



Enhanced Institutional Effectiveness: Technology for Learning

Executive Summary

The purpose of *Enhanced Institutional Effectiveness: Technology for Learning* is to increase the access to and quality of higher education in Yuma and La Paz Counties through externally-hosted and internally implemented, reliable and robust platforms, systems and processes for the provision of teaching, learning, student services, and data-based decision making, and enhanced navigation abilities for students.

This Quality Initiative has been substantially completed and remains an ongoing process for continuous quality improvement. Completed aspects include changing to SQL Server-based systems and transitioning to web-hosted student information systems. Great gains were made in implementing highly effective business processes in key functional areas: Finance, Accounts Receivable, Human Resources and Payroll, Financial Aid, and Student Recruitment, Enrollment, Advisement, Records, including Curriculum and Instruction. These will continue to evolve through successive stages of data clean up, staff training, and institutional implementation. Data accessibility was increased through adoption of analytic reporting tools and practices, and significant strides were taken to strengthen enrollment through new and enhanced recruiting processes. These will continue to improve over time with additional staff training and ongoing implementation as we ensure access, maintenance of new processes, and efficiency of effort through extensive professional development. We designed key performance indicators to monitor institutional effectiveness, in alignment with state-wide and national measures where possible. Finally, we made strides towards increasing students' digital literacy and life skills related to technology; an ongoing activity that aligns with institutional student learning outcomes.

No significant changes were made to the initiative except an extended timeline due to the magnitude of the changes. Staff turnover in key positions introduced both challenges and opportunities to enhance progress of the initiative.

SCOPE AND IMPACT OF THE INITIATIVE

What was accomplished in relation to purposes and goals

Enhanced Institutional Effectiveness: Technology for Learning is impacting Arizona Western College and our academic quality through accurate, real-time availability of data for decision making, teaching, learning and student services. We increased student access to online and hybrid learning, student academic supports, student services, business services, records/registration/enrollment/grades, and financial aid, via an increasingly reliable technological platform. These readily available resources to students and streamlined processes have freed staff up to focus more on students. Even in the face of a disaster, this initiative has minimized the risk of systems outage or complete loss.

The initiative helped us to increase the quality of our institution by providing a single source of real-time data for decision making for academic and student services as well as measures of institutional effectiveness. Enhanced processes are permitting all aspects of our institution to focus on analysis and action rather than on acquiring data across multiple "silos of information" formerly housed in Excel spreadsheets in various departments. This is informing continuous quality improvement processes.

Through *Enhanced Institutional Effectiveness: Technology for Learning*, AWC increased the access to and quality of higher education in Yuma and La Paz Counties through externally-hosted and internally implemented, reliable and robust platforms, systems and processes for the provision of teaching, learning, student services, and data-based decision making, and enhanced navigation abilities for students by completing or making substantial progress towards the following goals.

Goals:

1. Maximize technological stability and expert support by transitioning web-hosted information services, and by migrating to Microsoft SQL Server-based systems.

The following accomplishments and impacts are summarized from a document provided by Devin Kibler, Manager of Application Services, that was given as part of an invited presentation at the Ellucian Live international conference in Spring 2016.

ACCOMPLISHED: The transition to hosted services took place between October 2013 and April 2014, and database migration to SQL Server took place between July 2013 and October 2014. A link to the full implementation overview is available in the artifacts section. The four phases of these transitions included: planning/assessment, implementation, end user testing, and go live through migration/transition closure. Over 70 individuals participated, 556,000 data errors were corrected, 1200 custom processes were reduced to 20, and systems were established for data stewardship and change implementation.

IMPACT: Cloud-computing benefits were realized, replacing aging servers with site-to-site routers. Hosts assumed hardware management and risks, freeing up AWC staff to focus on enterprise applications within our datacenter. SQL Server databases reduced the complexity of saved list creation and maintenance to non-technical personnel, increased the ease of integrations with third-party products, and generally provided improved extraction-transformation-loading capacity for enhanced data administration. As an early implementer of Colleague cloud hosting, AWC has become a model institution and resource for other institutions contemplating similar initiatives.

