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What Works in Student Recruitment and Retention: An Analysis of Four Successful University Student Growth Initiatives

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History and Context

The financial "New Normal" of the early 2000's is fast approaching another frightening "New Normal" for higher education, a significant decline in the number of college-age high school graduates. Universities are competing for students in a dwindling pool of traditional age prospects. As student enrollments decline so do the financial resources of the university. Fewer financial resources generally results in fewer programs, either merging or eliminating programs.

Engineering and Technology Education (ETE) enrollments have been in steady decline since the late 1970's. A result has been the significant reduction in the number of ETE teacher education programs at universities. The challenge of declining enrollments has been the topic for numerous conference presentations over the past 40 years. The topics of these presentations included research on recruitment, descriptions of recruitment plans and strategies, sharing recruitment materials, using social media to recruit, and so forth. However, ETE enrollments continue to decline. If the trend is not reversed, ETE faces elimination from universities throughout the nation.

Enrollment Growth – Four Case Studies

This paper presents case studies of very successful student recruitment and retention initiatives at four universities in academic units that house programs in and related to Engineering and Technology Education:

- Bowling Green State University, Ohio (Public, doctoral, selective)
- Brigham Young University, Utah (Private, research, highly selective)
- Western Illinois University, Illinois (Public, regional, rural)
- Eastern Kentucky University, Kentucky (Public, regional)

These universities have disparate missions, locations, student profiles and selectivity, resources, program mix, and so forth. Each university had significant and sustained student growth in academic units that housed programs in and related to Engineering and Technology Education, albeit using very different strategies. The strategies and the results for increasing enrollments are described, along with a synthesis of the plans, strategies, and results. The vision, assessment techniques, and planning strategies used at each university are presented with a discussion of how to develop university and program specific visions, assessments, and plans to increase enrollments.

Bowling Green State University, Bowling Green, OH

Bowling Green State University (BGSU) is a doctoral granting research university that emerged from a regional teachers college founded in the early 1900's. In the mid 1990's the university enrolled about 15,000 students, approximately 1,500 students below the institutional cap authorized by the Ohio Board of Regents. About 35% of BGSU's students were first generation college students. BGSU was somewhat selective with the academic profile of its freshman class ranking 2nd or 3rd among the 12 public universities in Ohio each year.

In 1997 BGSU had a new President and a new Provost. As a state assisted university the state resources were directly related to enrollment, and were distributed by the state on the basis of weighted student credit hours (higher cost programs received a higher reimbursement, e.g., lab-based programs). BGSU's leadership team had a unique opportunity to plan for growth in selected units that would generate significant new resources.

At that time the College of Technology was the smallest of the six academic colleges at BGSU. However, its programs, all lab-based, were weighted at the highest level for generated state funds. For example, each FTE in undergraduate general education courses generated $500 in state funds, while each undergraduate FTE in the College of Technology generated $5,000 in state funds. The President and Provost did the math and they identified the College of Technology programs for growth. In response, the Dean of the College, working with faculty and staff, developed a vision and plan to increase enrollments by more than 75% over the coming five years. By following the plan the College more than doubled its enrollment in four years.

The vision for the growth plan came to the Dean, like a light bulb that turned on in his head, at the 1997 Mississippi Valley Conference in Nashville, TN. He had been encouraged by the Provost to grow the College, and the discussions, dialectics, and debates at the Conference got his intellectual and creative juices flowing, resulting in a vision for growth. He contacted the Provost and informed him that a plan for growth would be prepared by the College and presented to him a week later. The Dean returned from the Mississippi Valley Conference and engaged the faculty and staff in developing an aggressive plan to grow the College by more than 75% over the coming five years. The plan was titled *"Initiative 2002: A Proposal for the Growth of the College of Technology."*

There is an old saying that "plans are useless, but planning is priceless." While the plan, *Initiative 2002*, was not "useless" the planning process, engaging all faculty and staff, including graduate teaching assistants, in its development truly was priceless. The process of engagement in planning forged a true shared vision for the College and its growth. The power of this shared vision facilitated the growth of the College, resulting in exceeding the enrollment goals in four years rather than the five years outlined in the plan. Everyone caught the vision and had the drive to grow the College.

