light of what

52. David Lyle Jeffrey, "Faith, Fortitude, and the Future of Christian Intellectual Community," in Henry and Beaty, eds., *Christianity and the Soul of the University*, 95. Clark Kerr coined the phrase "multiversity" to characterize today's universities in his book *The Uses of the University*, 5th ed. (Cambridge: MA, Harvard University Press, 2001).

is good for humanity and creation. We prepare students to seek the ways modern innovations can alleviate pain, suffering, and disease while also exploring how advances in technology can be used for evil, greed, pride, and domination. While working on the cutting edges of technological inventiveness, we also help students understand that innovation will never remedy spiritual brokenness and the sin of the human heart. While technology is constantly changing and advancing, there yet is still "nothing new under the sun." In this way, a truly Christian and polytechnic education is an inherently and robustly well-rounded one that takes into account what all disciplines have to offer in telling the most comprehensive story—that of creation, fall, redemption, and restoration. The technical and the skillful is bound to the thorough and thoughtful. Thus we understand that

> a Christian university will continue to prize the relationship between the liberal arts and one's vocation. Since it values placing everything in a larger story, it will place a vocation in the context of theology, history, sociology, and other disciplines. It will attempt to help students see God's role in the story of this vocation and the humanness of the vocation—the wondrous creative role it plays, its limits in light of the larger human story and realm of knowledge, and its potential with the body of humanity for good. Without such a perspective, the university becomes little more than a technical school in that it focuses

> upon practical job skills and is reduced, in the phrase of one philosopher, to "the barbarism of specialization."[53]

Another way we talk about this storied polytechnic education is with the phrase we all have grown accustomed to: "the integration of faith and learning."[54] This is the commitment as scholars and educators to recognize the ways our Christian faith illumines and aligns our work, play, study, leisure, and everything curricular and cocurricular on a college campus. A truly integrated education eliminates a divide between the classroom and the athletic field, knowledge and application, and at times the sacred and the secular. There is a *coherence* to learning and living

53. Glanzer and Ream, *Reexamination*, 73. For an even more dogmatic warning, see Reinhard Hütter, "Polytechnic Utiliversity: Putting the Universal back in University," *First Things* (November 2013). www.firstthings.com/article/2013/11/polytechnic-utiliversity.

54. There is a generally accepted consensus that this phrase has its shortcomings, though it still holds currency across the Christian academy. See, for example, James K.A. Smith, "Beyond Integration: Re-Narrating Christian Scholarship in Postmodernity," in *Beyond Integration? Inter/Disciplinary Possibilities for the Future of Christian Higher Education,* ed. Todd C. Ream, Jerry Pattengale, and David L. Riggs, 19–48 (Abilene, TX: Abilene Christian University Press, 2012); Perry L. Glanzer, "Why We Should Discard the Integration of Faith and Learning: Rearticulating the Mission of the Christian Scholar," *Journal of Education and Christian Belief* 12, no. 1 (Spring 2008): 41–51.

that is bound to the Christian story and its *telos*. By virtue of being distinctly Christian, we remember that

> if Christian universities hope to remain more than training grounds for narrow forms of competence, they must avoid the secular temptation to be satisfied with simply providing disciplinary expertise in a field of study. . . . Christian universities must continue the grand quest to offer the world wisdom about what God's story of creation, fall, and redemption entails for the good life and a good world.[55]

This plays out in a number of ways on our campus through our teaching, scholarship, service, and mentorship of students.[56] It begins the first time we meet a prospective student and family as we share our heart as a university. And it continues as we prepare students to procure a job, to locate a venue within God's world to express their gifts and training. This Christian-storied philosophy of education means that we prepare students to find jobs, but even more, we prepare people, not just professionals, to love God and neighbor.[57]

55. Glanzer and Ream, *Reexamination*, 149.

56. On the topic of Christian scholars' call to engage in creative scholarly work for the good of student learning, see Glanzer and Ream, *Reexamination*, 64–65.

57. Glanzer and Ream, *Reexamination*, 147.

"THE"

Having a distinct, holistic, Christian approach to education—a particular coherence—is not all that unique. In fact, if one narrowed the scope to the CCCU, there are about 180 other colleges and universities claiming the same thing. What makes LeTourneau University special is our *organizational saga*, which has led to the reality that there is not another institution of our kind. There is no true parallel to LeTourneau University within the CCCU or otherwise. While other Christian colleges and universities may establish new engineering programs and other technical majors, none of them have the percentage of technical and stem majors that LeTourneau does nor the polytechnic history. While there are other universities that fit "polytechnic" (and it may even be in the name), none of them are distinctly Christian.[58] Thus it is not just branding that constitutes the definite article in front of "Christian Polytechnic University," but rather it is a reality that there is not a peer school with our composition. This is not to say that a student cannot get a quality STEM education at another Christian university, but it is to say that God has created a particular environment and culture, a particular DNA, and a particular institutional commit-

58. Not to mention that we are fundamentally a *teaching* institution and not an R-1 institution like the leading polytechnics in the U.S.

ment to an education immersed in technical, applied, and Christian outcomes.

