Open Pathway
Quality Initiative Report

Date: August 1, 2012

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Indicate one of the following: __X__ would like a letter of consultation

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The enclosed Quality Initiative report represents the work that the institution has undertaken to fulfill the Improvement Process of the Open Pathway.

August 1, 2012

Signature of Institution's President or Chancellor Date

Penelope H. Wills, PhD President
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Overview of the Quality Initiative

Yavapai College submitted a Quality Initiative Proposal to the Higher Learning Commission as one of the twelve Pilot Institutions for the Pathways Accreditation Process in 2010. An initial proposal was submitted Spring 2010 and a second amended proposal sent Fall 2010. Our Quality Initiative Project was a comparative analysis of online and face-to-face learning. This quantitative research project was conducted for three equally important reasons.

- Online educational offerings at Yavapai College grew 450 percent from 2005-2010. With this expansion came concern from within the faculty on the validity and equitability of the online delivery method. Our Quality Initiative Project provided recommendations drawn from our own district, with our own constituency of faculty and students, and our own resources, on the two education delivery methods.
- Yavapai College Strategic Initiatives include investigation into the further development of online learning through expanded course and program offerings and the enhancement of online student services.
- In 2011 Yavapai College submitted a change request with the Higher Learning Commission to offer distance learning courses and programs at category level 3. The HLC approved this request. Our Quality Initiative Project supported our mission to insure that all students of Yavapai College receive a high quality, convenient, and cost effective education regardless of delivery method.

Our Quality Initiative Project was founded on three primary objectives:

1. Determine if there is a difference in the quality of education provided through the two distinct delivery methods, Face-to-Face and exclusively Online Courses. (Hereafter F2F and OL, respectively)
2. Determine if Yavapai College provides equitable student services to support students in both F2F and OL classes.
3. Evaluate the architecture of the online learning environment, both from an infrastructure and course development standpoint.

Our Quality Initiative Project, (hereafter QIP) identified ten courses/forty classes taught during the 2011-2012 academic year for data collection. These courses were taught by both full-time and part-time faculty members, from three of our four campuses, and included courses from our career, developmental, and general education programs. From these forty classes we collected the following data:

- Mid-term and Final Grade Distribution
- Attrition Statistics
- Student Services Utilization
- Information Technology and eLearning Service Requests
- Student and Faculty Survey information

A seven-member steering committee met regularly to monitor the project, amend procedures, and finally to analyze the data. Members of the committee presented the activities and progress of the QIP to faculty and staff throughout the process. The Chairperson of the Steering Committee presented updates to the president's leadership team periodically and to the college governing board annually. Additionally, the chairperson and key members of the committee presented at national conferences. To enhance the educational opportunities at Yavapai College, the project concluded with recommendations made to the Faculty Senate and the Vice President of Instruction and Student Services

Scope and Impact of Initiative

The QIP identified a sample set of instructors and courses through which a comparison could be made. These courses and instructors established a platform from which the three objectives could be studied. The three objectives were interdependent in as much as the members of the committee and authors of the second proposal believed that the quality or success of an education is not isolated from the support services provided students prior to or during enrollment nor uninfluenced by the physical environment of the classroom or the technological environment of the online platform. The intention of the project was to use this thin slice of information and apply the conclusions drawn from the study to effect a positive impact on the services provided students.

Objective One: Determine if there is a difference in the quality of education provided through the two distinct delivery methods, Face-to-Face and exclusively Online Courses.

The QIP Steering Committee successfully collected data from a broad spectrum of course offerings at Yavapai College. From the analysis of this data, the committee concluded that within the parameters of our college and this particular study, if outcomes acquisition and final grades are indications of successful learning, then our district-specific research suggests that students receive an *equitable* education in both OL and F2F delivery methods.

Ten faculty members who taught OL and F2F courses agreed to participate in the project. These faculty members taught the same course for both the fall and spring semesters in both formats. Prior to the commencement of the semesters, three course learning outcomes and a midterm learning outcomes' assessment activity were identified and conducted both fall and spring. Faculty agreed to document their time spent on the respective courses, to follow established standards for student and faculty withdrawal, and to administer both an entrance and exit survey in the participating courses. The observations from the data collected follow:

- Mid Term Learning Outcomes Assessment. There is no overall trend to indicate a difference in the acquisition of student learning outcomes due to delivery method. There is a slight difference in the percentage of students who demonstrated the acquisition of the learning outcomes from course to course, but again, not by delivery method. The difference in acquisition is unique to the course, the instructor, and student population. (illustration 1)
- Final Grade Distribution. There is no overall trend in final grade distribution to indicate a difference of successful completion due to delivery method. (illustrations 2, 3a-k)
- Proctored Final Exams. The committee did, however, observe significantly higher grades in online classes when proctored final exams were not a requirement. (illustration 4)
- Attrition. More students are withdrawn from OL than those in F2F classes. (Illustration 5)

Conclusions and recommendations from the QIP Steering Committee were drawn from data collected from mid-term and final grades from ten courses during the 2011-2012 academic year. Our original plan included fifteen different courses and data collected over two academic years. During the Spring Semester 2011 two factors brought about the elimination of two semesters worth of data, SP2011 and FA2012. Upon the conclusion of the Spring 2011 semester, the committee discovered a series of discrepancies in practice and data collection amongst the faculty from different disciplines. To optimize our protocol, we converted this first semester to a trial and built, from our mistakes and differences, a series of uniform contracts and instruments which articulated a standard for criteria and collection. Scheduling also proved problematic as our institution does not always have the demand to offer two sections of any course every semester. Finally, the actual deadline for the QIP Final Report was shared with the steering committee. Because the Final

Report for the project would be due prior to the commencement of the Fall 2012 Semester, there was no possibility of including data from the Fall Semester 2012 into the final analysis.

In addition to data on mid-term and final grades, our original plan included a longitudinal study to identify student success as affected by the delivery method of prerequisite courses. The committee was interested in whether or not the delivery method of a prerequisite like English 101 would affect success in writing- intensive humanities course, or if a discipline-specific prerequisite like Biology 101 would affect student success in Biology 201. Unfortunately, we were unable to collect this data as our study was driven by the identified courses and not the individual students in the courses. One challenge, originally presented to the Steering Committee by the Faculty Senate, was the analysis of the delivery methods through indicators other than grades or outcomes acquisition. This proved to be an insurmountable challenge as the committee could not identify another manner in which to quantifiably measure *learning*. Finally, the original proposal included the engagement of faculty sub-committees to participate in the evaluation of the data and perform a comparative analysis of the curriculum as approached through both delivery methods. The parameters of the project limited these activities.

The Steering Committee met for a week upon the completion of the Spring Semester 2012 and the QIP. During the discussion, the committee identified the following recommendations, which were presented to the Faculty Senate and the Vice President of Instruction and Student Services.

- Establish a Faculty Peer Review Committee. The QIP Steering Committee identified the need for a peer review process which would work to enhance the offerings of all courses at Yavapai College regardless of delivery method. The Committee also recognized the need to review courses holistically embracing the important relationship between curriculum, instruction, course and program outcomes' assessment. The committee therefore, recommended to the administration the creation of a Faculty Peer Review Committee and process which would enable a review that includes both breadth and depth.
- Require a Proctored Assessment Measure. The significantly higher grade acquisition in online courses that did not require a proctored final exam from those which did have such a requirement encouraged the committee to make a recommendation to support a policy that requires a minimum of one proctored exam during the latter half of the college semester in all OL courses.
- Additional Research. Continue on with the QIP by conducting a Longitudinal Study tracking student success. Investigate the causes of elevated levels of attrition in OL courses as well as the effect of the delivery method on prerequisite courses.

In addition to data captured related to learning outcomes assessment and final grades, students in the participating courses responded to both entrance and exit surveys. The questions for these surveys were drawn from a survey of the literature for best practices and student success in online learning delivery methods. Questions were also built on references made from both student and faculty perceptions. Students were asked questions that related to their preparedness, motivation for a selecting a delivery method, and understanding course requirements. The observations from the data collected follow:

- Delivery Method. Students register for
    - F2F courses by choice 67% of the time.
    - OL courses by choice 34% of the time.
    - OL courses because it fit their schedule 58% of the time.
- Student Preparedness. The majority of the students in the project
    - owned their own computers,
    - had taken online courses from Yavapai College in the past,
    - did not know about or did not participate in an online student orientation,
    - believed themselves to be self-disciplined students with time management skills.

- Extra-Curricular Demands. There is a perception amongst faculty that students over-commit themselves and register for online courses when already overextended in other areas of their life. The Committee found there was no significant difference between OL and F2F students when surveyed about their demands or responsibilities outside of class. (Table 1)
- Student Satisfaction. The majority of the students in both delivery methods understood the expectations of the course and felt the expectations were clearly articulated in the course syllabi.

Conclusions and recommendations from the QIP Steering Committee were drawn from data collected from entrance and exit surveys conducted within the forty identified classes. Our original research plan included an end of the project debriefing with students from the participating classes and open forums on each of our four campuses to glean from students more qualitative information concerning student success and satisfaction by delivery method. Due to the demanding and/or time consuming lives of our students during and after the semester and the overall nomadic existence of our student population, the committee was unable to achieve reasonable participation from both our OL and F2F student participants. However, the Steering Committee was satisfied with the information collected from the two semesters' worth of surveys. During the discussion, the committee identified the following recommendations, which were presented to the Faculty Senate and the Vice President of Instruction and Student Services:

- Require orientation. Survey of the literature and best practices recommends the requirement of an orientation to prepare first-time online students to the academic rigors and technological demands of online coursework. The committee recommends the prerequisite for all first-time online students.
- Consider alternative minimum enrollment requirements for F2F sections. OL courses allow for registration throughout the district; however, when students who need or desire F2F delivery are forced to attempt an OL course because of low enrollments in F2f sections, causing cancellations, student success may be compromised. Higher attrition rates in OL courses may be due to students being forced into a modality which may not be appropriate for their learning styles or abilities. The committee recommends the consideration of various approaches to provide opportunities for F2F courses.

Objective Two: Determine if Yavapai College provides student services to support students in both online and face-to-face classes.

Representatives from the Student Services at Yavapai College tracked the use of academic advisement, Learning Center, Tutoring, and Disabilities Resource services for those students registered in the forty classes identified for the QIP. Data was collected to ascertain the use of student services available to students both face-to-face and in an online or distance format. From the analysis of this and the data collected from student exit surveys, the QIP committee concluded that within the parameters of our college and this particular study, there is no overall trend to indicate a difference in the use of services by students registered in OL or F2F courses. We made the following observations from the data collected:

- Academic Advisement. A slightly higher percentage of students from the identified classes sought F2F academic advisement rather than online options. However more than sixty percent of students registered in the forty classes tracked sought academic advisement.
- Learning Center and Tutoring. Although students in F2F courses utilized academic support services at a slightly higher percentage than students registered in OL courses, neither students from F2F or OL courses optimize the Learning Center and Tutoring opportunities available to them. (Table 2)
- Disabilities Resources. Student Services and thus the Steering Committee were unable to analyze or evaluate this data as students do not always identify themselves as eligible for accommodations.

The QIP Steering Committee successfully collected data on student utilization of Advising, Learning Center services, Tutoring, and Disabilities Resources of those students registered in the ten courses identified during the 2011-2012 academic year. Our original proposal included a sub-committee of faculty and staff to perform a far more extensive evaluation of our Student Services department. Our original objective was to identify the best methods to advise and support students for all delivery methods. This plan included evaluation of our outreach and recruitment activities, tracking of appropriate guidance through placement testing in addition to the services provided to students in our TRIO programs. This original objective was unreasonable when the educational objective became focused on a tight comparative analysis of the two distinct delivery methods. During the spring 2011 semester, the composition of the QIP committee changed due to a reorganization of the college administration. With this change of representation from Student Services came a more focused objective for the Student Services component of the project.

The Steering Committee met for a week upon the completion of the Spring 2012 Semester and the QIP. During the discussion the committee identified the following recommendations which were presented to the Faculty Senate and the Vice President of Instruction and Student Services.

- Enhance Academic Advisement. The committee recommends further research into best practices for advising students interested in online learning; furthermore, the committee recommends student service leadership determine a best model to support college programs.
- Enhance Learning Center, Tutoring and Library availability and awareness. Both F2F and OL course offerings are scheduled to meet student access and need. However Student Service access is limited and restrictive to students who have commitments during regular working hours. The committee recommends service availability to align with student need.
- Expand Testing Center Services. The college testing center is administered by Student Services. The significantly higher grade acquisition in online courses that did not require a proctored final exam from those which did have such a requirement encouraged the committee to make a recommendation to support a policy that requires a minimum of one proctored exam during the latter half of the college semester in all OL courses.
- Require Orientation to Online learning. Surveys of the literature and best practices recommend the requirement of an orientation to prepare first-time online students to the academic rigors and technological demands of online coursework. The committee recommends the prerequisite for all first-time online students.

Objective Three: Evaluate the architecture of the online learning environment, both from infrastructure and course development standpoints.