2. Implement highly effective business processes in key functional areas: Finance, Accounts Receivable, Human Resources and Payroll, Financial Aid, and Student Recruitment, Enrollment, Advisement, Records, including Curriculum and Instruction

ACCOMPLISHED: Improvements of significant magnitude were realized by including functional area users in the processes of mapping (11/13-3/14), streamlining (2/14-8/14), and disseminating (8/14-4/15) effective business processes in each of the areas listed above. We are building upon these gains as software and systems are updated and additional components are added.

With regard to **Finance**, changes were made to Purchasing (set up for blanket purchase orders, and vendor files were purged/unduplicated and appropriately formatted, enabling use of Web Advisor for requisitions); Accounts Payable (managing rejected email addresses, default e-check advice method, manual payments for outstanding vouchers, unclaimed property, and electronic check reconciliation); and Travel (open-ended travel processes, transportation charges, travel card encumbrances, and vouchering advancements and reimbursements for travelers without travel cards). Systems and automated processes were also made functional for online payment and deregistration for non-payment. We built upon these foundations to increase

Human Resources and **Payroll** processes were updated for managing employee records and student employment, processing employee leaves and separations, processing new hires, and tracking FMLA, deferred pay, award service years, annual benefit updates, batch processes for terminating and rehiring positions, electronic processing for time card and leave reporting and approval (formerly done by paper), and adoption of a Talent Management System. Historical data were cleaned up through 2013. Additional data clean-up is needed to permit accurate reporting and projections. Significant changes in the staffing and focus of Human Resources changed the trajectory for

consolidating gains based on foundational work and business processes. They are in the process of reviewing next steps.

Financial Aid realized significant gains by using automated processes for more accuracy for return of Federal Student Aid and transfer monitoring and enrollment reporting. Business processes were significantly enhanced and streamlined for processing applications, packaging and disbursement, managing funds, student employment and federal/institutional work study, and managing satisfactory academic progress. We expanded upon this foundation to streamline the process of how book vouchers are sent to the College bookstore, increased voucher amounts, and greatly decreased the amount of manual adjustments. Book vouchers sent to the College bookstore the Monday before classes start. A student can opt out of the book voucher and receive a check the week that classes start.

Student Registration and Records and Admissions and Recruiting enhanced processes related to admissions (recruiting, processing admission applications and communications), auditing degrees and graduation process, creating and maintaining class schedules, managing student registration, managing grades and academic standing, advising, veteran's services, and withdrawals. Automation and batch processing saved tremendous amounts of time compared to manual processes formerly in place. Rules were created to assign academic distinction and print all diplomas and certificates in batches at once (rather than individually). Cohort designations with start and end dates permit historical tracking, ease of reporting, and simplified and paperless registration processes for cohort-specific courses. Prerequisite overrides allow advisors to record in Colleague when pre-requisites were fulfilled at another institution, greatly enhancing ease of registration and reduction of the need to see advisors repeatedly for the same reason in future semesters. Use of standard processes for End Student Program, Pre-requisite Drop, and Academic Renewal enabled staff to end active programs for students that stopped attending, replaced two custom reports, and created a new credit type (Renewal-RNL) to identify and track academic renewal credits. Finally, overload approvals are entered into Colleague by advisors, permitting select students to register for additional courses without having to repetitively seek approvals during the same semester.

AWC invested in Recruiter SaaS licensing to permit students to complete user-friendly online applications rather than submitting an application that was then re-entered by enrollment staff. The timeliness of response, automation of processes such as residency assignment, ability for applicants and staff to track applications from submission to acceptance, and data transfer to Colleague for enrollment, etc. The automated issuance of student ID number and acceptance notifications reduced the number of contacts by phone, email or in-person visits required. Because Recruit can be accessed from any Internet connection, recruiting staff can process applications on site at high schools and other events. This has greatly improved service from learning centers located throughout our district away from the Yuma campus due to improved access to information, as well as improving dual-credit enrollment processes.

New capabilities for student Financial Views, self-service, and Student Planning were also acquired and implemented in 2016-2017, better informing students' academic planning and expectations and course planning to facilitate timely degree completion (offering enough sections and required courses to permit completion). Features include advisor approval workflows, automatic saving of academic plans, and pre-loaded degree plans/templates. Students can perform academic planning activities such as searching for courses, planning their terms, and scheduling and registering for course sections. Advisors can access advisees' academic plans to provide guidance and feedback.