Each program had enrollment growth targets, determined by the faculty, outlined in the plan, and the related faculty and staff resources that would be required to deliver the various programs to the increased number of majors, both in terms of additional faculty and staff members and the associated operating funds. So, the faculty and staff could see the new resources that were planned for their programs if they worked hard and increased enrollments. The plan included a few proposed program and administrative changes, a few new program proposals, and a new Center for Technology Transfer. The plan also included proposed building and lab enhancements, and continuing budget increases for equipment, recruitment, research and so forth.

When *Initiative 2002* was launched the College had about 600 undergraduate majors and 65 master's students. The plan was to grow the college to 1,075-1,275 undergrads and more than 100 graduate students. The goal for the Technology Teacher Education program in the College was to grow from about 10 majors to 50-75 majors.

The Provost embraced *Initiative 2002*. As the College grew the Provost agreed to initially provide non-tenure track faculty lines, that would convert to tenure track after two years of sustained higher enrollments. This agreement provided the teaching resources needed with growth and assured that the growth was not just a blip, but was sustained over time.

The following strategies were implemented in *Initiative 2002*:

Admissions Office. The College connected with the new Admission Director and Admissions Office staff, and made sure that they knew the range and quality of programs in the College. College faculty and staff upped their game at campus-based recruitment efforts, and got the College added to the campus tour for prospective students. College faculty and staff attended some off campus recruitment fairs with Admissions staff.

College Tours. The College would give a tour to a prospective student and family on a moment's notice. College faculty and staff were trained to give effective tours of the College, in more than one instance secretaries stepped up to give last minute tours.

Business Cards. The College collected business cards from its graduates and prominently displayed these cards on the walls outside of the College Advisement Office. The tours always ended at the College Advisement Office to show the job titles and companies that had hired the graduates. This display was very effective with first generation college students as their parents tend to view college as the way to a good job and profession. The business card display was "proof" that the graduates were very employable.

Centralized Advising. The College had a centralized advisement office. While faculty provided career-related advisement, the academic advisement and course selection advice was handled centrally by professional advisers. The Advisement Office was also very effective in retention efforts.

Increased Visibility. The College promoted student team competitions to raise visibility on and off campus. For example the Electric Falcon Racing Team, competing in EV open wheel race competitions against 15 other university student teams, led to numerous newspaper articles and several TV news spots, a corporate alliance with Lincoln Electric bringing a $250,000 donation, eventually leading to a NASA funded project, and so forth.

Scholarships. The College reallocated some funds to add to the scholarships specific to the College. These scholarships were designed to recruit students. If there was a high school scholarship recognition event within a three hour drive, a College administrator or faculty member would attend to present the scholarship letter to the student. This raised visibility of BGSU and the College.

Off-Campus Programs. The College worked with the College of Continuing Education to develop BGSU's first off-campus bachelors degree completion program for adults who held an Associate degree from a community or technical college. This program was initially delivered by two-way TV (Polycom) and continues today as BGSU's largest enrolled online program.

Recruitment Activities

The following activities were identified in Initiative 2002 and implemented to recruit new students and to retain existing students.

Recruitment:

- New recruitment materials were developed and duplicated
- Personal contacts/site visits were made at key community/technical colleges
- Training for campus tour guides was planned
- Tours of the College were available upon request, even with less than five minutes notice
- Active participation in Preview Days, President's Day, and other campus recruiting activities.
- Offering and advertising scholarships targeted to new community college transfer students (two $500 scholarships for full time transfers from each of five community colleges -- Owens, Northwest, Terra, Lima, and Sinclair).
- Offering and advertising program specific recruitment scholarships (e.g., $500 for a new freshmen in each of the eight undergraduate programs).
- Developing and placing a College of Technology kiosk in the Admissions Office waiting area.
- Visits to the top feeder high schools
- Coordination with Admission to make sure communication was maintained with admitted and interested students.
- Public information and press releases to raise the visibility of the College and its programs
- Public appearances (e.g. Art Edgerton show; regional/national aviation shows, the Electric Falcon races and trade shows)
- Purchased a list of students with interest in aviation for direct mail recruitment.
- Obtain supplemental marketing materials to interest students.
- Publish high school counselor College of Technology Reference and Admissions Book.
- Coordinated articulation agreements with community colleges and high school technology programs.
- Actively marketed the Advanced Tech Education program to industry partners.
- Expanded distance education programs for place bound adults.
- Investigated having a Technology wing or floor in a residence hall.
- Distributed promotional VCT CD-ROMs to high school and community college audiences (e.g., art teachers, math teachers, computer teachers, counselors).