As predicted, the most challenging and complicated aspect of our project was the objective focused on our online learning environment. The evaluation of a moving target required flexible and dynamic analysis. The manager of the Teaching and eLearning Support (TeLS) Department directed this third component of the QIP. This fraction of our research did not begin as a comparison of delivery methods. Data was captured to evaluate the infrastructure of the online services provided to both faculty and staff. These services include but are not limited to the College Website, the College Portal, the Learning Management System (hereafter Blackboard or *BBL*), technical support and training for users. To evaluate these services, the TeLS Department captured quantitative data which the committee agreed would provide a reasonable assessment of the College's foundation in this area. This data came from work order requests, student, and faculty surveys. In addition to a survey of the literature, the Steering Committee employed, *Maintaining Academic Integrity in Online Courses* and *Yavapai College Recommended Guidelines for Online Instructions*. (See appendix)

During the project, TeLS moved from the college ITS Department to Instruction and Academic Support. Yavapai College upgraded the Learning Management System to Blackboard Learn 9.1 during Summer 2010. This was followed by the purchase of new hardware (servers) to accommodate the newer version of *BBL*. The Yavapai College website evolved during the course of the QIP to further support distance education. There is now a link on the main YC Website that makes Online Learning more visible through two menu options. The improvement of the college website continues as the college maintains equivalent student services and support to students interested in OL and F2F courses and programs. The Yavapai College Portal targets student business where nearly every service and source of information can be accessed. Each service area has a webpage providing an explanation of its role and what it offers to students. Once within the Portal, access to the Learning Management System is one click away. Interactive support and a formal orientation to online learning are available within the college portal. In order to serve the continuous growth in the online enrollment, Yavapai College procured an online subcontractor for 24/7 Tier 1 Helpdesk support. Due to severe issues of non-performance, Yavapai College is now researching other third party vendor options.

The TeLS Department at Yavapai College was created to serve online education. This department serves both faculty and students by providing immediate technical support, F2F and OL training and education. Requests can be made through email, telephone, or by walk-in visits to the office. The TeLS team consults with the ITS group and conducts regular research to ensure that possible solutions are reliable. During 2011-2012 rather than assisting student themselves, the subcontractor forwarded work orders to the TeLS team for completion. TeLS produces the technical support information published on the college website and within the courses themselves. Each online course contains a navigation element that directs students to an online learning support webpage. The resources listed on this website correspond with best practices for learner support and resources in online learning. The TeLS Department maintains a work order data system that contains relevant information to maintain quality support. After an analysis of the data captured during the previous two academic years, the Steering Committee made the following observations:

- Method Requested. The majority of the requests for service came to the TeLS department either through email or telephone communications. Less than fifteen percent of the requests for service or assistance were made by face-to-face or walk-in requests.
- Population Served. Students made up less than twenty five percent of the population served by the TeLS department. Student exit surveys indicate that students seek assistance from the college learning centers or the ITS Helpdesk more often than from direct contact with the TeLS Department. Additionally, the student exit surveys indicate that approximately half the time the ITS Helpdesk was unable to assist or solve the technical problem. Less than ten percent of the calls came from staff. Two thirds of the requests documented during the two-year period came from faculty.
- Services Provided. Faculty requests to link sections, add users to courses, get specific user information made up close to sixty-two percent of the services requests. Technical issues, server problems, error messages, disappearing files, or more specifically, non-human errors made up close to thirty percent of the calls while actual requests for on-demand trainings made up little more than sixteen percent of the calls. On-Demand training provided by the TeLS Department required immediate assistance and less than thirty minutes in duration. Documented trainings are organized and scheduled activities which require more than thirty minutes. During the two academic years during which data was captured for this project the TeLS Department provided close to one thousand hours of formal trainings. This does not include the on-demand, informal mentoring or assistance provided on a daily and one-to-one basis. (Table 3)

The Steering Committee met for a week upon the completion of the Spring 2012 Semester and the QIP. During the discussion, the committee recognized that the evaluation of the online instruction at Yavapai College supported the recommendations previously identified. The Steering Committee also identified

concerns specific to the online course offerings at Yavapai College. The committee honors and respects the need for Academic Freedom. It is imperative that no policy impose unreasonable restrictions or become too prescriptive. However, the responsibility to provide a stable learning environment and to maintain academic integrity require further address at Yavapai College; therefore, the Steering Committee made the following recommendation to the Faculty Senate and the Vice President of Instruction and Student Services:

- Student Authentication. The Higher Education Opportunities Act (HEOA) requires institutions that offer courses or programs through distance education to verify or authenticate that the students who register are the same who participate and receive the academic credit. To ensure and enhance this requirement, the Steering Committee recommends that a policy be established to require the entrance of all online offerings at Yavapai College be made first through the College Portal and then the established learning management system, *BBL*, using a secure login and pass code.
- Academic Integrity. The Steering Committee recommends the establishment of a policy that requires in all OL courses a minimum of one proctored exam during the latter half of the college semester.

Commitment to and Engagement in the Quality Initiative

The original Quality Initiative proposal submitted to the HLC in May 2010 identified a Steering Committee of twenty members. This committee included seven representatives of the administration and thirteen faculty members. With a change in leadership in the Office of Instruction a new committee was formed and a new proposal submitted in the Fall of 2010. The new committee, like the revised proposal, provided a more focused direction for the project. Initially the new committee included the Director of Institutional Research and the Vice President of Instruction and Student Services. However, as the project moved forward, these two members stepped back and encouraged greater faculty leadership. The committee was chaired by a faculty member and included four faculty members and two members of the administration.

Amy Ilona Stein, PhD Environmental History and Quaternary Science, Professor of History and Humanities. Dr. Stein joined Yavapai College twenty-one years ago. During her tenure in addition to her faculty position, she has served as Director of the Adult Basic Education Programs and Dean of the Visual and Performing Arts Division. Dr. Stein has served on the Curriculum, Student Learning Outcomes Assessment, College Honors Program, Developmental and General Education Committees. Dr. Stein served as chair of the Quality Initiative Committee.

Matthew Pearcy, PhD Molecular and Cellular Biology, Professor of Biology. Dr. Pearcy joined Yavapai College four years ago. In addition to his faculty responsibilities he serves on the Curriculum Committee. Dr. Pearcy served the Quality Initiative Committee by leading the quantitative research and data analysis for the project.

Stacey Hilton, MS Communication Education and Mass Media Technology, Manager, TeLS Department. Ms. Hilton joined Yavapai College fourteen years ago. She serves the college on the Great Ideas for Teaching Center Advisory Committee. She serves Yavapai College and County on a variety of other committees including the Yavapai County Educational Technology Consortium. Ms. Hilton represented the TeLS and ITS departments on the Quality Initiative Committee.

Sandra Garber, MA Educational Psychology and Counseling, Associate Dean for Student Services. Ms. Garber joined Yavapai College five years ago. She provides leadership and supervises all professional staff in Student Services. This department includes but is not limited to; Admissions, Enrollment Services, Student Records, Academic Advising, Counseling, Career Services, Financial Aid, Residence Life, Learning Center Services, Disabilities Resources, and the TRiO Grant Programs. Ms. Garber represented Student Services and the administration on the Quality Initiative Committee.

Constance B. Gilmore, MA History, MS Instructional Technology, Instructional Dean. Ms. Gilmore joined Yavapai College twelve years ago as a Communications and Humanities instructor. In addition to her faculty and administrative duties she served on the Curriculum, Developmental and General Education committees. Ms. Gilmore retired in 2011 but continued to represent faculty and instruction on the Quality Initiative Committee.

Tina Luffman, MA Rhetoric and Composition, Professor of English and Communications. Professor Luffman joined Yavapai College eleven years ago. During her tenure in addition to her faculty position, she has served as Learning Center Coordinator and GED Coordinator working with Project IDEAL, (Improving Distance Education for Adult Learners). Professor Luffman has served on the Student Learning Outcomes Assessment and the Developmental Education Committees. Professor Luffman represented the faculty and instruction on the Quality Initiation Committee.

Mark Woolsey MA Speech Communication, Professor of Speech Communications. Professor Woolsey joined Yavapai College twelve years ago. In addition to his faculty responsibilities he has served on the Student Learning Outcomes Assessment Committee for ten years, chairing that committee for the last three. Mr. Woolsey represented the faculty senate on the Quality Initiative Committee.

In addition to the three members of the steering committee who assisted in the collection of data, eight faculty participated in the project. This group represented faculty from three of the four Yavapai College campuses. The years of experience teaching in the classroom ranged from twenty-five year veterans to first year instructors. The experience teaching in an online format ranged from eleven years to no experience prior to joining the study. The motivation to begin teaching online varied as much as experience. Some instructors began teaching online out of interest, some due to financial motivation; some were required to build online courses by their administrator. The participating faculty in the study included:

- Molly Beauchman, PhD, Mathematics Professor
- James Bostwick, MS, Mathematics Professor
- Barbara Davis, PhD, English Professor
- David Dolatowski, PhD, Music Professor
- Marie Hardman, BSN., RN., MS., Nursing Professor
- Lindsay Henning, M.Ed., Associate Professor
- Nancy Schafer, MA, English Professor
- Andra Pottenger, MS, RD, Professor of Allied Health

All faculty were invited to participate in the Quality Initiative Project. The chair of the Quality Initiative Project presented at several faculty in-service and in-house training institutes to encourage participation. Faculty demands limited participation; however, during the last semester of the project, an online survey was made available to all faculty to capture data on their perceptions of OL and F2F delivery methods. Of the 130 faculty who responded to the survey, seventy-one were full time faculty, fifty-nine were adjunct. Seventy-nine of those who responded taught online for Yavapai College. From this survey, data captured within the project, and communications throughout the process, the Steering Committee learned the following important information and identified the greatest challenges for the future:

- The objective of our project was to conduct quantifiable research through which an educated discussion of the topic could become possible. It requires courage, communication, and the confidence to compromise if an institution is to effect positive change. The greatest challenge may be in facing opinion or belief-based perceptions which cannot be swayed as the college moves forward in the expansion of online offerings.
- The majority of our faculty
    - believes in the legitimacy of online instruction

- is receiving the training they need and want from our TeLS Department. These trainings come in the forms of F2F trainings and informal mentoring.
- is satisfied with the services and support provided by our TeLS department.
- is satisfied with the Blackboard 9.1 learning management system.
- has experience, education, training and knowledge of online instruction and, therefore, do not believe it is necessary to mandate formal training in order to teach online courses for Yavapai College.

- Issues which may cause divisiveness amongst the faculty when addressing the perceptions or realities of F2F and OL delivery methods. These issues include but are not limited to:
  - The inconsistencies in the standards or criteria employed by academic deans.
  - The variations in enrollment or class-caps from department-to-department, class-to-class, and sometimes section-to-section.

Resource Provisions

Direct costs for the Quality Initiative Project did not exceed $50,000.00. The QIP was a concentrated and tightly focused component of the entire Pathways reaccreditation process. Because the project was born out of concern from within the faculty on the validity and equitability of the online delivery method as the college expanded our online offerings, the college focused the majority of financial allocation on human resources, in particular faculty compensation. The primary investment made during the two-year course of this project was compensation for faculty participants in the research project. It was imperative that this study be conducted within our delivery area, with our student body, and our conditions. Rather than contract with outside consultants, this project built internal credibility and relevance by engaging our own faculty and acknowledging their worth and contribution beyond their contractual responsibilities. During the two year course of the project, the college invested close to $32,000.00 on faculty compensation.

The indirect costs of the QIP were not calculated. The manager and staff of the TeLS department participated in the capture of data as part of their assigned duties each semester. The Associate Dean of Student Services along with individual academic advisors, Learning Center staff, and the Director of Disabilities Resources researched utilization of special services by retrieving AdvisorTrak and TutorTrak, data. Institutional Research specialists and the Vice President of Instruction and Student Services, along with his staff also participated.

The only other activity to incur direct cost was travel to national conferences. $18,000.00 was required to attend conferences hosted by the HLC through which instruction and guidelines for the new accreditation process were provided. With the dramatic reduction of Arizona State funding to community colleges, the need to employ financial resources prudently was paramount. First and foremost, Yavapai College chose to support the endeavors of faculty participants with the most direct impact on students and education within the district.

Plans for the Future

Based on the results of the QIP Comparative Analysis, the Chair of the Steering Committee has outlined action plans for the following recommendations and will present these to the Faculty Senate and Vice President of Instruction and Student Services.

- **Continued Research.** The research project outlined for this quality initiative far exceeded the temporal parameters of the accreditation process. The data captured, and thus conclusions drawn, are incomplete. The QIP Steering Committee recommends continued research to realize the full potential of the project. A longitudinal study for which individual students could be followed from their placement testing through academic advisement and a complete program of study would provide insight on the effect of delivery methods and learning acquisition. This project could be broadened to include the hybrid delivery method in addition to OL and F2F courses. Such a project must include more directed

study into the causes or conditions for significantly higher levels of attrition in OL courses. Research and implementation of best practices of academic advisement for online students and programs would benefit from this continued research if addressed in tandem or prior to the commencement of such a study.