IMPACT: The impacts were greatly increased efficiency in business processes, reduction in opportunities for human error, improved access to data (current and historical), reduction in redundant approvals or tasks, and improved communications and services based on one source of data. By reducing reliance upon custom reports and processes, programmers and Computer Information Services personnel are engaged more meaningfully to resolve problems, oversee implementation of

updates, and manage enterprise systems. End users are also better served by access to meaningful information and reports to inform their work, planning and decision making.

3. **Increase data accessibility through adoption of analytic reporting tools and practices.**

ACCOMPLISHED: Data were made more accessible through new reporting tools and practices related to Synoptix (for Finance and Administrative Services), Colleague Reporting and Operating Analytics (CROA) tools generally accessed through Web Intelligence, and Document Imaging, which was available to select areas of the college for paperless processes.

Currently there are 63 Web Intelligence users, including 11 specially-trained Report Architects and an additional 32 Report Writers. Ongoing support was provided in the form of in-person trainings and four Web Intelligence courses produced in-house for self-service training. Self-paced instruction is also available from Ellucian through the On-Demand Subscription Library.

IMPACT: Staff are able to simply and quickly create basic queries and more detailed reports that can be shared with others to reduce duplicative work, and scheduled for distribution by email regularly to specific users at various times and intervals. Data are far more easily manipulated in user-friendly programs (Microsoft Excel, Access, etc.). Standard calculations for Full-Time Student Equivalents (FTSE) are auto-calculated in one report with a summary tab and details, auto-delivered by email. Similarly, a Missing Grade Report clarifies which sections are missing no-show, FTSE, mid-term, and final grades; greatly enhancing the timeliness of reporting.

Document Imaging streamlined and improved document retention processes for participating areas, while also reducing the space needed for file storage and reducing paper usage where appropriate. A change in ownership in the imaging company and cost of equipment slowed down implementation after all Finance and Student Services areas went paperless. Institutional Effectiveness, Research & Grants (IERG) has begun to scan filed documents for ease of future retrieval, and to reduce the amount of filing space required.

4. **Strengthen enrollment through new and enhanced recruiting processes.**

ACCOMPLISHED: Recruit SaaS and new business processes were acquired, set up for our context, tested and implemented. Since the original contract and training implemented in version 2.0, we have upgraded several times to the current version 4.7.

IMPACT: Enrollment in Community Colleges in Arizona and nationally has decreased, in keeping with a reduced number of traditional college-age students graduating high school (aging out of the Baby Boom Echo). Despite AWC's decreasing enrollment from the same demographic trend, our enrollment decreased least of all community colleges in Arizona. Recruiting staff provided the following list of formative and summative impacts:

- We previously had no way to track prospective students and reach out to them. This system allows us to capture contact information of interested students and communicate with them even before they apply for admission.
- Reporting and advanced find function allows us to provide high school counselors with more information regarding the application and enrollment status of their students. This is something they have been requesting for years, and we are finally able to provide it.
- We can monitor where students are in the enrollment process and reach out to them to complete the process.
- Systems and processes allow for more direct communication to students.
- The old process went from manual data entry of paper applications, to an online application submitted via email that was still entered manually, to an online application that fed to Colleague but did not allow for monitoring or follow up of applications. Also, students couldn't save their application and return to it, causing students to give up on the process.

The new process allows students to create an account, save an application until they are ready to submit it, and feeds cleanly into Colleague.

- We now have a format that allows us to send modern, attractive communication to students.
- We have received training and personalized consulting for the Recruit program. Trainings have been focused on building and implementing the new application and its processes, learning the various recruiting functions of the program, training our end users on processing applications, etc. The implementation of Recruit and the consulting and training we have received has forced us to look more closely at our recruitment goals, types of reports we need, and how we can use data to enhance our processes.
- We can now track our recruiting events, tours, travel, etc. and tie prospective students to those events to determine our return on investment and where our recruitment efforts should be focused.