Retention:

- Developed a student mentor program in which all new Technology students (freshmen and transfers) were paired with a continuing Technology student mentor
- Phone-a-thon – phone calls by faculty to all first year students.
- Open house for undecided majors
- Developed a section of Tech 280 for undecided majors (spring 1998)
- Receptions for summer freshmen, dean's list recipients, graduating seniors, all students (fall cider day, holiday cookie open house)
- E-mail contact with majors – reminders for deadlines, scholarships, etc.
- PSO and Co-op Offices open evening hours for non-traditional students
- Student handbook
- Fall new student breakfast, college meeting, and advisor meeting on convocation day.
- Advisor training and development
- Contest for student organizations for increased membership
- On-site and web-based advising for students in the distance program

Outcomes

By implementing the plan, the College more than doubled its enrollments in four years, a year early in the five-year plan, *Initiative 2002*. Furthermore, an accreditation visitation team reported to the Provost that they were impressed with the unity and shared vision of the faculty and staff of the College.

Brigham Young University, Provo, UT

Brigham Young University (BYU) is a large private university that is designated as a research university. In In the late 1990's and early 2000's BYU was restricted to 33,000 students by Board policy, and it was, and continues to be, very selective in admissions with a first year student profile that tends to rank among the top ten universities in the nation.

In 1998 BYU merged two Technology departments in the College of Engineering and Technology creating a new administrative unit, the School of Technology. Historically the Technology Teacher Education (TTE) program at BYU had been housed in one of the technology departments, and it continued as a program area in the new School. The TTE program enrollments were stable, averaging about 25 students each year over the prior 20 years.

A new leader for the School of Technology was hired after a national search. He organized the School with five program areas, each with a program chair, including Technology Teacher Education (TTE), Construction Management (CM), Facilities Management (FM), Manufacturing Engineering Technology (MET), and Electronics Engineering Technology (EET). During the first year of operation, as a result of complex negotiations, the BFA program in Industrial Design was transferred from the Visual Arts Department to the School of Technology, giving the School six academic program areas.

In the mid-1990's BYU was preparing for its regional accreditation review through the Western States Association. As part of the preparation for renewal of accreditation BYU leaders conducted an in-depth review of the mix of programs offered given that the mix of academic programs had not undergone a comprehensive review since the late 1960's. Since the 1960's the academic profile of BYU students had

changed dramatically with the academic profile of its freshman class ranking among the highest in the nation. BYU's leaders wanted to make sure that it was offering the right mix of academic programs for the very best students in the nation. In a draft report to the Western States Association, BYU's administration recommended several academic program changes including some new program proposals, enhancing some programs, and eliminating some programs. All of the technology-related programs in the College of Engineering and Technology, with the exception of Construction Management, were targeted for elimination based on the perspective that they were low status, weak programs.

A preliminary report of the program changes was presented to the Board, and a very powerful Board member challenged the proposal to eliminate the technology-related programs. He forcefully stated that three of his sons, and a son-in-law, all earned degrees in these programs (1 in Technology Education, 1 in Construction Management, and 2 in Electronics Engineering Technology), and they all were very successful in careers directly related to their majors. He further stated that he felt that BYU was becoming elitist and rather than eliminating hands-on programs BYU needed to strengthen them. As a result, BYU's President was charged to come back with a plan to enhance and strengthen the hands-on technology related programs in the College of Engineering and Technology. The President issued the charge to the Dean who assembled a study committee that resulted in a proposal to merge the two departments into a new School of Technology. In effect, the new School had a strong supporter on the Board and was going to be "held harmless" as it developed and implemented enhancements.

As noted above, a new Director was hired from off campus to merge the departments, grow enrollments, strengthen academic and research programs, and so forth. The new Director immediately did an environmental scan, gaining insights that led to strategies for phenomenal growth. As a newbie, several people on and off campus openly shared their perspectives of the faculty and programs, mostly negative, including:

- Questions about faculty qualifications as only 60% held a doctorate, with virtually no externally funded research, and relatively few faculty publications and presentations. The lab-based applied programs and faculty looked more like community college faculty and programs rather than faculty and programs that belonged at a highly selective, research-based private university.