- **Establish a Faculty Review Committee.** There will always be a need and desire for traditional educational opportunities in Yavapai County. The QIP Steering Committee identified the need for a peer review process which would work to enhance the offerings of all courses at Yavapai College regardless of delivery method. The QIP Steering Committee recommends the identification of a faculty member to orchestrate the new process. Review Committees should be established by departments. The composition of the committee should include two faculty members from within the department /discipline and one from an outside discipline. Members shall commit to a three to five year term. During a term all courses from within the discipline will be reviewed. The review will begin with a self-assessment or review by each instructor teaching the courses identified. A standard rubric built on an outline of best practices, course, and program outcomes will be the foundation for the review. The review will include a discussion with the faculty review committee during which time conversation will embrace course evaluations and peer observations. The review must include, but not be limited to; Course Outlines, Program Outcomes, Student Learning Outcomes Assessment, Final Grades and completion data.
- **Policy.** At present there are no guidelines or parameters set for instruction or access to the virtual classroom. Data collection from the QIP and HEOA support the recommendation to set policy which would require entrance into online courses through the College Portal and the established learning management system. The establishment of this policy and one which would require a minimum of one proctored assessment activity during the second half of the semester would meet student identity and authentication mandates and would maintain the credibility of our college.
- **Standards.** If not policy, then criteria and guidelines should be established to create an equitable environment for faculty teaching in all delivery methods and students from all areas of the district. Students who would best be served by F2F instruction should not be forced into an inappropriate delivery method because of inflexible requirements of minimum enrollment. Nor should faculty members be faced with inequitable workloads from department to department due to the delivery method of assigned courses. Further reflection and discussion is encouraged to alleviate conflict or divisiveness concerning the implication of OL or hybrid instruction.
- **Faculty Training.** Yavapai College adheres to a rigorous hiring process for full-time continue-contract faculty members. Our current preferred requirements include experience in online education. However, part time instructors hired by individual academic deans or lead faculty do not always have this preferred experience; therefore, the committee recommends training for instructors full-time or part-time, who do not have technical skills to adapt to a virtual learning environment and/or have no online teaching experience.
- **Student Orientation.** The committee, supported by best practices and a survey of the literature, believes that first-time OL students would benefit from a required orientation to familiarize them with the essential elements of time management, computer literacy, and the online learning environment. The committee therefore recommends that the development of an OL orientation to online learning be a prerequisite to any course taught online.
- **Library and Learning Center.** At present the college provides academic support through the Library, Learning Center, and other student services. Conventional wisdom leads us to conclude that better utilization of these resources would also enhance student success. However, access to these venues is restricted to traditional daytime and limited evening hours. This does not meet the needs of our demographic. The committee recommends further discussion of the development and augmentation of access to these services. Once these services are enhanced to equitably support students district-wide, the college needs to prioritize advertising to encourage student use of the Library and Learning Center in all delivery methods.

Appendix I

Illustrations:

Illustration 1. This data shows there is no overall trend to indicate a difference in the acquisition of student learning outcomes due to delivery method. There is a slight difference in the percentage of students who demonstrated the acquisition of the learning outcomes from course to course, but again, not by delivery method. The difference in acquisition is unique to the course, the instructor, and student population.

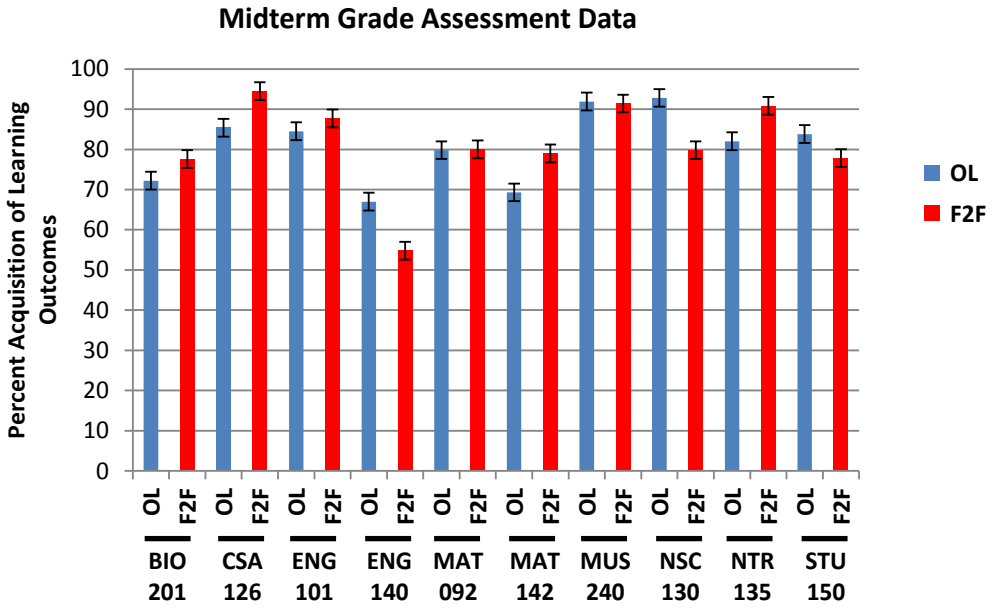
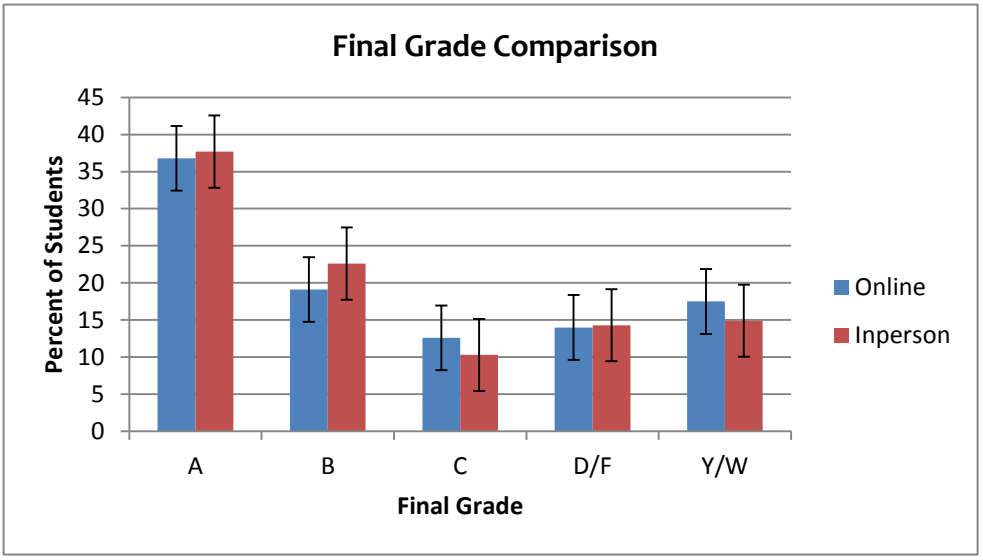
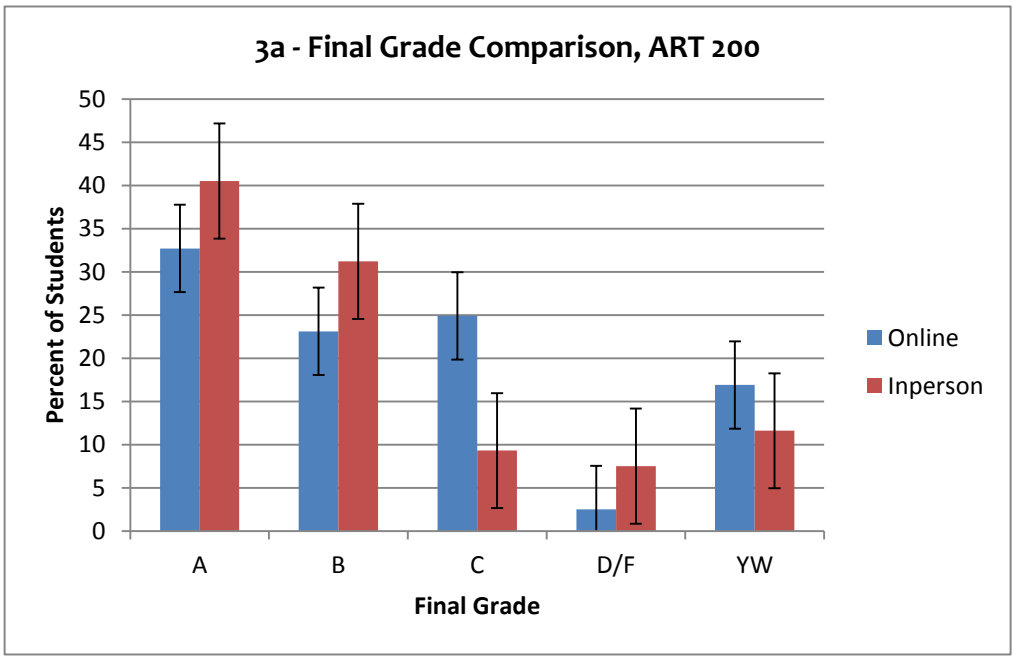
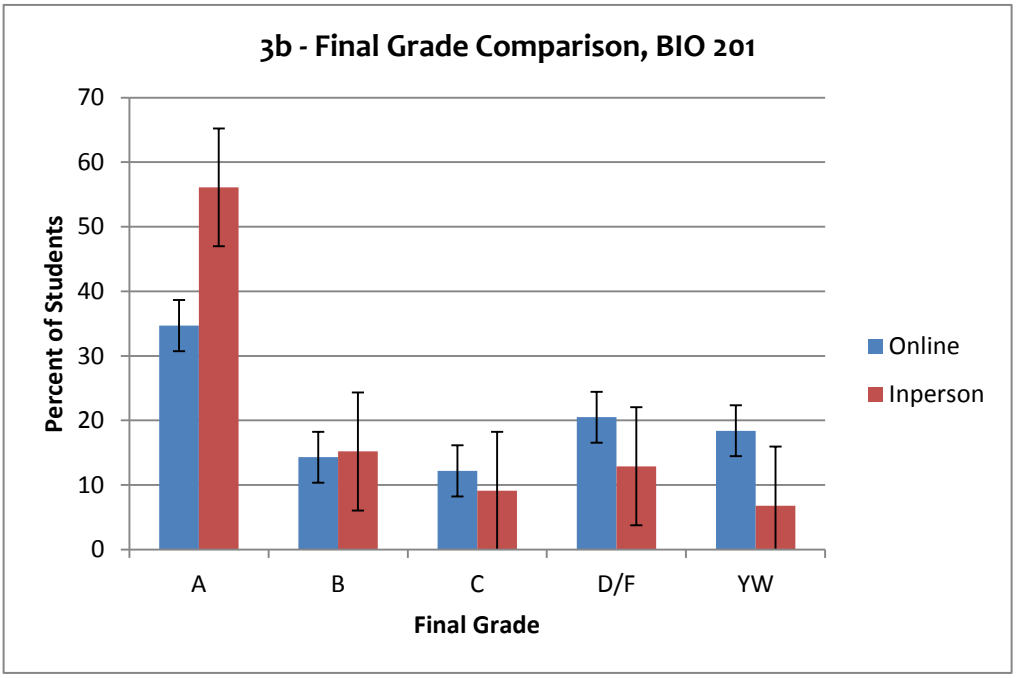


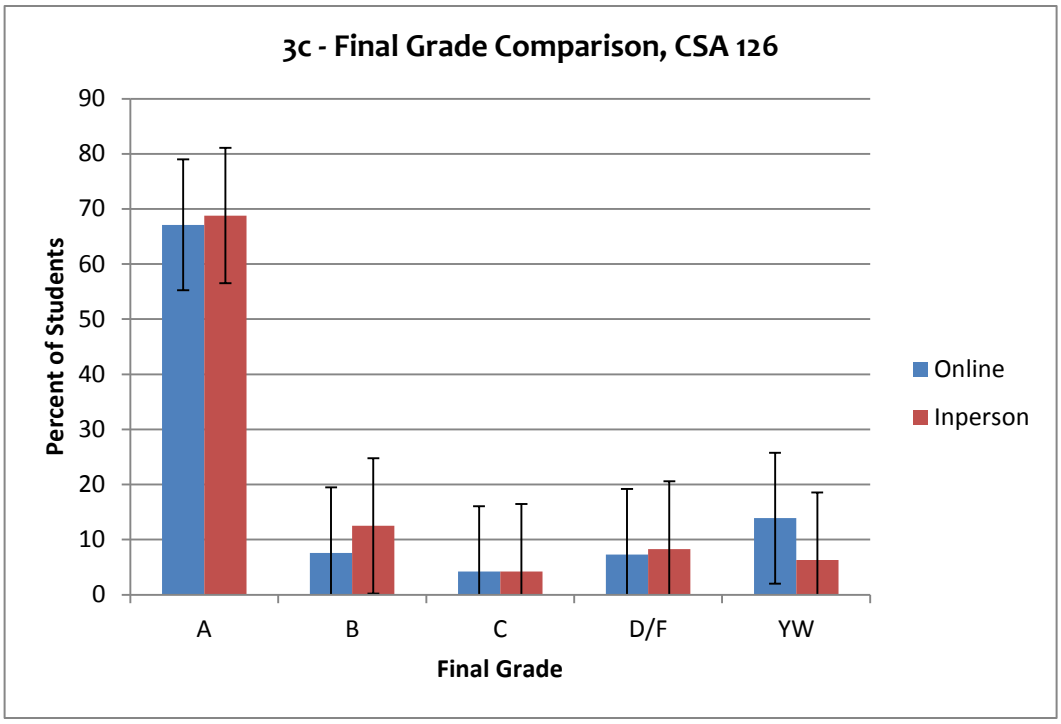
Illustration 2. This data shows there is no overall trend in final grade distribution to indicate a difference of successful completion due to delivery method.