5. Ensure access, maintenance of new processes, and efficiency of effort through extensive professional development.

ACCOMPLISHED: Professional development following the functional team consulting for optimization of use of Colleague (28 hours Finance, 96 hours Financial Aid, 96 hours Human Resources and Payroll, 136 hours Accounts Receivable and Cash Receipts, 144 hours Student-related functions, and 6 hours Colleague Reporting and Operating Analytics mentoring) included:

37 people received 15 hours of Communications Management training in order to communicate with select student, employee or vendor audiences using Colleague to personalize and send email.

In addition to in-depth training for 11 Report Architects in Research Fundamentals and Report design in Web Intelligence, the Technology Initiative Coordinator wrote, designed, filmed and produced Web Intelligence training that is available via BlackBoard with videos and supporting documentation at basic, intermediate ad advanced levels.

IMPACT: Staff are better equipped to maintain new processes, communicate more efficiently with students, and to more effectively use technological resources. There is an enhanced level of understanding of technological capabilities across the enterprise system. Staff now have ready access to documentation and manuals as well as resources for specific self-paced training through the On-Demand Subscription Library for which we maintain membership.

6. Adopt key performance indicators to monitor institutional effectiveness.

ACCOMPLISHED: While AWC has pre-existing institutional performance indicators and participates in statewide performance reporting for community colleges, these were focused on historical data that resulted in incremental changes and broad grant-funded strategic initiatives that addressed trends well after their development. Through this initiative, Preliminary Key Performance Indicators (KPIs) that can be connected directly to critical college functions (first contact to classroom teaching/learning/assessment to a more highly-educated community) were developed in consultation with the Dean of Institutional Effectiveness, Research and Grants (IERG) and are being finalized in consultation with the President, President's Cabinet, Strategic Enrollment Management Committee, Computer Information Services, and District Governing Board. Given that districtwide strategic planning is underway, it is anticipated that KPIs will be adjusted to correspond to the Strategic Plan Goals and Objectives upon their completion in Spring 2018.

IMPACT: A coherent set of measures that would positively address recruitment, enrollment, student success, retention, timely completion and transfer has been developed, in order to systematically set goals and measure progress. This represents a significant change from using data for reporting and consultation, rather than systematic quality improvement. Improved reporting and analytic capabilities developed through this QI will ultimately permit automation of reporting for progress and achievement of KPIs.

7. Increase students' digital literacy and life skills related to technology.

ACCOMPLISHED: Students were afforded new tools and capabilities to interact with the College using interactive technology related to enrollment, payment/financial aid, academic planning, academic progress, faculty appraisal, improving academic success, and through instruction/learning. Additionally the General Education Curriculum Committee (GECC) focused on digital learning during the 2016-2017 academic year, collected and assessed student learning outcome data and processes, and developed recommendations for further efforts, which will be highlighted below.

The Vice President for Learning Services provided the following summary of digital literacy accomplishments from the QI achieved prior to the 2016-17 year:

- Financial review available through WebAdvisor, Financial Views, and Student Self-Service has increased students' knowledge and skills in regards to tracking funds available for study and accessing this information online.
- The ability to access important information via degree audit online allows students to increase their knowledge and ability to plan their academic plan. This links to the ecap form students now complete in the high school system to prepare for job or college. Periodically accessing and monitoring their degree audit will allow students to plan for their future and reach academic goals without taking unnecessary classes.
- Linking technology to faculty appraisal allows students to use the system online to appraise faculty and give useful feedback on their own learning process.
- All classes at AWC are web-enhanced. This brings students into the 21st century in the learning spectrum, employing technology for lifelong learning. Assignments are submitted online and graded online. Grades are input online and students are responsible for reviewing grades submitted. With midterm grade performance, students are now responsible for checking their midterm performance and requesting assistance or visiting support areas, such as the Student Success Center or the Academic Library, for additional academic support.
- An online class has been created for students on probation so that they can work individually with an instructor to be more successful.

The Vice President for Student Services provided the following information about **Academic Restart** - New academic probation support program/services:

- In 2014-15, Career and Advisement Services established a NEW district-wide "Academic Restart" Program/Services which included student enrollment in a Blackboard page and a database with all Academic Probation students receiving Advising/Mentoring services; at least monthly communication to encourage student participation and academic success as well as important deadline reminders or educational workshops and career-related events.