- Perceptions that the students were weak academically given the hands-on nature of the programs and the "games" that some program areas played to get students with lower qualifications (GPA's, ACT scores) admitted. For example, one year the Manufacturing Engineering Technology (MET) program used donated funds to offer 50% tuition scholarships to 20 transfer students whose academic qualifications were much lower than the BYU cutoff. By admission's policy if a student was offered at least a 50% tuition scholarship the minimum academic record required fell to the level of the football team. This action, while within BYU policy, irritated BYU's admissions leaders and staff, resulting in a very negative view of these programs and faculty.

- The Technology Teacher Education (TTE) program sponsored a special recruiting cook out and tour each year. Technology teachers in the region would identify their top students who would be invited, along with their parents, to this special event. A steak cookout was followed by polished and professional tours and presentations about the TTE program. Prospective students and parents were pumped up about BYU and the TTE program. However, as a very highly selective university, most of these prospective students would apply for admission but would get

rejected for not meeting the GPA and/or ACT score cutoffs. This upset the prospective students, their parents, and their high school teachers. In effect, this resulted in very negative perspectives of the TTE program.

- The MET and Electronics Engineering Technology (EET) programs sent program recruitment materials to every incoming new student to recruit them to these majors. The materials were very professional, and very costly, estimated to cost more than $2.00 for each packet, being mailed to more than 8,000 new students, for a cost of over $16,000 annually. Many BYU faculty, staff, and administrators had children who were newly admitted students, each receiving the MET and EET recruitment packet. One such parent noted that the two programs were perceived as being weak given that they had to spend so much money on recruitment materials.

- The EET program had experienced a 5%-10% enrollment decline each year for almost 10 years. This decline targeted EET for elimination even though virtually every EET graduate had multiple job offers upon graduation, and the EET Advisory Board and employers were seeking to hire more EET graduates.

The following strategies were implemented to recruit students and to improve the image of the School overall.

Stopped off-campus student recruiting. Most would assume that to increase enrollments a new School of Technology would enhance its off-campus recruitment efforts, developing slick advertising materials, partnering with K-12 teachers and community college faculty members. You can imagine the blowback the Director got from the faculty when he announced that off-campus student recruiting efforts would be eliminated or significantly downsized. Frankly, stopping off-campus recruiting is counterintuitive, but it worked, doubling enrollments in less than three years by focusing all undergraduate recruitment on-campus.

The first off-campus effort to go was the MET/EET packet mailed to all incoming new students. The faculty pushed back hard, and the Director agreed to send the recruitment packet to approximately 1,500 incoming undecided majors the first year, it was eliminated totally in year two. The second effort to go was the TTE recruitment cook out and tour.

Employed a PR student as the School Media representative. The new Director determined that improving the image and perceptions of the School, its faculty, its programs, and its students, needed to be addressed first. By chance, a public relations major, Mary, came to meet the new Director, you see her mother's second cousin was a faculty member at West Virginia University and a good friend of the Director. As the Director visited with Mary a strategy to improve the image of the School became clear. It was learned that Mary had worked on the student newspaper staff the prior semester, and that she had very good public relations knowledge and skills. She was hired on the spot as the School's PR and Media representative for 15-20 hours per week.

Established an Advising Center. A secretarial position was refocused to search for an academic advisor for the School. The successful candidate had recently moved to Provo after she and her husband sold their home construction company in Oregon as an early retirement venture. While in Oregon she was the local liaison with the BYU Admissions Office, coordinating recruitment efforts in Oregon. Her in depth knowledge of the admissions process and her on going contacts would prove to be extremely valuable as the School worked to increase enrollments. Furthermore, establishing an Advisement Center

significantly improved student academic advisement services, and supported faculty who focused on career advisement with students.