This *coherence* not only requires that we approach things from a Christian point of view but that we also understand our *organizational saga* as a distinct calling. LeTourneau University has a specific vocation that was created and crafted by the Triune God for his kingdom purposes in this world. It is not by chance that LeTourneau University was founded in Longview, Texas. It is not by chance that our institution was first built upon, and remains gifted with, technical and professional competencies. And since we believe that the Lord established LeTourneau University at just the right time and within a distinct set of realities, *that coding becomes a calling*. LeTourneau University has developed a certain vocation within higher education that requires us to steward and maximize our institutional gifts for the good of the world.

It is not by chance that, at least in this point and time, we are *the* Christian Polytechnic University. And so the pressing question becomes, If we are indeed "The Christian Polytechnic University," where does this call take us? How are we to steward our particular organizational saga? How does this shape us and help us make strategic decisions into the future?

EMBRACING "THE CHRISTIAN POLYTECHNIC UNIVERSITY" SAGA

We are stewards of our *organizational saga*. The adventure story of LeTourneau University continues. There will be twists and turns and more heroic achievements to come. And all the while, as curators of the institution for this moment of LeTourneau's history, we must press into our calling in deliberate and intentional ways to prevent mission drift from whom God has created us to be. What does it mean to be *The Christian Polytechnic University* into the coming decades? How do we maintain our core competencies while also expanding our influence? How do we not only preserve our unique niche within higher education but carve it out even more? How might we shape our university priorities together to achieve "a long obedience in the same direction"?

Unfortunately, the medium of this essay only allows for a one-way exchange. I look forward to a much more collaborative and ongoing "So what? / Now what?" conversation, either over a cup of coffee or more formally. But for starters, here is a brief sample of what I view as fundamentals for responding to our calling on both the curricular and co-/extracurricular levels.

Curricular

We need to maintain a high percentage of undergraduate and residential majors in the technical areas. As a pre-

dominantly undergraduate institution with a longstanding residential identity, it is crucial that we anchor our identity to the Longview campus in this way. We need to maintain a target of at least 60–65 percent of our residential university majors in the technical and applied areas of Engineering, Aviation, and Computer Science, with an overall STEM enrollment target of 70–80 percent. This does not preclude the strong pursuit of growing other majors and programs. In fact, a solid and comprehensive polytechnic university means that non-STEM majors grow and flourish in their own right. Rather it is about the right balance of the overall composition to keep our unique polytechnic identity. That will place a healthy pressure on the institution to increase the enrollment growth of the technical and STEM areas as other majors prosper.

As is commonly accepted in industry and academia, the liberal arts are of vital importance to a holistic polytechnic education, especially an intentionally Christian one. We need to highlight and reinforce the liberal arts at LeTourneau University. This entails creating opportunities to maximize our liberal arts faculty in both curricular and cocurricular formats as well as tailoring our liberal arts offerings to address the questions raised by technological innovations of our day.

All our academic programs, whether face to face or online, should have distinctly Christian polytechnic outcomes. In turn, we need to consider how to enhance lib-

eral arts and other non-STEM degree programs (e.g., business, education, etc.) with a special polytechnic focus. Since all disciplines are impacted by technological advancement, LeTourneau should be the university of choice for these majors as all address cutting-edge questions about technical innovation in their field. In this way the LeTourneau University environment allows the non-technical majors to develop an identity that one would not necessarily find at the more traditional liberal arts university.

Making all programs distinctly Christian polytechnic begins with our General Education. We need to redesign our General Education curriculum to reflect our Christian polytechnic focus. This would entail a thoughtful mix of courses in the liberal arts and sciences as well as a "Polytechnic Core" integral to 100 percent of university undergraduate degree program, both residentially and online. This Polytechnic Core is a balance of technical, applied, and liberal arts components. It might comprise a simple collection of three to five classes, but they would be courses thoroughly LeTourneau-esque and Christian polytechnic in nature.[59] We also should require every non-engineering student at LeTourneau University to take a course like

59. I can imagine classes like "Faith and Technology," "The History of Technology and Innovation," "Technology and the Liberal Arts," and/or "Virtue Ethics and Technological Advancement," for example.