Dr. Ellen Riek, on behalf of the GECC, reported the following to the Vice President for Learning Services related to digital literacy (directly quoted, beginning on next page):

Assessment Design: Beginning academic year 2015/16, the GECC designated a GE Focus Area for promotion and Assessment. Additionally, each year [Writing Intensive (WI) outcomes are] assessed by members of the Writing Curriculum Committee and WI faculty. Digital Literacy (DL) is the focus for 2016/17, and has not been assessed before. To facilitate assessment, the GECC

- requested 10% random sample of DL students through IERG
- Requested faculty of those students submit:
- assignment & rubric
- student performance indicator
- brief evaluation of assignment effectiveness

Once the GECC received these artifacts (78), we created a Rubric to evaluate Digital Literacy artifacts. GECC members met Fri, 2/10, to norm the rubric & evaluate artifacts (56/78 met the request for submission).

Process: What became clear during our norming session, prior to any evaluation of artifacts, was that our rubric, and thus Student Learning Outcomes (SLOs), had some redundancies, and also at least 1 unmeasurable outcome. There was rich discussion about what we would be looking for as evidence of student learning, and what then also became painfully clear was that we needed actual student work to evaluate, not just the assignments, rubrics, performance indicators, and comments from the instructor. While the time was well spent in terms of what we learned, the preponderance of completed assessment rubrics indicate “unable to determine” due to the lack of student artifacts, so any report beyond recommendations would provide skewed data. To address this, the GECC has agreed that:

- Digital Literacy SLOs need to be revisited
- All Focus Areas need explanation & context for faculty & students
- Faculty need the rubric when we request artifacts
- We must request specific student artifacts
- Include students in the assessment request

Conclusion: Assessment is a messy process, not a spotless product. The GECC has agreed to revisit both outcomes & identified courses for all Focus Areas, providing faculty the opportunity to make sure their designations are appropriate. The GECC held a workshop during Professional Development Day and attendees were supportive of having GECC members go into Division meetings to discuss the GE Focus Areas and SLOs, and explain our assessment expectation. This is our plan for Fall 2017, following our revision of Focus Area outcomes.

Addendum: Although we were unable to assess student artifacts, we were able in many cases to assess the quality of Digital Literacy assignments and rubrics. Amending our rubric to include examples of each category (i.e., web portfolio as an example of Exceeds) should help faculty determine not just if their assignment is developing Digital Literacy, but to what extent. The table below reflects how the *assignments* scored. (next page)

	Exceeds	Meets	Needs Improvement	Unable to Determine
Digital Literacy assignment components and expectations	3%	27%	33%	34%

Sample Reviewer Comments:

Exceeds

“This assignment has multiple levels of DL—creating a web portfolio that includes a Prezi, buttons/links, and video”

Meets

“Video assignment—great example of how to move assignment from paper to digital, consider audience, etc.”

“Varies in DL: blog, video, Prezi... assignment is high-level DL”

“Creating an Excel spreadsheet—if students are required to do this instead of encouraged for extra credit, this would be an excellent DL assignment”

Needs Improvement

“Low-level DL—only required a PowerPoint presentation assembled as a group project”

“Only DL component is reading an online article and analyzing in the BB Discussion Board”

“Writing an essay that includes peer-reviewed literature is not meeting DL outcomes”

“Rubric has nothing do with Digital component. DL seems to be an afterthought”

“The assignment requires students to watch a video and click answers in an online software program—this does not engage students in DL”

“Just using a photo enhancing program is probably not enough to meet DL”

As part of the focus on Digital Literacy, students responded to the following prompt:

Digital Literacy is one of 5 General Education Curriculum Focus Areas at AWC.

A Digitally literate person is someone who:

- **Comprehends and can use technology strategically to find and evaluate information**
- **Connects and collaborates with others in a digital environment**
- **Produces and shares original content**
- **Uses the Internet and technology tools to achieve academic, professional, and personal goals.**

Describe an assignment or project in your AWC coursework that has helped develop your Digital Literacy skills.