Encouraged and supported faculty travel to attend professional conferences. The Director, who was very active in several professional associations, soon realized that the majority of the faculty of the School seldom attended professional conferences. This factor became evident when a faculty member who was applying for promotion to full professor could not name five full professors in his discipline at other universities who could serve as external reviewers of his promotion application. The Director reallocated significant funds for professional travel, and encouraged faculty to travel, including inviting faculty to travel with him to conferences. Faculty who attended conferences came back renewed with several ideas for improving their programs. Professional travel also led to making presentations, and networking with faculty at other universities. The faculty also learned that BYU's programs and facilities were exemplary, something to be proud of. This pride improved the confidence of the faculty, and faculty who are confident go on to accomplish much more, and they exhibited enthusiasm for their programs that was magnetic in attracting and retaining students. (FYI, the School overspent its travel budget by $40,000 or so each year)

GM visit – VR room. Within a month of arriving on campus, the Director was invited by the Industrial Design faculty to travel to the Detroit area to visit alumni who worked a designers at GM, Ford, and Chrysler, and to tour design studios at each company. There were many take aways from this trip, however the key one was seeing how GM used various types of virtual reality (VR) in designing cars and trucks. The Director returned to Provo with a vision to establish some type of VR lab to support the programs and research in the School, and he discussed this vision with the Dean, who was supportive. The VR vision lead to working with a key donor who, shortly after the Industrial Design program was transferred from the Visual Arts Department to the School, provided funds to acquire BYU's first supercomputer, designed to drive a VR auditorium in the Technology Building. SGI/Cray was the vendor, and corporate partner, for the supercomputer. Once operational on campus, the new supercomputer was maxed out within a week because of the pent up computing needs of the faculty throughout the College, something that SGI/Cray had never experienced before. The supercomputer was doubled in capacity, and maxed out again in less than a month.

The supercomputer drove a VR auditorium used by students and faculty to preview designs, geography, animations, etc., in 3-D. Several high schools and youth groups scheduled tours of the VR auditorium, allowing significant numbers of prospective students to see the cool 3-D technologies first-hand. The VR auditorium brought significant recognition to the School and all of its programs.

Cultural Overlay. Aligning with aspects of regional culture led to tripling enrollments in the Technology Teacher Education program. The dominant religion in the region (and on campus) has a strong focus on marriage and family, and many female students were planning to pursue teaching as a major/career to align potential future career with family (e.g., teachers have the same work schedule as their children who are attending school). At this time there was an over supply of elementary teachers, likewise for school teachers in the fine arts and social sciences. The College of Education hosted a new student orientation wherein all teacher education programs across campus were given five minutes to provide an overview of their programs. The TTE faculty noted in their presentation that if students were interested in design, computers, media, engineering, etc., they should consider the TTE program, especially given that graduates of the program were in high demand in virtually every state. In effect, graduates could stay in Utah or move to any other state and teaching jobs will be waiting for you. Based on the presentation, three female students transferred to the TTE program, and they were so happy with it, and

the supportive faculty, that they encouraged their friends to consider the TTE major, resulting in growing enrollments from about 25 to about 70 in two years, with 40% of the students being females.

Student Mentored Learning. The Director was interested in involving students in high visibility student competitions. A key faculty member was invited to co-advise a new student EV Race Team (EVRT), in which students would design and build EV race cars and would compete against other university teams. The EVRT competed with an open wheel formula style race car (Formula Lightning), a modified EV1 car drag race car, and an EV streamliner that eventually set the land speed record for the E1 class at the Bonneville Salt Flats. These efforts were high visibility activities, often getting local TV news and Newspaper coverage. The race cars were often displayed on campus and some were driven in parades.

The EVRT engaged students in designing, building and testing new technologies. Some technologies developed were patentable, and undergraduate students who helped develop the technologies were named in the patent applications. In another case, a student conceived the idea of using ultracapacitors rather than batteries in the drag race car, a very novel approach that proved unique and very successful. A paper about using ultracapacitors in EV's was prepared for the Society of Automotive Engineers (SAE) conference in Detroit. The School provided travel funds and sent the undergraduate student to SAE to make the presentation. These efforts were noted by BYU's President Bateman, who launched an initiative he called Student Mentored Learning, wherein his plan was that every BYU student would work with a faculty member, or group of faculty members, in research, development, publication, performance, etc., at least once in the four years of their education. President Bateman was very successful in raising significant external funds for this initiative. The EVRT was the poster child for Student Mentored Learning, raising the visibility of the School, its programs, students, and faculty.