"Our World of Engineering and Design"[60] and for every major to have a core/capstone class on technology and innovation in their given field. Our Theology and Vocation core should be bolstered by intentionally exploring how the fundamental questions around technological advancement and innovation must be answered and grounded by the biblical story and biblical vision for humanity and human flourishing.

We all recognize how important our online and graduate programs are to our university and how the nontraditional population has always been an integral piece of LeTourneau. We need to expand our portfolio of technical programs in these areas. How can we capitalize on our ingenuity and creativity to enhance and grow engineering online, for example? What new graduate programs in technology should we be launching? How can we reach more nontraditional and working adults that would benefit from receiving vocational training certificates and badges, continuing education opportunities, and other industry-centric education besides the full degrees we offer?

60. "The polytechnic concept ensures that even graduates in degree programs outside of the Science, Technology, Engineering, and Mathematics (STEM) areas will have training and education in those areas and develop skills applicable to the 21st century economy." Mercer and Ponticell, "Polytechnic Education," 49.

The Christian polytechnic thread should weave through all programs and platforms.

Co- and Extracurricular

The cocurricular activity and opportunities on campus should also accent what a Christian Polytechnic learning environment offers. For example, we already launched a lecture series this spring on faith, science, and technology, which is a good start for creating a more conversant context for challenging questions posed by technological advancement. I can imagine creating a Center for Faith, Science, and Technology that would not only facilitate faculty, staff, and student dialogue but also offer a range of other opportunities that enhance the curricular programming. I can imagine an arm of the Center partnering with our Department of Career Services to concentrate on what employers are looking for in today's employees.[61] Hartley writes,

> 92 percent of nine hundred executives polled by the *Wall Street Journal* in 2016 stated that soft skills were "equally important or more important than technical skills," and 89 percent of those executives further

61. Perhaps we should rename this department to "Vocational Services" to indicate we think about careers differently.

> stated that they had a "very or somewhat difficult" time find candidates with those requisite skills.[62]

This might include creating nonacademic certificates for all our graduates in areas like Soft Skills and Communication, Organizational Health and Wellness, Mindful Leadership, Life Balance, and so on. These are practical cocurricular programs not necessarily tied to academic credits, but they would enhance the skills and profile of our students. Student leadership programs like IMPACT also offer real opportunities to develop the soft skills of leadership in a technology-laden environment.

Pursuing our identity as "The Christian Polytechnic University" also entails banding together as faculty and staff to create an extracurricular campus environment conducive to developing healthy people for a rapidly advancing technological world. Glanzer and Ream remind us that "the Christian university comes closest to fulfilling its mission when the curricular and the cocurricular, following the lead set by common worship, work in an integrated fashion to cultivate the whole being of all community members."[63]

We need to thread Christian Polytechnic outcomes through the entire campus experience to appropriate the

62. Hartley, *Fuzzie and Techie*, 206.
63. Glanzer and Ream, *Reexamination*, 98.

right virtues for living in our world of technology and innovation. Every unit on campus—from the chapel to the athletic field—should address the questions and conundrums of our technological way of life by assessing our learning and living spaces, places, and practices. LeTourneau University should be just the type of place maximizing the possibilities of technology while confronting the dangers of the unexamined consumption of it. It is widely acknowledged that depression and anxiety is on the rise in college students. Many are pointing the finger at technology as the leading factor in the general malaise of a society that has drifted from a healthy view of what it means to be human. Can "The Christian Polytechnic University" craft learning outcomes, environments, liturgies, and curricula that inspire students to imagine a fuller vision of the good life than what society presents? And in doing so, can we create a healthier student body, which translates into healthier graduates for flourishing workplaces?

These questions and ideas are just a start at imagining ways to respond to the call to be *The Christian Polytechnic University* as an academic community. I look forward to the collective and creative wisdom that will come with more campus conversation.

CONCLUDING THOUGHTS

I hope this essay has provided clarity and confidence for our shared work at LeTourneau University. We have

a unique "organizational saga" that is ordained and sustained by the providence of the Triune God. We can fully embrace our identity as "The Christian Polytechnic University" because it is an apt way of describing how we fulfill our mission. For this is who the Lord has gifted us to be. He began an exciting adventure-story of historic and heroic achievements in 1946 that continues to develop and take shape even today.

We are a one-of-a-kind institution of higher learning (*The*) because of our abiding commitment to the Gospel story (*Christian*) in offering a technology-centric (*Polytechnic*) education, where all academic disciplines and community practices share their goods in common (*University*). May the Lord equip and empower us to fulfill this collective vocation with joy and passion for his kingdom's sake to the glory and praise of Father, Son, and Holy Spirit. Amen.

> "But seek first his kingdom and his righteousness, and all these things will be given to you as well." (Matt. 6:33)