Some randomly-selected student responses follow:

- In my History of Theatre class we did a PowerPoint, we had to research our topic, and talk to other students to discuss what we found. It helped me a lot to develop my Digital Literacy skills because I haven't done many PowerPoints in my years of learning.
- Group projects have helped me build my digital literacy. We have had to collect data by using the internet, creating slides, and also use digital technology to share our work amongst our group members.
- Using the AutoCAD and Revit programs
- An assignment that has helped me develop my digital literacy skills is in my statistics class. We are required to submit labs and use Excel and other programs to complete the assignment.
- I wrote a research paper in my paralegal class about estate taxes. I used an online law website and many online articles. In my Human Development class I learned how to post on Blackboard. I made & replied to discussion topics. I submitted all of my papers through Safe-assign. The research for those papers was online.
- English 102 introduced me to Prezi. ACC 212 helped improve my Excel skills.
- I have to present in my class using a PowerPoint, Prezi, online webpage, or video. I also have to create a booklet in Publisher or other software.
- We have to create and maintain a website and blog for English 102. Each assignment gets posted to our website and we update our blogs as writing workshops.
- I learned to use MathLab.

IMPACT: Students have extensive tools and information for financial and academic planning, learning, monitoring progress, and receiving support to make Satisfactory Academic Progress. Faculty's focus on assessment of Digital Literacy resulted in recommendations for continuing quality improvement of assessment processes as well as teaching and learning.

Tools, data or other information that resulted from the work of the initiative

As a direct outcome of this initiative and the need for enhanced digital literacy supports, AWC submitted a \$2.75M Developing Hispanic Serving Institutions grant to enhance, develop, pilot, assess and improve Digital Literacy and Meta-Literacy instruction, assessment and learning-focused technological resources through library staff and faculty across disciplines. The *Expanding Horizons and Academic Success through Metaliteracy and a Digital Growth Mindset* proposal is under consideration for award starting October 1, 2017. If awarded, it would greatly enhance the ongoing work of the GECC focused on assessment of student learning outcomes.

Extensive reporting and technological capabilities are highlighted in the goals above. In general, AWC made significant strides towards the availability of information for decision-making at all levels of the institution. The draft Key Performance Indicators, enhanced accuracy and automation of Financial Aid reporting to NSLDS, a daily Full-Time Student Equivalent enrollment report, and significantly improved recruitment and enrollment processes are a few examples from among the many developed and highlighted in the text above.

Biggest challenges and opportunities encountered in implementing the initiative

The magnitude of changes in this initiative were greater than anticipated. Underlying the planning was an unexamined assumption that the proposed technology changes, once implemented, would result in a

highly-functional and generally static system with a uniform architecture that would require routine maintenance. In reality, we implemented a combination of web-hosted, third party, and SaaS solutions that required a series of significant upgrades and vendor-required moves, first from one hosting facility to another, and then from Dimension Data to Amazon Web Services environments. Ongoing upgrades, patches, and interfaces with mandatory version updates of SaaS solutions (i.e., from Recruit 2.0 to the most recent update 4.7, as well as a cut-over when Ellucian moved the SaaS solution to its current AWS environment) were more extensive, time consuming, and technically and operationally challenging than anticipated. Each change, upgrade, move, and patch required testing, approvals, and implementation. As a result, we greatly enhanced change management capacity throughout our institution as well as best practices for responding to technological changes more responsive to the accelerating pace required to maintain up-to-date and secure systems in today's world.

As an early adopter of web-hosted systems and given the complexity and breadth of solutions, we experienced difficulties in consistently acquiring timely and knowledgeable support from first- and mid-level vendor support staff while also learning to adjust our own practices and expectations to coordinate with our vendor and their technical experts. We took the opportunity to adjust internal processes/timelines and practices to operate effectively in the new environment, while the vendor appointed dedicated, knowledgeable support leads and an executive sponsor to assist in mediating and resolving concerns.

Administrative reorganization and subsequent transition of the leadership of the Project Oversight Committee provided challenges in maintaining a productive vendor relationship and trajectory of the initiative. Employee mobility, especially after the first phase of the initiative in which business processes were mapped and significant professional development was completed with functional teams, also presented a significant challenge to transmit institutional knowledge and create buy-in (or issue a directive) to maintain the trajectory of implementation. For example, stalled data clean-up limited the reporting and analytic capabilities across the enterprise related to personnel. Upon careful review, a Chief Information Officer position has been posted to better unify and focus ongoing systemic and strategic efforts, maintenance of effective business processes and reporting capabilities developed through this Quality Initiative as well as strategic and tactical planning for information and technology support systems.