Supported Student Travel to Professional Conferences. The School used donated funds to cover student travel expenses to attend professional conferences and student competitions. The Construction Management program generally took 100 undergraduate students to the NAHB Exposition, and the BYU CM student team earned a top three placement in the student competition for more than 25 years. The TTE program started taking 20+ students to the ITEEA International Conference, and BYU students actively competed in TECA competitions. Raising funds for student professional travel was a priority in the School.

Pursued NSF funding. Faculty teaching loads were two courses per semester given that BYU is a research university. Acquiring external research funds was fast becoming an expectation for faculty. To this time the School faculty had little experience with externally funded research. The Director wanted to engage faculty in pursuing grants and contracts, and decided to set the example. Working with the Technology Department Chair at Utah State University, a successful proposal was prepared and submitted to the National Science Foundation (NSF) for a Center for Learning and Teaching, a five year $10 million project that funded the National Center for Engineering and Technology Education (NCETE). The Center included nine university partners, and was the second NSF Center proposal funded at BYU over the past three decades. NCETE involved engineering faculty along with School faculty, and raised the perceptions of the School on and off campus.

Built Alliances Across Campus. The School reached out to other colleges and departments on campus to form alliances to improve student success. These outreach efforts improved the image of the School, its faculty, students and programs. Interactions with the College of Education led to significant increases in TTE enrollments, growing from 25 majors to more than 70 majors, with 30-40% being female students. An alliance with the Marriott School of Management led to significant increases in enrollment in the

applied management focused technology programs, and a Manufacturing faculty member co-teaching a management course in the MBA program.

Outcomes

The School doubled the number of majors from 1998 to 2003 (600 to 1,200 majors) and doubled the annual number of graduates (139 to 275); significantly increased the faculty publication rate and percentage of faculty involved in publishing and presenting, increased the number of faculty who held doctorates, raised millions of dollars in donations, and so forth.

Western Illinois University, Macomb, IL

Western Illinois University is a regional comprehensive university with a main campus in Macomb, IL, and an urban branch campus in Moline, IL. Macomb is in rural western Illinois, approximately 75 miles south of Moline, IL, and its associated metro area (generally referred to as the Quad Cities), 75 miles west of Peoria, IL, at that time the corporate headquarters for Caterpillar Corporation, 90 miles northwest of Springfield, IL, the capital of Illinois. Macomb is a three-hour drive north of St. Louis, MO, and a four-hour drive southwest of Chicago, IL. The counties in western Illinois surrounding Macomb has often been referred to as *Forgotonia* because of its very rural setting and perceived lack of political power.

WIU was founded in the 1890's as a regional teachers college. It grew to a comprehensive university, adding an urban branch campus in Moline. The programs related to ETE were housed in the College of Business and Technology (CBT). This College housed the AACSB accredited business and accounting programs, computer science, economics, agriculture and engineering technology. All departments and programs in the CBT had solid corporate alliances, and job placement for graduates tended to be the best on campus.

A new dean was hired the summer of 2006. At that time WIU was trying to grow its branch campus in Moline, and to grow enrollments at the main campus in Macomb. The new dean engaged the department chairs, faculty and staff in recruiting and retaining students. He worked closely with the Admissions Office personnel, and developed CBT specific strategies. The strategies included the following:

Increasing Community College Transfer Students. When scanning the resources of the College, the Dean noted that a department chair, who would later serve as Associate Dean, had been a faculty member and administrator at John Wod Community College in Quincy, IL. Knowing this he formulated a plan wherein this chair would personally visit community college throughout Illinois, fostering alliances and transfer agreements. He had instant credibility when he stepped on a community college campus give n his 12 years working at Wood CC. This gave him an edge in fostering these alliances, developing seamless transfer agreements.

Recruitment Scholarships. CBT foundation accounts were reviewed to reallocate some funds for recruitment scholarships for new freshmen for each program. These scholarships were promoted by the College and also through the general university promotion efforts. Additional scholarships in the CBT, generally available to juniors and seniors, were also promoted.

Centralized Advising. CBT already had centralized academic advising offices, staffed by outstanding professional advisors. These advisors were very involved in recruitment efforts, and essential in retention efforts.

Promoting Professional Employment. The degree programs in the CBT generally had the highest job placement on campus, this fact was the focus of promoting the College, growing enrollments through recruitment and retentions efforts.