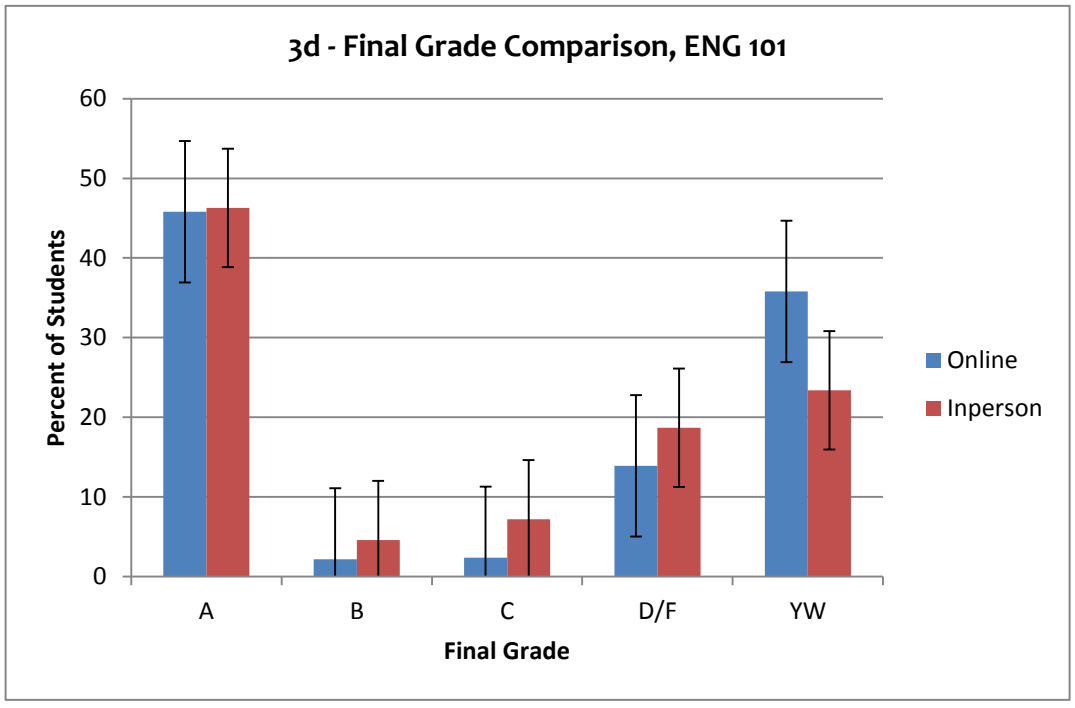


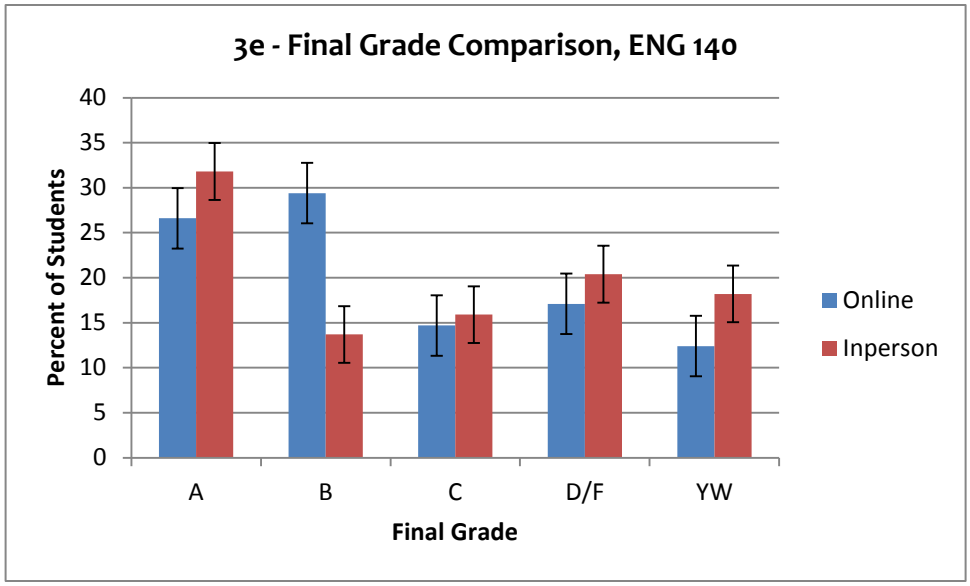
Illustrations 3a-3k. These illustrations represent data collected in the individual classes.






3c - Final Grade Comparison, CSA 126
Percent of Students
90
80
70
60
50
40
30
20
10
0
A
B
C
D/F
YW
Final Grade
Online
Inperson


3d - Final Grade Comparison, ENG 101
Percent of Students
60
50
40
30
20
10
0
A
B
C
D/F
YW
Final Grade
Online
Inperson


3e - Final Grade Comparison, ENG 140
Percent of Students
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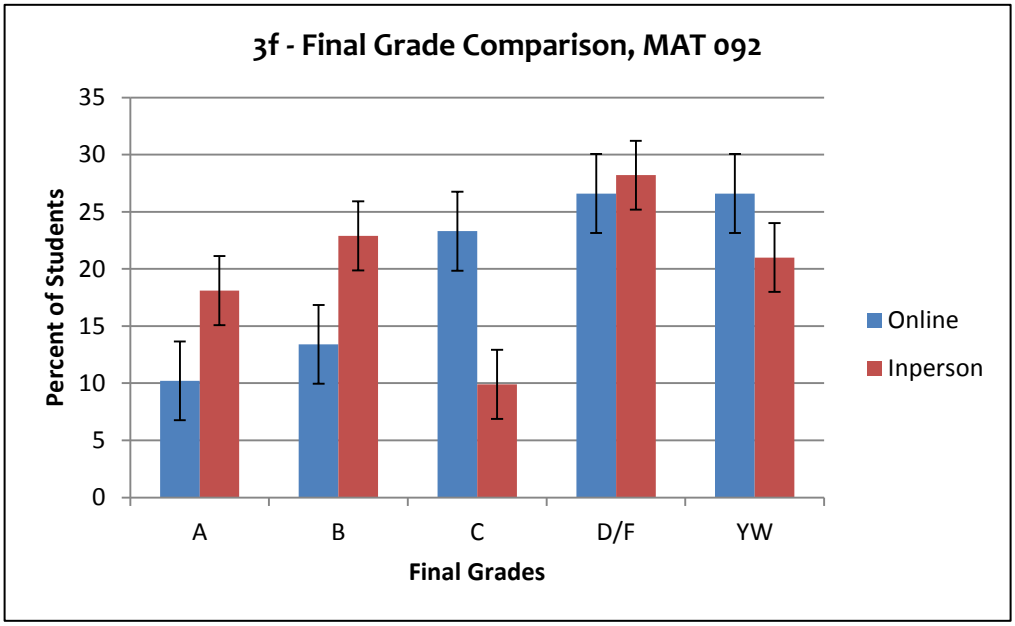
35
30
25
20
15
10
5
0
A
B
C
D/F
YW
Final Grade
Online
Inperson


3f - Final Grade Comparison, MAT 092
Percent of Students
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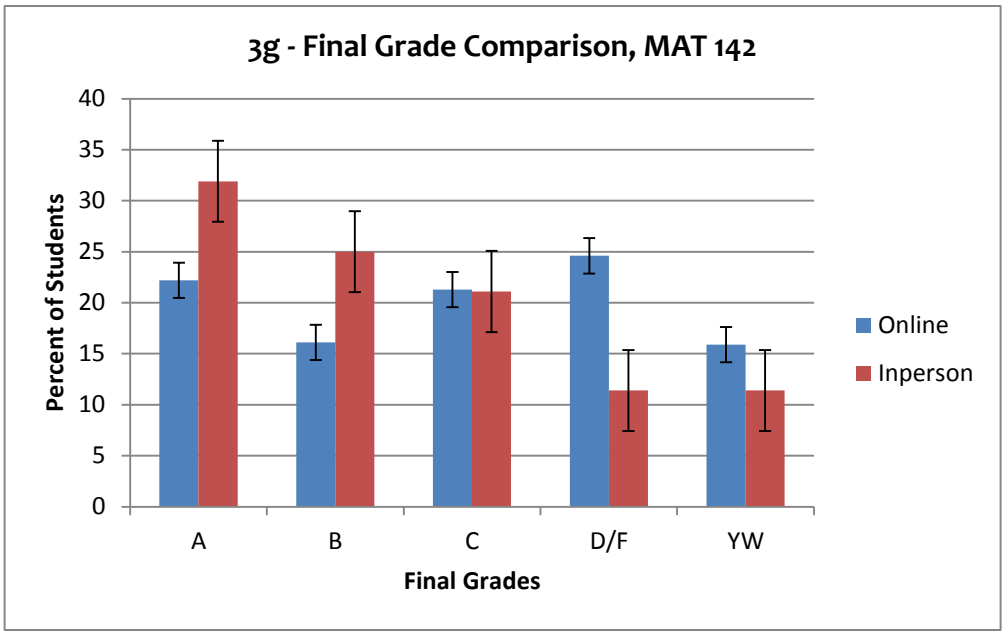
25
20
15
10
5
0
A
B
C
D/F
YW
Final Grades
Online
Inperson