COMMITMENT TO AND ENGAGEMENT IN THE QUALITY INITIATIVE

Individuals and groups involved in stages throughout the initiative and their perceptions of its worth and impact

The Chairs of the Quality Initiative shared progress and updates at public meetings, including the District Governing Board (monthly), President's Town Hall (3), and (1) Faculty Professional Day presentations.

Business Process Mapping and Optimization Projects were conducted with the ongoing involvement of 60 people, in addition to the leadership and project oversight structure.

Successive phases of implementation have involved a majority of Student Services, Business and Administrative Services, and many Learning Services staff as well as faculty engaged in student advisement and GECC digital literacy student learning outcome assessment. It has also impacted all prospective and current students.

The worth of this project is undeniable in terms of greater efficiencies in business processes, additional availability of data, end-user capabilities for self-service, and impact on digital literacy student learning outcomes. Perceptions of the worth of this project vary by proximity to the business process and role of the technology user given that system access was adversely affected periodically during the many upgrades and changes. Faculty and students are less likely to have a positive view of the initiative, given that reliable access to technology most informs their opinions. For example, core teams implementing the

first two phases of this project have an extremely positive view of progress made, accuracy of information, and streamlined and accessible reporting. Students appreciate enhanced online capabilities, yet in today’s world, those are a basic expectation. Data from strategic planning focus groups with students and faculty and related surveys demonstrate an ongoing need to continuously improve technology infrastructure and access.

Most important points learned by those involved in the initiative

Changes of this magnitude are a significant undertaking, especially since the responsibility for ongoing implementation and maintenance of processes was distributed to leaders of the six key areas following the initial phases of this initiative. Plans and budget for ongoing training may have been more realistic than the concept of training of trainers who maintained full-time responsibilities for their positions, employee mobility, and especially given the ongoing speed of technological change. However, production of training videos available through BlackBoard was an effective way to capture and transmit knowledge gained. Additional communication about the nature and goals of this initiative, especially to students and faculty, would have been helpful to build a larger context for interpreting periodic difficulties in technological access, as well as the intentionality of gains achieved. In retrospect, a parallel communications campaign was advisable.

RESOURCE PROVISION

Explain the human, financial, physical and technological resources that supported the initiative

The long-term strategic priority by Arizona Western College’s District Governing Board and President demonstrate the high level of commitment to this initiative. Board-adopted college-wide objectives on this topic from 2012 through the present and Board action items authorizing contracts for the Colleague Optimization Project (\$877K 2013-2015), application hosting “in the cloud” (\$1.26M 2013-2017) and a web-based recruiting and admissions system (\$359K 2014-2018) above and beyond the \$273K annual commitment for software, licensing, and support, provide compelling evidence of scope and financial allocation for this initiative. An overview of all IT expenses below, and funding source for technology, software, equipment and contractual expenses (second table below), more effectively portray the magnitude of this initiative.

Information Technology Expenses, 2012-April 2017

Fiscal Years	FY12	FY13	FY14	FY15	FY16	FY17 thru Ap	Total
Sal/Bene	1,572,859	1,729,925	1,681,931	1,699,849	1,559,310	1,522,899	9,766,774
IT Contractual Services	98,716	44,051	686,158	632,284	451,002	261,430	2,173,642
Professional Services	354	-	1,951	6,154	2,111	2,111	12,682
Supplies	55,716	114,698	49,968	28,875	20,445	20,445	290,147
Capital/Non Capital Technology	755,794	1,523,576	1,055,896	959,873	1,373,773	585,309	6,254,222
Software	808,579	878,485	975,259	907,806	1,030,864	1,036,345	5,637,338
Fixed Charges	40,224	114,698	29,548	22,519	15,948	15,948	238,885
Communication/Utilities	190,268	127,375	32,112	35,796	118,516	118,516	622,583
Travel	10,435	4,490	4,135	9,826	11,778	11,778	52,441
Total	3,532,946	4,537,298	4,516,959	4,302,983	4,583,747	3,574,781	25,048,714