Internships. The CBT had a well developed internship program with corporate partners like Caterpillar, Deere and Company, Archer Daniels Midland (ADM), Peter Keweit Construction, and so forth. The successes of CBT interns in achieving significant accomplishments, and cost savings, for the various companies was highlighted by the CBT and through the WIU News Service. Examples include a Supply Chain intern who saved Deere $1.2 million in annual shipping costs as the result of her summer internship project. An intern at ADM likewise saved the company $650,000 in shipping costs through a summer internship. Of course, the companies hired and promoted these interns, and this factor was also highlighted by the CBT and the University.

Total Team Effort. The chairs, faculty and staff were all focused on growing enrollments, in effect they gave a total team effort. This was critical given the remote, rural location of the main campus.

International Graduate Student Merit Scholarships. Out-of-state tuition for graduate students was double the in-state rate, while out of state undergraduate tuition was 1.5 times the in-state tuition rate. The Computer Science Department had approximately 50 masters students, 90% from India. Realizing that they could increase the number of masters students within the existing faculty resources (basically filling empty seats in classes), the CS graduate coordinator proposed awarding a Graduate Merit Scholarship to recruit new international masters students wherein the out-of-state multiplier would be 1.5, the same as the out of state undergraduate tuition, effectively reducing tuition by 25%. Technically this was tuition discounting, but it was presented as a Merit Scholarship. Award letters offering a Merit Scholarship that reduced tuition by 25% greatly assisted international students in acquiring the appropriate visas. The Merit Scholarship program increased CS enrollments from 50 to more than 200 within a few years. The program was so successful that the WIU graduate School instituted it for all graduate programs on campus.

Outcomes:

The CBT efforts to grow enrollments produced positive results. If the campus enrollments were up 2%, the CBT were up 4%. If the campus enrollments were down 3%, the CBT was down 1%. CBT enrollments were always better than the overall University enrollment trends.

Eastern Kentucky University, Richmond, KY

Eastern Kentucky University is a regional comprehensive university with a main campus in Richmond, KY, and two branch campuses in rural Kentucky. Richmond is in central Kentucky, approximately 25 miles south of Lexington, about a two hour drive south of Cincinnati and its northern Kentucky suburbs. Louisville, Kentucky's largest city, is about an hour and a half west.

EKU was founded as a regional teachers college. It grew to a comprehensive university, adding branch campuses in Manchester and Corbin. The programs related to ETE were housed in the College of

Business and Technology (CBT). This College housed the AACSB accredited business and accounting programs, agriculture and engineering technology. All departments and programs in the CBT had solid corporate alliances, and job placement for graduates tended to be the best on campus.

A new dean was hired in 2014 to lead the College. At that time EKU had achieved its highest enrollments, however the enrollments started dropping from that time. Several initiatives and efforts were instituted by EKU to grow enrollments, however enrollments continued to decline in all colleges except the CBT. Between 2014 and 2021 CBT enrollments grew an average of 5% per year except for one year in which the enrollments were flat. The result was an overall 30% increase in enrollments for the CBT. However, given the overall decline in enrollments of approximately 20 % at EKU, and associated reductions in tuition funds, EKU had to cut budgets most years. Even though CBT was growing, it took among the highest budget cuts.

The new dean engaged the department chairs, faculty and staff in recruiting and retaining students. He worked closely with the Admissions Office personnel, and developed CBT specific strategies. The strategies included the following:

Centralized Advising. CBT was the only college on campus that kept and promoted its centralized academic advising office, staffed by outstanding professional advisors. These advisors were very involved in recruitment efforts, and essential in retention efforts. Given that approximately 40% of EKU students were first generation students, the advisors provided an extra level of support for these first time college students, and their families.

Promoting Professional Employment. The degree programs in the CBT generally had the highest job placement on campus, this fact was the focus of promoting the College, growing enrollments through recruitment and retentions efforts. Getting a good job upon graduation is what first generation students were seeking, and CBT's promotion of successful employment was an effective strategy.

Internships. The CBT had a well developed internship program and a CBT specific internship coordinator who assisted students in acquiring internships. The successes of CBT interns in achieving significant accomplishments, and cost savings, for the various companies was highlighted by the CBT and through the EKU News Service.