3g - Final Grade Comparison, MAT 142
Percent of Students
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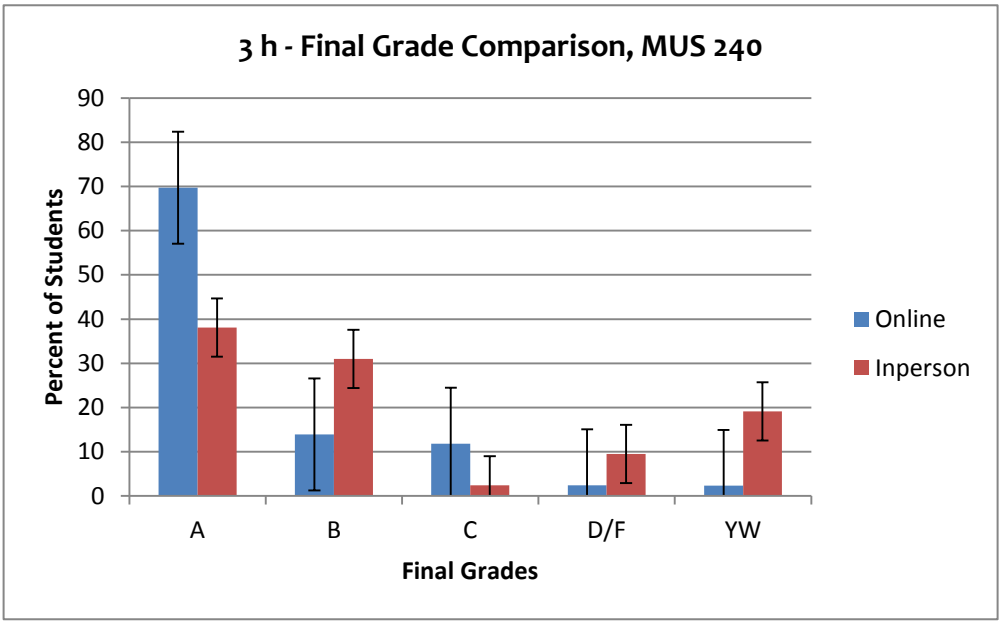
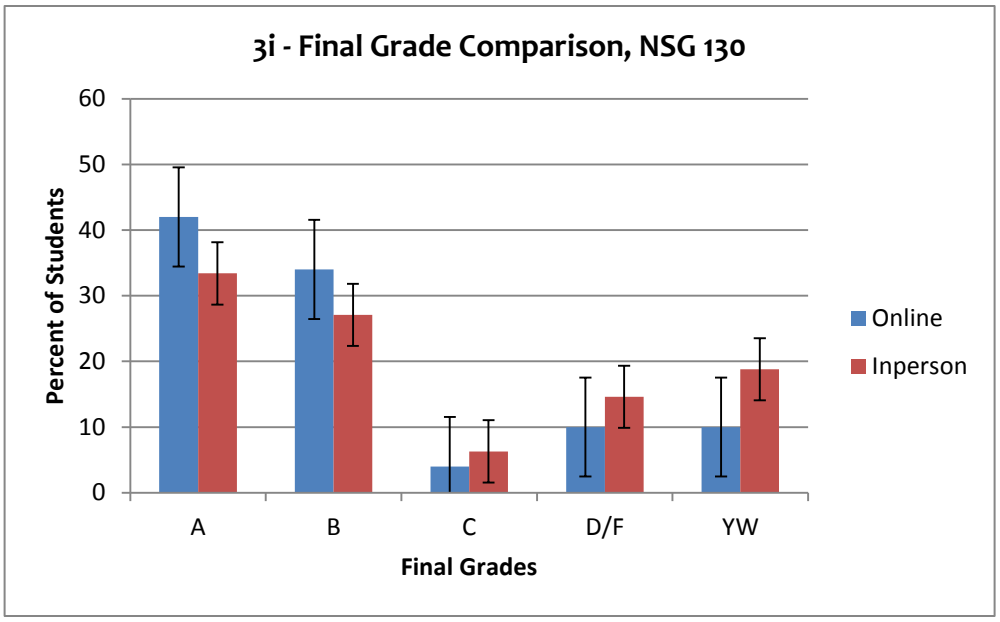
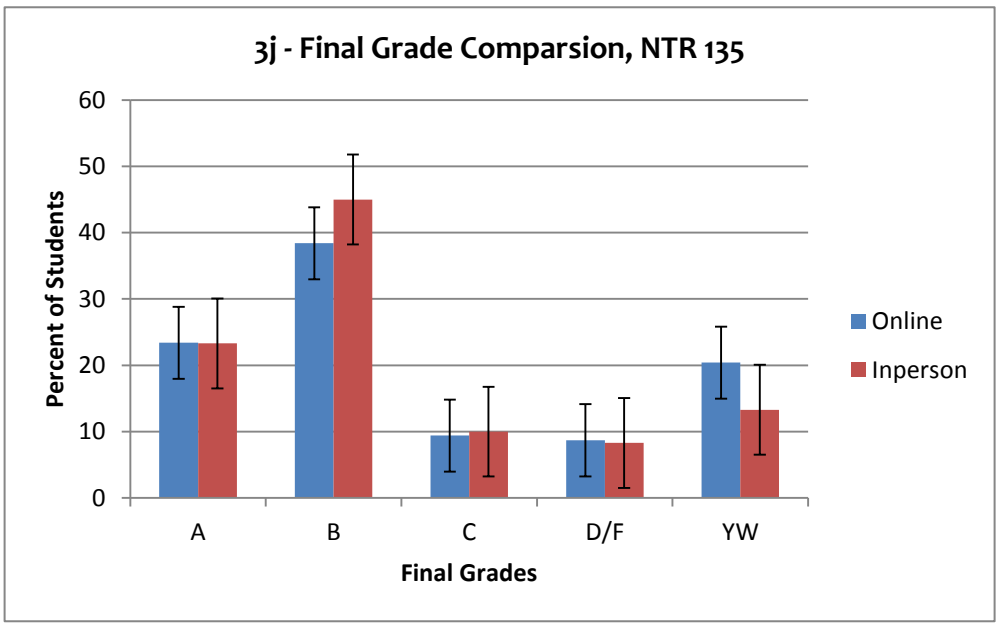
35
30
25
20
15
10
5
0
A
B
C
D/F
YW
Final Grades
Online
Inperson


3 h - Final Grade Comparison, MUS 240
Percent of Students
90
80
70
60
50
40
30
20
10
0
A
B
C
D/F
YW
Final Grades
Online
Inperson


3i - Final Grade Comparison, NSG 130
60
50
40
30
20
10
0
Percent of Students
A
B
C
D/F
YW
Final Grades
Online
Inperson


3j - Final Grade Comparsion, NTR 135
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50
40
30
20
10
0
Percent of Students
A
B
C
D/F
YW
Final Grades
Online
Inperson

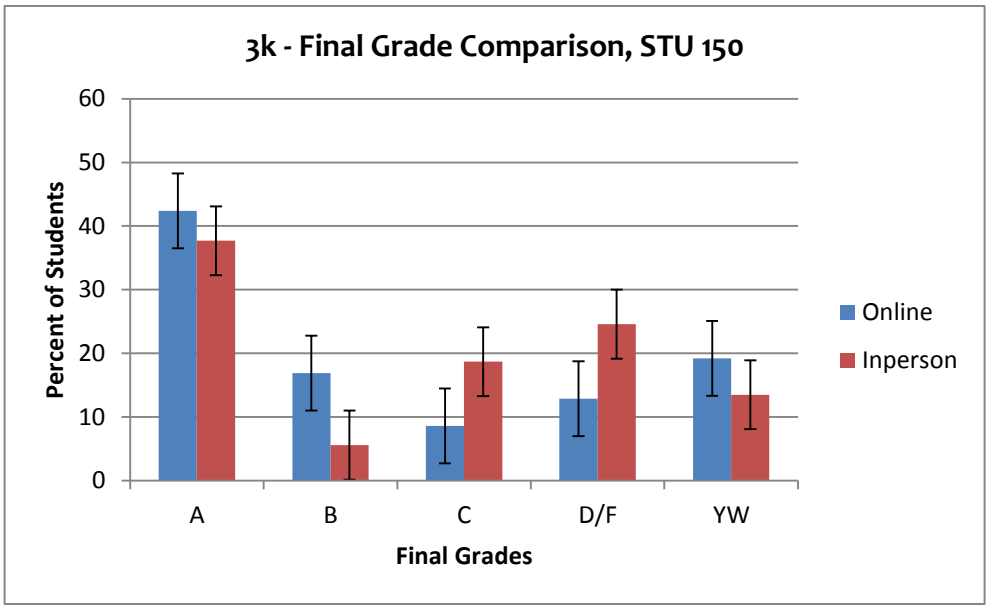


Illustration 4. This data demonstrates significantly higher grades in online classes when proctored final exams were not a requirement.

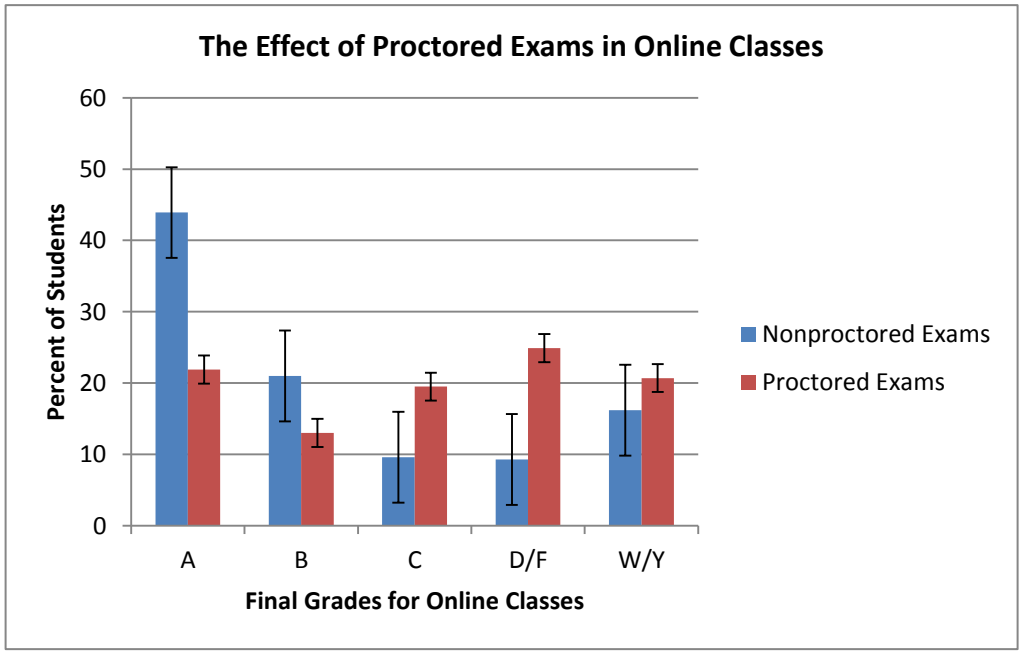
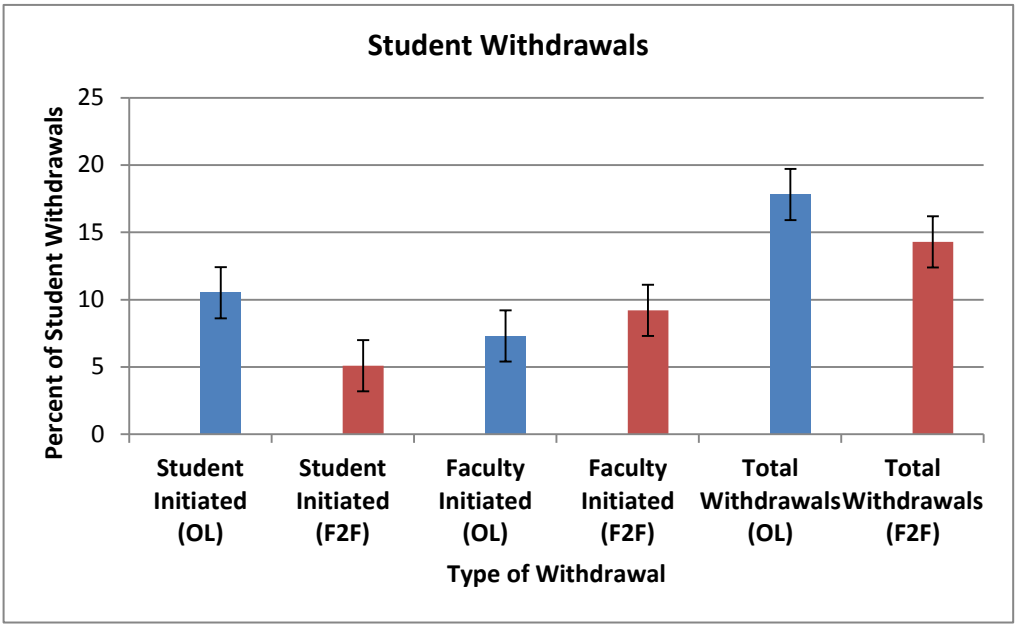


Illustration 5. This data illustrates that more students are withdrawn from OL than those in F2F classes.



Tables:

Table 1. Data collected from student surveys shows there is little difference in the extra-curricular temporal demands of F2F and OL students.

In addition to my studies at Yavapai College, I spend _____ hours a week on work and /or family responsibilities.				
	Entrance Survey		Exit Survey	
	OL	F2F	OL	F2F
0-10 hours	4%	6%	6%	11%
11-20 hours	9%	14%	7%	15%
21-30 hours	14%	16%	11%	11%
31-40 hours	16%	15%	17%	16%
41-50 hours	24%	18%	17%	13%
51-60 hours	10%	10%	16%	8%
61 or more hours	23%	21%	26%	25%

Table 2. This table shows the percentage of students who utilize Student Services.

Select all of the services that you have used this semester		
	Exit Survey	
	OL	F2F
Academic Advising	52%	61%
Student Group Advising Session	3%	2%
Learning Center Services	21%	51%
Disability Resource Services	1%	2%
OL or F2F writing tutor	12%	7%
None of these services	40%	30%

Table 3. This table illustrates the support and services provided through TeLS.

Type of Service Requested			
	Faculty Support	On Demand Training	Technical Issues
AVERAGE	61.8%	16.5%	27.7%
Who Requested the Service			
	Faculty	Students	Staff
AVERAGE	66.7%	23.6%	9.7%
How the Request Was Made			
	Email	In Person	Phone
AVERAGE	45.1%	12.7%	42.1%

Appendix II

HLC Pathways for Continued Accreditation

Comparative Analysis of Online and Face to Face Learning

The mission of Yavapai College is to provide high quality, convenient and cost-effective learning opportunities for the diverse populations of Yavapai County. In this age of rapidly evolving communication technologies, Yavapai College like other institutions, nationwide, embraced the possibilities to fulfill our mission through online instructional innovations. Online courses at YC have increased by 450 percent in the past five years. During the Spring Semester of 2010 more than 27% of student enrollment was served by online delivery methods. As student requests for online learning are met by faculty and increased course offerings, it is imperative to reflect on the efficiency of this new instructional mode for college education. Other methods of delivery are not static nor are the culture and conditions in Yavapai County. Therefore, a review of our primary delivery methods of instruction shall be conducted to ensure they are effective, engaging, appropriate and relevant to the needs of our population.