Information Technology Software, Equipment and Contractual Expenses by Funding Source

Fiscal Years	FY12	FY13	FY14	FY15	FY16	FY17 thru Ap
Institutional	1,523,093	1,706,640	2,239,169	2,151,375	2,454,852	1,549,667
Grant Funds	139,996	739,472	478,145	348,588	400,788	333,417
Total	1,663,090	2,446,112	2,717,313	2,499,963	2,855,639	1,883,084

Technological and other resources were also extensive. Throughout the initiative, the College dedicated: (1) Help Desk support and equipment for WebEx, webinar, in-person presentations and

telephone conferences; receiving and escalating requests for system fixes (internal project tracking and online entry into contractor’s help request system); room/equipment scheduling; facilitating printing capabilities; and support uploading documents to client care site. (2) 16 laptops for training, testing and report development. (3) Consultant access to guest account with appropriate security levels to demonstrate advanced technical capabilities. (4) Use of conference rooms during on-site consulting and for weekly and bi-monthly meetings, including extensive use of the District Services Training Room.

Further evidence is the commitment of personnel. The President appointed two senior administrators as Co-chairs for all accreditation efforts and a Project Oversight Committee of three senior administrators and three senior functional managers to cooperatively shepherd others through these major changes. The Project Oversight Committee was chaired by the Dean of Institutional Effectiveness, Research and Grants 2012-2016, when a newly hired Director of Computer Information Services was appointed to chair the committee during the 2016-2017 academic year. The president also appointed a Steering Committee of 15 functional experts responsible for ongoing maintenance and evolution of the Colleague system. Six functional work teams and team leaders collaborated with other persons/departments that intersect or are affected by their work. Each functional team worked with consultants to review and streamline business processes, prepare them for implementation, test and implement them, and then presented a Best Practices Workshop to publicly introduce new processes and capabilities accomplished through their efforts. Faculty, staff and administration then learned about and adopted the new practices and processes, while also benefiting from data for decision making, robust technological platforms, and feedback from students.

PLANS FOR THE FUTURE AND MILESTONES

Describe plans for ongoing work related to or as a result of the initiative

Arizona Western College will continue to build upon the foundation of effective business processes, upgraded technological capabilities, and enhanced student services and learning services aspects of this project. The District Governing Board approved \$800,000 for fiscal year 2018 technology control funding (a \$200,000 increase) to continue progress on this initiative. In addition to covering increased licensing and maintenance contracts for the ERP/SIS, significant upgrades will be made to the Wi-Fi service in the residence halls and throughout the district, a new student email system is slated for deployment, and several upgrades to network and storage infrastructure will be made. The Chief Information Officer will be charged with ensuring that the hard-won advancements related to this initiative are maintained and enhanced into the future.

Efforts portrayed by the General Education Curriculum Committee for continuous quality improvement of assessment of student learning outcomes will be further developed in the 2017-2018 academic year for all five competencies, with an ongoing focus in the future.

Describe any practices or artifacts from the initiative that other institutions might find meaningful or useful

Selected Artifacts from this initiative

Host Transition and Database Migration Summary	https://www.azwestern.edu/sites/default/files/awc/information-technology/Transition and Migration Summary of Action.pdf
Best Practices: HR and Payroll 12/3/14	https://www.youtube.com/watch?v=lfN8iChSn-s
Best Practices: Student Services 3/3/15	https://www.youtube.com/watch?v=RCU3DmdT9KQ
Best Practices: Accounts Receivable	https://www.youtube.com/watch?v=z1A3kGDtbFY
Web Intelligence Introduction	Housed in BlackBoard, WEBI-001-TRA
Web Intelligence Fundamentals	Housed in BlackBoard, WEBI-002-TRA

Web Intelligence Reporting	Housed in BlackBoard, WEBI-003-TRA
Web Intelligence Advanced Topics	Will be housed in BlackBoard, WEBI-004-TRA
Strategic Planning (see data tab)	https://www.azwestern.edu/office-of-the-president/strategic-planning