Total Team Effort. The chairs, faculty and staff were all focused on growing enrollments, in effect they gave a total team effort. Specifically, the Dean's staff, including centralized advising, a communications director, and an outreach and internship director were extremely effective. This was critical given the remote, rural location of the main campus.

New Programs. CBT developed new programs and options aligned with needs for professionals in Kentucky. These programs included a Banking emphasis in Finance, a Professional Sales program in Marketing, a new Supply Chain Management program, and so forth. These programs attracted students from off and on campus. These programs were developed to align with the culture and workforce needs in Kentucky, using a unique understanding of Appalachian culture as an overlay.

Student Competitions. Programs were encouraged to involve students in competitions with like students from other universities. The successes of the various teams were promoted on and off campus. One example was the new Banking program which sponsored a team to compete in the Community Bank

Case Competition. EKU's first Banking Case Team took 1st place nationally and they were invited to present their case at the Community Bank Research Conference at the St. Louis Federal Reserve Bank.

Outcomes:

As noted above, the CBT grew enrollments by 30% over seven years. At the same time, EKU had an overall enrollment decline of approximately 20%.

Synthesis and Recommendations

There is an old saying that "all politics is local." Likewise, recruitment and retention efforts are local to each university, and must consider the uniqueness's of each university and college. There is no panacea, no one-way to recruit and retain. The following are synthesized from the successes of the four case studies.

Environmental Scan. An environmental scan, sometimes referred to as a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats), should be conducted as a basis for planning growth strategies and initiatives.

Cultural Scan. Gain perspectives of the local, regional, and state cultures, seek uniqueness's that can be exploited (e.g., strong family ties in Appalachia, Utah).

Seek Allies On and Off Campus. Collaborate with units and faculty in your college and throughout the campus. Seek corporate and agency alliances off campus, and do what you can to get parents as partners in your efforts. Partner with classroom teachers, and do not forget high school counselors.

Total Team Approach. Engage faculty, staff and students in planning efforts, and in implementing the strategies, build a shared vision.

Collaboration with the Admissions Office. Make the Director of Admissions, and Admission's personnel, your best friends and colleagues.

Identify and Promote Strengths of Programs and Faculty. Identify your signature programs and promote them. Likewise, promote the good things that your faculty do.

Use Appropriate PR Venues, Use Professionals. Use PR strategies that work to tell your story. Remember not all stories will interest your potential audiences.

Identify High Visibility Projects and Engage Students in Competitions. Seek unique projects that will raise the visibility of your program on and off campus.

High Quality Advising is Essential, Centralized if Possible. Most students will need assistance meandering their way through college to graduation. Effective advising is central to providing this assistance. Advisors are central to retention efforts.

Focus on Employment, Engage Alums in Recruitment. Most college students, and their families, believe that a college degree will lead to a good job and profession. This is especially true for first generation college students. Don't be bashful about promoting the employability of your graduates.

External Influencer (Patron Saint). Relying on external influencers can gain some advantages as long as the person is actually using position and power to provide positive influence. If the influencer does not follow through the unit will falter. Likewise, the unit needs to prepare for the time when the influencer moves on.

After Thoughts

Given the "engineering" focus of ETE programs are we recruiting engineers to consider a career change to become ETE teachers? What about recruiting engineering students to consider teaching?

Given the "engineering" focus of ETE programs are we fostering alliances with Engineering departments and faculty on campus, or at other universities in the region/state?

The Physics Department at a major research university recently appointed a local high school physics teacher as the Chair of the Physics Department Advisory Council. Have we partnered with the Engineering or Engineering Technology colleges and/or departments on campus, or at other universities if there are no such programs on your campus, to promote adding high school engineering and technology education teachers to their advisory councils?

Final Thought

All four universities had another common factor, they all had the same leader (Dean/Director) who worked with faculty, staff, students, and other constituents to grow enrollments. While the greatest benefits were for the increased number of students who graduated and launched professional careers, the leader acquired additional, purposeful experience. Given that experience, that leader is very willing to assist others in developing visions, plans and strategies for growing enrollments.

References

The case studies discussed and analyzed in this paper are based on the first-hand experience of the author based on his having worked at each university, and the perspectives presented are through the lens of his experience at each.