A comparative analysis of Online and Face to Face Learning will provide insight into our institution's services. This project will begin with and focus on education but shed light on every aspect of our service to students. An endeavor such as this will require more than reflection in the classroom or on the platform. Curriculum and Assessment precede and succeed delivery, and therefore must be a component of this study. Student Services, recruitment, advising, and support are also intrinsic to student success and thus are included in our holistic evaluation. The information technologies systems provided to students and professors are the venue for online learning. The college plans to survey the effectiveness and stability of these structures.

An analysis of these three facets of education at Yavapai College will shed light on the services afforded our students. Yavapai College was founded to provide our community with sound traditional educational opportunities. There will always be a need and desire for face-to-face learning opportunities in Yavapai County; however, online learning is here now and is definitely an increasing part of our future. We must seize the opportunity to assess our delivery methods and establish criteria and guidelines for our continued commitment to quality educational opportunities for residents of Yavapai County.

Primary Outcomes of the Quality Initiative Project

1. Determine if there is a difference in the quality of education provided through the two delivery methods.
2. Identify the best methods to advise and support students for all delivery methods.
3. Evaluate the architecture of the online learning environment, both from infrastructure and course development standpoints.

This Quality Initiative Project will be led by a steering committee of nine. The Chief Academic Officer, the Director of Institutional Research, and the Dean of Student Affairs will represent the administrative staff. Five full-time faculty members and the Manager of Technology Enhanced Learning Services, (TELS) will represent all facets of instruction. All members of this committee will also serve on Assurances committees to guarantee communication and cohesion between the two facets of the HLC Accreditation Process.

To determine if there is a difference in the quality of education provided through the two delivery methods, the steering committee will set parameters and identify a focus that will provide information reflective of the entire district. Criteria, guidelines, and instruments for this comparison will be developed during the first stage of the project. Subcommittees led by faculty will participate in the gathering of information including, but not limited to, that already accumulated through our Student Learning Outcomes Assessment activities. Additional strategies for gathering quantitative and qualitative information on both curriculum and assessment measures and activities will be developed to supplement the quantitative data.

It is impossible to predict all the potential challenges that might arise during the course of a research project; however, the steering committee identified three issues of concern. The first challenge will be to overcome an assumption that face-to-face instruction is inherently better or more successful than online delivery methods. Second, learning is often assessed by documenting the acquisition of the learning outcomes. One challenge shall be not to limit the concept of *learning* to just a comparison of this acquisition. A final issue addresses academic integrity. How do we ensure that the materials, accumulated as indicators of learning or education, are the products of the actual students? These challenges are only those identified in the early stages of this discussion. This pilot project will certainly encounter more as it progresses.

Once the parameters and focus of the instructional component of the project are outlined, a course of action for the evaluation of Student Affairs' services can be developed. Analysis and evaluation of recruitment, placement, advising and learning support activities will provide additional insight into the success or failure of students in online and face-to-face courses. Parallel to the investigation of instruction, criteria, guidelines and instruments for comparison will be required. These too will have to be tailored specifically for our target and diverse populations. This aspect of the Quality Initiative Project, we predict, will provide more opportunities than challenges. Here the project can focus and acquire information on the impact of a relatively new educational delivery method not previously researched at Yavapai College to this extent.

Recruitment, advising, placement testing, tutoring, and instructing are now all available through new communication technologies. This Quality Initiative Project will also require we evaluate the architecture of the online services, both from an infrastructure and development standpoint. The project will expose the strengths and weaknesses in the structure and establish a gauge by which to evaluate both online and in-house services.

This may be, by far the most challenging and complicated aspect of the project. First and foremost, information technologies systems change constantly, and therefore a topic for research or study dependent upon a technology may change threefold during the course of this project. Questions in this area must remain flexible. A second complication and thus challenge for focus of the project is the variable associated with human or computer error. How do we determine to what degree student success is dependent upon student preparedness, deficiencies in a learning platform, course design, or instruction? Any endeavor attempted in conjunction information technologies may not remain static. The Steering and subcommittees for this Quality Initiative must be prepared to upgrade the proposal and adapt to necessary changes in the process.

Once the first stage of the Quality Initiative Project, the research stage, is completed the Steering and subcommittees will identify and establish standards for instruction, student support services, and technology resources. These standards will be defined to address the needs of professors and students for both methods of delivery. Their implementation will take place during the last year of the Project Calendar. The final stage of the Quality Initiative Project will integrate the findings and standards into Yavapai College long-term planning goals.

Scope and Significance of Comparative Analysis

Continuous analysis and evaluation of our instructional methods is not only relevant but necessary. Communities change; but communication and education technologies change exponentially and at greater speed, creating a compelling need for a review such as this. A clear understanding of the advantages and disadvantages of online and face-to-face instruction will provide Yavapai College with the appropriate information to meet the needs of our continuously evolving constituency with the rapidly evolving technology.

The role of technology in teaching and learning directly affects all elements of our mission. Ensuring a high quality educational environment is the highest priority at Yavapai College. In the past decade, a Master Plan to renovate our existing campuses and build new centers through the district was completed. With education and student services as our focus, we can now evaluate the architecture of the online learning environment, from an infrastructure, course development and student standpoint, and address any inefficiencies in the overall structure. We will identify where technology can support convenience and cost effectiveness while maintaining a high standard of teaching and learning.

One of the Strategic Operational Priorities for 2009-2010 includes investigation into the further development of online and hybrid learning through expanded course and program offerings and the enhancement of student services online. This operational priority was the impetus for selecting a Quality Initiative project that examines the impact of technology on all aspects of student success.

Yavapai College does not currently have a structure or plan in place to address the rapid changes in technology and the delivery methods available for such options. The method by which the college will proceed in this area must be addressed. From this Quality Initiative Yavapai College can create a clear plan to continuously address institutional-wide growth in an appropriate and informed manner to maximize student success.

The results of this project will enhance our academic core and our ability to provide student support services. General education courses established and designed to articulate to the four year universities, associate degree program requirements and general interest course options are all affected by the development of technological delivery methods and the changing conditions in Yavapai County. This project will provide concrete information from which guidelines and criteria for equitable educational opportunities can be built.

Our institution has a culture of self-assessment and adaptation. Yavapai College will honor the mission to provide a quality education by identifying the best practices for diverse delivery methods. The Quality Initiative could not be more directly focused on the veracity of our commitment to place student learning and effective teaching at the center of our interests. This project will generate reliable evidence to direct strategies for continuous improvement and guidelines for the allocation of financial and human resources.

Through this Quality Initiative Project, the college recognizes the diversity of our constituents and the need to examine the institutions academic and administrative structures to incorporate technology and provide excellent educational opportunities. As technology continues to influence educational practices, it is vital for the college to have strategic initiative and operational priorities to anticipate and respond to changes. As the college continues to develop strategic plans, this Quality Initiative will be intrinsic to the college at it prepares for the future.

Evidence of Commitment and Capacity

The President's Leadership Team identified online learning through enhanced student services and expanded course/program offerings as one of the college's strategic priorities. This strategic priority was the initial Quality Initiative; however, as this was shared with other college constituencies it became apparent that a focused objective concerning technology in education at Yavapai College needed to be addressed. Thus, the decision was made to have the Quality Initiative be a faculty-led process that holistically examines two distinct methods of instructional delivery and students services. This aligns with and expands the college's current strategic priority related to online education.

Examining the role of technology, as it relates to teaching, learning and student services in at Yavapai College, has widespread support. A major part of this Quality Initiative involves detailed communication with internal and external stakeholders to identify what the best practices for distance and face to face education will look like at Yavapai College and how technology in general should be incorporated to enhance all aspects of the services we provide.

Student demand, technological advances, and economic realities resulted in exponential growth of online education at Yavapai College. The college is continually examining ways to provide cost-effective educational opportunities to students, who reside in outlying rural regions of our service area. Online and face-to-face instruction must be examined to insure quality is inherent in any method of educational delivery.

The Vice President of Academic Affairs, Dr. Greg Gillespie, and faculty member, Dr. Amy Ilona Stein, will co-chair the Quality Initiative Steering committee. Tom Hughes Director of Institutional Research and research analyst Sandra Thurman along with faculty members Constance Gilmore, Tina Luffman, Dr. Matthew Pearcy, and Mark Woolsey will continue their service on this committee. As intrinsic components of this analysis are the services provided through Student Affairs, Adrienne Tabar, Dean of Student Affairs will take the leadership role in this aspect of the project. Stacey Hilton, Manager of the TELS Department will drive the portion of the project which deals directly with technology.

Subcommittees of faculty, student services and information technologies staff will participate in the Quality Initiative Project to ensure district wide representation. A budget for the Pathway's re-accreditation model was established to ensure that human and other resources were available. As the information and conclusions from the analysis become available, the results and recommendations from the project will become part of the college's strategic plan and will be linked to the college's budget and resources allocation.

Proposed Timeline

FA 2010:

1. Identify and clarify the Quality Initiative.
2. Establish research teams for facets of the study and organize Quality Initiative teams for cooperative participation with Assurances process.

SP 2011-FA2011

1. Identify variables and methods by which they shall be measured analyzed and evaluated.
2. Determine the sample size and composition of project. Collect the data.

SP 2012-FA 2012

1. Organize and interpret the data

Sp 2013

2. Use data to prepare a set of recommendations for best practices

Appendix III

Maintaining Academic Integrity in Online Courses

COMMUNITY COLLEGE LEADERSHIP FORUM

Maintaining Academic Integrity in Online Courses

Custom Research Brief • January 21, 2011

RESEARCH ASSOCIATE
Karishma Furtado

RESEARCH MANAGER
Aashna Kircher

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V. Course Management Technologies
Networking Contracts

THE ADVISORY BOARD COMPANY
WASHINGTON, D.C.

I. Research Methodology

Project Challenge:

A member institution approached the Forum with the following questions about maintaining academic integrity in online courses:

- ***Methods:*** *What methods do institutions use to ensure academic integrity in online courses? What methods have institutions found to be particularly effective or ineffective?*
- ***Technology:*** *What technology do other institutions utilize to support initiatives to ensure academic integrity for online courses?*
- ***Assessment:*** *How do other institutions track the effectiveness of strategies designed to maintain academic integrity? What metrics do other institutions use to measure this effectiveness?*

Sources:

- National Center for Education Statistics: http://nces.ed.gov/
- Baker, Judy. *Academic Integrity in Online Courses*. 2007. <http://www.slideshare.net/bakerjudy/academic-integrity-in-online-courses>.
- *Best Practice Strategies to Promote Academic Integrity in Online Education*. Rep. UT Telecampus, WCET, and Instructional Technology Council, June 2009. Web. <http://www.wiche.edu/attachment_library/Student_Authentication/BestPractices.pdf>.
- Vendor websites

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I. Research Methodology

Research Parameters:

The Forum interviewed administrators of online education at public, two-year colleges.

A Guide to the Institutions Profiled in this Brief			
Institution	**Geographic Location**	**Carnegie Classification**	**Approximate Total Enrollment (all undergraduate)**
Arizona Western College (Arizona Western)	Southwest	Associate's—Public Rural-Serving Large	8,000
Lower Columbia College (Lower Columbia)	Northwest	Associate's—Public Rural-Serving Medium	4,000
Paradise Valley Community College (Paradise Valley)	Southwest	Associate's—Public Urban-serving Multicampus	10,000
Rio Salado College (Rio Salado)	Southwest	Associate's—Public Urban-serving Multicampus	21,000
Skagit Valley College (Skagit Valley)	Northwest	Associate's—Public Rural-Serving Large	6,000
Yakima Valley Community College (Yakima Valley)	Northwest	Associate's—Public Rural-Serving Medium	5,000

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II. Executive Summary

Key Observations

- **Measures of preventing compromised academic integrity vary from department to department and from course to course.** While some software is available and some policies apply to all courses (e.g., anti-plagiarism software, certain assessment platforms, etc.), few institutions mandate the use of those tools. Instead, department heads and faculty members implement preventative measures on a per-course or per-department basis.

- **Contacts report a variety of strategies for minimizing academic dishonesty at the various stages of an online course:**

    - **Course Design:** With the exception of **Arizona Western College**, institutions do not have formal guidelines for developing courses resistant to academic-dishonesty. Contacts have, however, developed ways of leveraging the wealth of experience and advice instructors can offer.

    - **Course Orientation:** Contacts encourage multiple means of correcting misconceptions about online courses and informing students about expectations regarding academic integrity. At **Lower Columbia College**, students must register through an academic advisor; several institutions host online-specific orientations and course introductions.

    - **Non-Exam Times:** Engaging students through assignment variety and using assignments that build on one another are crucial to monitoring academic honesty, contacts stress. Contacts also recommend a small suite of anti-plagiarism tools.

    - **Exam Time:** Contacts convey a variety of test design, test delivery, and technology-based strategies for minimizing academic dishonesty on exams. Proctored tests are, however, the most common and, according to contacts, the most effective way of ensuring academic honesty.

- **Resources for encouraging academic integrity can be distributed to three classes of initiatives: culture-based, course-design-based, and technology-based.** While contacts disagree on the relative priority of each of these classes, they agree that a balance is critical to cultivating strong academic integrity in online courses.

- **Contacts describe very few methods of quantitatively and rigorously assessing the efficacy of strategies that help maintain academic integrity.** While some contacts do plan on pursuing this, most do not describe it as a priority.

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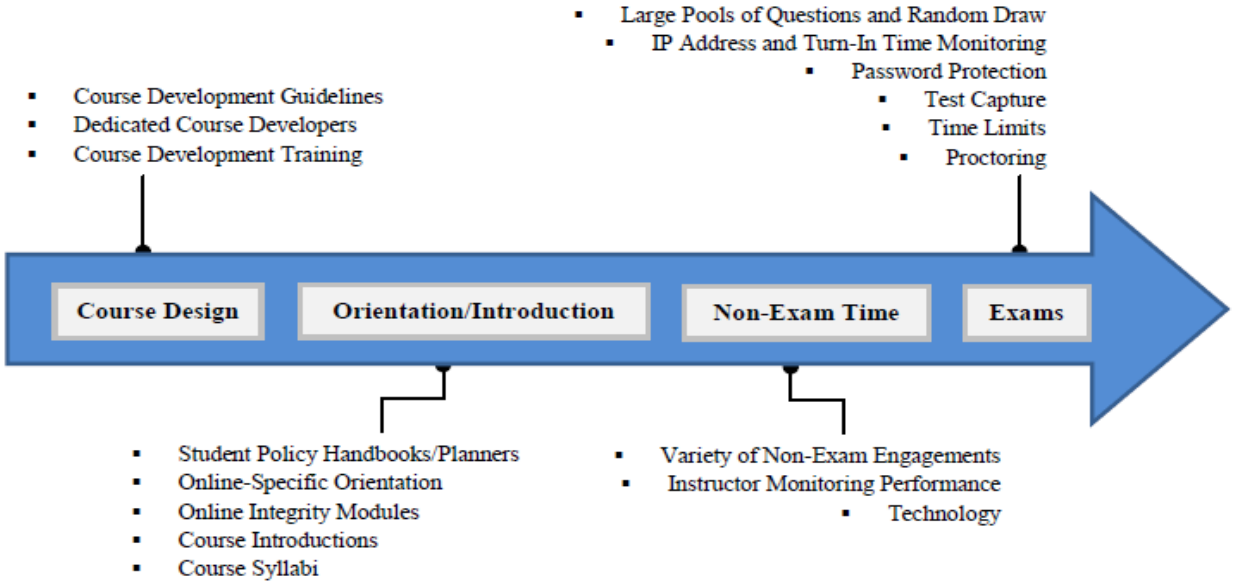
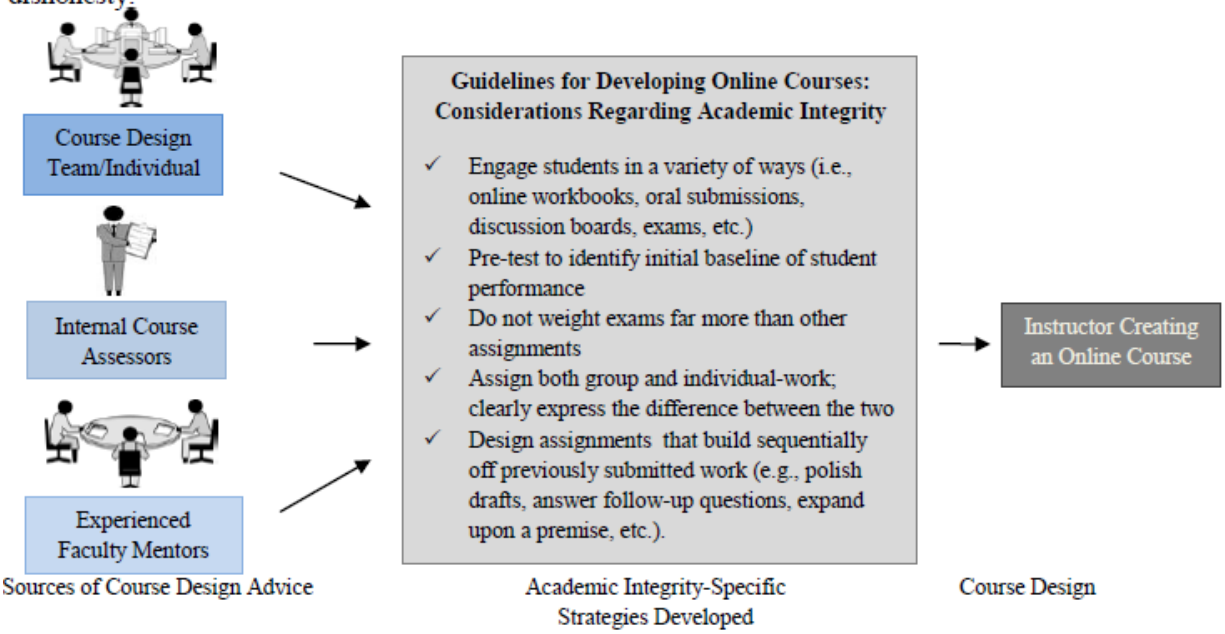
III. Methods for Maintaining Online Academic Integrity

Maintaining Academic Integrity across the Lifecycle of an Online Course



Building Academic Integrity at the Course-Design Stage

Contact institutions, with the exception of **Arizona Western College**, do not maintain requirements for online course design that prescribe specific academic dishonesty preventative measures. Administrators already implement rigorous standards to ensure academic quality in online courses. Expanding course design requirements would, contacts explain, infringe upon instructors' academic freedom. Nonetheless, contacts agree that taking certain steps at the course-design stage can help discourage academic dishonesty.



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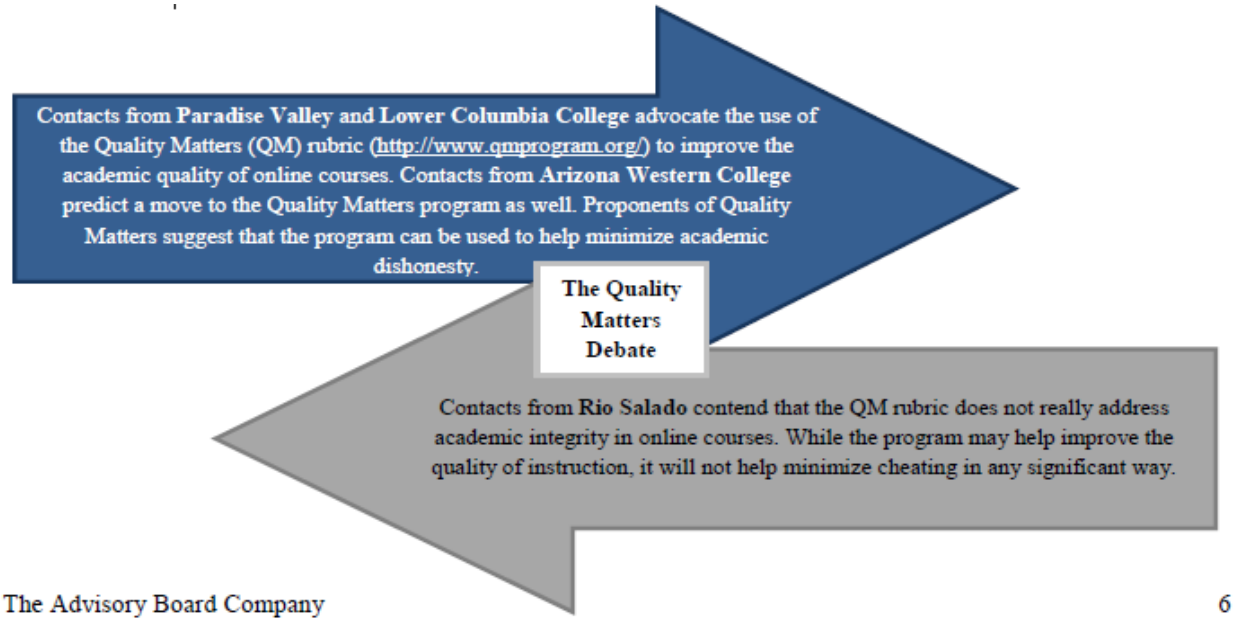
III. Methods for Maintaining Online Academic Integrity

Sources of Course-Design Advice

While most institutions have not instated specific academic integrity requirements at the course design stage, contacts describe several methods by which to convey advice to instructors interested in designing an online course:

Faculty Training Sessions	At **Arizona Western College**, distance education staff, assisted by the occasional more-experienced faculty member, host training sessions that cover many topics central to online course design, including academic integrity. Arizona Western holds its sessions during training and convocation days. **Lower Columbia College** and **Yakima Valley** host similar training sessions. Arizona Western also makes its distance education staff available for one-on-one meetings with interested faculty.
Online Learning Authority	The Online Learning Coordinator at **Paradise Valley Community College** (who is also a full-time faculty member with extensive experience in the online space) is available to advise any faculty who are interested in launching an online course.
Department Chair Advisors	At **Rio Salado College**, instructors creating an online course work closely with department chairs who have a great deal of experience in the area of online course development.
Faculty Mentors and Champions	**Yakima Valley** encourages experienced online faculty to mentor new faculty. The eLearning department maintains funds to support such activities. Funds can cover registration fees for online education conferences or can be used to compensate faculty who are willing to host training sessions. Contacts explain that supporting faculty champions in this way is an excellent alternative to hiring a dedicated course-design specialist.
Large Group Discussions	**Arizona Western College** uses a portion of the $25 student fee for online courses to fund a retreat for online course instructors and staff. This retreat, named Camp Yuma, addresses some of the issues that are unique to online courses; key among them is the topic of academic integrity in online courses. Faculty use the opportunity to share and collect best practices. Faculty must sign up to attend; space is limited since attendees are compensated (because the retreat is held during off-contract time).



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III. Methods for Maintaining Online Academic Integrity

Addressing Academic Integrity During Orientation

Contacts explain that oftentimes students harbor misconceptions about the rigor of online courses and the extent to which group work is permitted. All institutions recommend including academic integrity expectations in course syllabi and in an online format on the eLearning website. Several contacts also add that many faculty make announcements regarding academic integrity through the course management software at the beginning of the course and right before exams. Beyond these measures, contacts describe several efforts to correct misconceptions:

Advisors Register Online Students	At **Lower Columbia College**, students interested in registering in an online course must do so through an academic advisor. Advisors stress to students the rigor of online courses and the no-tolerance policy for academic dishonesty. They also help ensure that students do not sign up for too many online courses. Contacts note that students are tempted to compromise their academic integrity when work becomes unmanageable due to poor time management and/or an overly-taxing course schedule.
Students Complete Online Course Training	Several colleges offer either voluntary or mandatory online course orientation. Orientation is typically hosted by the distance or eLearning staff and takes place before the beginning of the course. While orientation focuses on teaching students how to use the course management platform, the topic of academic integrity is also addressed. At **Lower Columbia, College** all students must take a one-hour ANGEL training course with the option of signing up for a three-hour ANGEL boot camp. The latter focuses on the inherent differences between online and face-to-face courses, and considers how those differences do not make academic dishonesty any more acceptable or easier to get away with in an online course. Some instructors make the boot camp a required or strongly encouraged assignment. **Yakima Valley Community College** and **Skagit Valley Community College** also conduct training sessions that address academic integrity. **Rio Salado** hosts an online course orientation in an interactive electronic format. While this makes the orientation easier to access and therefore more convenient, some contacts prefer in-person orientation because many students are not sufficiently technologically literate to maneuver through an online orientation on their own. In-person orientation also has the added benefit of exposing students to the staff monitoring online courses and ensuring quality.
Students Receive Online Course Introduction	Many instructors at **Yakima Valley College** have specialized course introductions that help students become acquainted with the format, syllabus, and expectations of the class, including academic integrity standards. While some of these introductions are in-person, contacts note that several instructors make the introduction an interactive online module or record the introduction using Tegrity lecture capture. Online course introductions supplement orientation and training sessions most students complete before beginning the course.

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III. Methods for Maintaining Online Academic Integrity

Allude to Preventative Technology	Contacts at **Lower Columbia College**, **Rio Salado College**, **Yakima Valley Community College**, and **Skagit Valley College** report that students are warned that academic dishonesty will be caught using a variety of technologies. Students are not told exactly what technologies will be used, but are repeatedly reminded of their existence via online training sessions, course introductions, and course announcements. As one contact explains to students, "if you are academically dishonest in an online course, we will catch you. It is just as easy as watching you look at the other person's paper in a face-to-face class. We can do it; we will do it; we just will not tell you how".

Minimizing Academic Dishonesty in Online Courses during Non-Exam Times

Variety of Course Engagements

All contacts encourage online course instructors to task their students with a variety of assignments. Suggestions include online workbooks, discussion boards, oral submissions, shorter essays, and small-group projects.

Instructor Monitors Performance

Instructors then use the assignments to formulate a holistic understanding of a student's voice, habits, and capabilities.

Instructor Detects Deviations in Performance

Instructors become better equipped to detect significant deviations from students' baseline performance. This practice is, all contacts explain, absolutely critical to identifying academic dishonesty. Contacts acknowledge that it is more work-intensive for instructors; however, instructors with experience teaching online likely monitors students in this way already.

Technology Used During Non-Exam Times

Contacts list a few technologies that are used on a regular, near-institution-wide basis during non-exam time:

- SafeAssign (by Blackboard): software tool that scans submitted writing assignments for plaigarism
- TurnItIn.com (not affiliated with a course management platform): online tool that scans submitted writing assignments for plagiarism
- Monitor IP addresses and turn-in times (via course management platform): platform feature that can highlight potential cases of inappropriate group work

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III. Methods for Maintaining Online Academic Integrity

Ensuring Academic Integrity on Exams

Regardless of efforts to minimize academic dishonesty on exams (e.g., lower weight of tests on grade, warn students of the capability to catch offenders, etc.), contacts agree that attention and resources should be focused on this area. Institutions use the following strategies to ensure academic integrity on exams:

	Strategy	Some Institutions Using Strategy	Description
Exam Delivery	Remind students of academic code before exam	*Lower Columbia*	Deliver before the exam a verbal and/or written reminder (on the exam) of the academic code, the penalties for breaking it, and the unnamed ways institutions have of identifying academic dishonesty.
	Proctor exams	*Arizona Western, Lower Columbia, Rio Salado, Skagit Valley, Yakima Valley*	Distribute the test through a proctor who checks IDs and enters a password that the student does not have in order to initiate the test.
	Check IDs	*Arizona Western, Rio Salado, Yakima Valley*	ID checking is most commonly used with proctored exams, though some contacts describe technologies that can check IDs. No contact institution employs any of these physical identity verifiers.
Exam Design	Create tests with unique formats	*Lower Columbia*	Contacts at **Lower Columbia** describe tests that give students multiple short answer questions from which they must pick a few to answer. As a result, the likelihood is small that two students will have the same test. Such an occurrence would itself suggest academic dishonesty.
	Draw questions from a large pool	*Arizona Western, Rio Salado, Skagit Valley*	Instructors develop a very large pool of questions from which the course management platform or assessment service draws. The draws may or may not be random. The large variety of questions ensures that similarity between any two tests is minimal.
	Draw questions at random	*Arizona Western, Rio Salado, Skagit Valley*	Questions are drawn from a pool at random. As a result unique tests are created for each student. Random draw can lower the size of the question pool.
Exam Technologies	Monitor the IP address from which tests are turned in	*Lower Columbia, Rio Salado, Skagit Valley*	Course management platforms are usually able to log the IP address from which the test is submitted. Comparing IP addresses for duplicates can unveil students who took the test on the same computer, which might suggest that they were inappropriately working together.

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III. Methods for Maintaining Online Academic Integrity

Exam Technologies	Track cookies placed on students' computers	*Lower Columbia College*	Develop a script that places a cookie on the test-taker's computer and checks for such cookies when a test-taker logs in. If a cookie is detected upon log-in, the computer has already been used to take the test. This could suggest inappropriate group work.
	Maintain a strict time limit	*Paradise Valley, Rio Salado, Skagit Valley, Yakima Valley*	Allow students to use their book and other materials (it is difficult to guarantee they will not) but place a prohibitive time limit on the test. Students will not be able to look up all the questions and complete the test within the time limit.
	Use assessment delivery system	*Rio Salado*	Assessment delivery systems help coordinate several of the above strategies. In addition to hosting the pool of questions and selecting those to give to a student, systems can also offer helpful metrics for the improvement of assessments.
	Password protect the test	*Arizona Western, Skagit Valley, Yakima Valley*	Students have to use either they log-in information or a password assigned to them closer to the time of the test. Proctors can also enter the password after confirming ID.
	Record all electronic activity during the test	*Yakima Valley*	Use course management technology, like Tegrity, to record all electronic activity during the test. Instructors can then view the activity of students they suspect of cheating.
	Make the test available for only a short window of time	*Skagit Valley*	The test is only available for one or two days, as opposed to a week or more. This gives students less time to coordinate and execute more complicated multi-person plans.
	Display only one question at a time	*Skagit Valley*	Students have more difficulty obtaining a copy of the full test if questions are presented one at a time.

Home-Grown Technology

Contacts note that IT and computer programming staff should participate in efforts to ensure academic integrity. Leveraging in-house talent can yield lower-cost technologies that are highly effective.

- Peer-to-Peer tool developed at **Rio Salado** maintains an archive of past student written assignments and checks new assignments against it for similarity. Similarity between two samples that registers above a certain threshold suggests plagiarism.
- Cookie Tracker developed by a programmer at **Lower Columbia** operates as described above.
- Computer forensics performed by IT staff at **Lower Columbia** is very helpful when investigating potential offenders. Contacts explain that these staff members were not hired for their computer forensics backgrounds. Rather, they were allowed to explore a personal interest in the topic.

Proctoring Tests

Although taking proctored tests is, contacts acknowledge, inconvenient for students, it is among the best ways of ensuring honesty on exams. Most contacts therefore report wide use of proctored exams by instructors. The notable exception is **Paradise Valley Community College**, where all exams must be online, according to its definition of an online course. At all other contact institutions, efforts have been made to improve the convenience of proctored testing. **Lower Columbia** and **Rio Salado** have proctoring centers on campus and networks of proctors off campus for non-local students. Students who cannot take tests on campus are allowed to find a more convenient proctor and report them to their institution. The eLearning department then clears the proctor and adds them to the network. Developing this network of proctors is, most contacts agree, a sound investment as it makes proctoring more convenient for students and therefore a more attractive option for instructors.

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IV. Distributing Resources: Course Development, Culture, and Technology

Contacts identify three categories in which to cultivate academic integrity: course development, institution culture, and technologies that detect the signs of academic dishonesty. Contacts disagree on which of these three categories is most important.

Priority: Course Development

Description: While institutions have made efforts to guarantee the academic quality of online courses, most institutions (with the exception of Arizona Western) have not created guidelines for developing online courses that are not susceptible to academic dishonesty. Contacts agree that establishing these guidelines could be a valuable option. Supporting experienced faculty who have likely collected best practices can also facilitate the transfer to the broader teaching community. Contacts add that already-present faculty champions have the added benefits of knowing the institution, possessing a network on campus, and carrying influence with other faculty. **Yakima Valley** has identified this as a future area of interest. Investing in course development could also mean hiring a dedicated individual or re-tasking staff within the eLearning office.

Strengths	Weaknesses
✓ Strong courses minimize the need for expensive technologies	× May infringe upon faculty member's academic freedom
✓ Sources of knowledge are likely already present; they just need to be identified and leveraged	× Improving course design will not pose much of an obstacle to offenders who are determined

Priority: Culture

Description: Contacts from **Yakima Valley Community College** and **Skagit Valley** explain that ingraining in students a respect for the academic code is absolutely key to cultivating long-term academic honesty. Developing a strong culture around academic integrity could mean investing in seminars, online modules, and discussions around such topics like the philosophical meaning of academic integrity and what actually constitutes academic dishonesty. Contacts at Yakima Valley add that oftentimes students, especially those who are not college-ready, do not fully know how to identify academic dishonesty. As a result, at Yakima Valley, low-performing students take a college success course that discusses, among other topics, what it means to own one's work and how to honor the work of others while taking advantage of resources. If funds were available, contacts assert that the course would be available to all students. Funds could also be used to invest in mentoring programs, online advising programs, and stronger orientation programs all designed to make academic integrity a constant expectation and presence on campus.

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IV. Distributing Resources: Course Development, Culture, and Technology

Strengths	Weaknesses
✓ Ground-up, organic means of ensuring academic integrity	× Support that focusing on culture works to minimize academic dishonest is largely anecdotal
✓ Can leverage student body through a culture of peer monitoring	× Saturating a campus with the academic integrity message may be difficult
✓ Investing in students is easily marketed	

Priority: Technology

Description: Investing in technology is perhaps the most direct way of identifying and preventing academic dishonesty. Technology involving retinal scans; facial identification; voice, palm, and fingerprints; desktop cameras; and handwriting geometry are all available. Most course management platforms also come in with built-in features that can help by recording IP address and turn-in time. **Rio Salado** uses the QuestionMark Perception service to assist in creating, delivering, and analyzing course assessments.

Most contact institutions, however, have no plans to invest heavily in technology. The costs, associated labor needed to maintain the technology and utilize collected data, and transient nature of technology as a deterrent (as one contact explains, "as soon as we implement something, students are trying to find ways around it") all outweigh the benefits.

Strengths	Weaknesses
✓ Technologies can be quite rigorous (i.e., difficult to bypass or confuse)	× Can be very expensive
✓ As the most direct way of addressing academic integrity in online courses, investments in technology have a unique marketability	× Implementation and maintenance can be cumbersome
	× Analysis of collected data may be work-intensive
	× Places emphasis on policing at the cost of course ethos

A Multi-Pronged Approach

Ultimately, though they do not agree on the distribution of resources, all contacts agree that resources should invest in all three approaches as they are, to a degree, complementary. One contact explains

> "Maintaining academic integrity involves more than being good plagiarism police. The culture has to value integrity and the course design has to encourage it. That is how you create a truly educational experience for the students"
>
> --Dean, Instructional Technology and Support
> Rio Salado College

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IV. Distributing Resources: Course Development, Culture, and Technology

Assessment of Preventative Measures
Contacts do not describe any large efforts to assess the efficacy of preventative measures. Any assessment being completed is generally at the level of individual instructors, many of whom have an in-class version of the course against which the online unit can be compared. Some contacts do predict moving into the assessment space in the future. Contacts at **Rio Salado** agree that they have the data, though they have not yet analyzed it. Contacts are considering ways in which the data can be used to detect repeat offenders and whether a central database of offenders might be a good idea for the future.

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V. Course Management Technologies

Course Management Technology	Description (acquired/modified from vendor website)	Website	Contacts' Comments
Blackboard	*Blackboard Learn*™ provides a core set of tools for engaging and assessing learners of every type – both inside and beyond the classroom.	http://www.blackboard.com/	Blackboard is expensive and deliverables are not impressive. (**Skagit Valley Community College**)
ANGEL (acquired by Blackboard)	Blackboard Inc. and ANGEL together for the benefit of students in an ongoing effort to create a more flexible and engaging teaching and learning platform.	http://www.blackboard.com/Teaching-Learning/Learn-Resources/ANGEL-Edition.aspx	None
Moodle	Moodle is an Open Source Course Management System (CMS), also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). To work, it needs to be installed on a web server somewhere, either on one of your own computers or one at a web hosting company.	http://moodle.org/	If an institution can self-host their platform, Moodle becomes a much more attractive option. Students and faculty find it easy to use. Not sure of the detection or prevention methods Moodle has with respect to academic integrity. (**Skagit Valley Community College**)
Camtasia	People around the world use Camtasia to create videos that train, teach, sell, and more. It's an easy way to demonstrate a process, product, or idea.	http://www.techsmith.com/camtasia/	None

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V. Course Management Technologies

Course Management Technology	Description (acquired/modified from vendor website)	Website	Contacts' Comments
Wimba	Wimba is a leading provider of collaborative learning solutions and services, as well as Publishing services and solutions. From its inception almost a decade ago, Wimba is committed to harnessing the most powerful elements of human interaction – facial expressions, vocal intonations, hand gesticulation, real-time discussion, creativity and passion – so that online instruction, meetings and academic and administrative assistance are dynamic and engaging.	http://www.wimba.com/	Wimba and Elluminate have been brought together to form Blackboard Collaborate.
Elluminate	Elluminate, unifies enterprise technologies, video and web conferencing, instant messaging, phone, learning and content management systems, social networks, and more to make learning and collaboration happen better, faster, and more efficiently.	http://www.elluminate.com/	Wimba and Elluminate have been brought together to form Blackboard Collaborate.

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V. Course Management Technologies

Course Management Technology	Description (acquired/modified from vendor website)	Website	Contacts' Comments
Tegrity (acquired by McGraw-Hill)	Tegrity Campus 2.0 web service a class-capture solution impacting learning, student satisfaction and retention across the entire institution. Tegrity makes class time available by making every class on campus available for replay by every student – anytime, anywhere. With patented Tegrity "search anything" technology, students instantly recall key class moments for replay online, or on iPods and mobile devices.	http://www.tegrity.com/tegrity-campus/overview	Some faculty are exploring and seem to be enjoyingTegrity as means of presenting an online orientation and course introduction to students. (**Yakima Valley Community College**)
QuestionMark Perception	Questionmark™ provides technologies and services that enable organizations to measure knowledge, skills, and attitudes securely and achieve successful learning outcomes. Questionmark solutions enable reliable, valid and defensible assessments by empowering learning and testing professionals with collaborative authoring tools, accommodating participant needs with blended and multilingual delivery and informing stakeholders through timely reporting and meaningful analytics.	http://www.questionmark.com/us/index.aspx	At Rio Salado, Perception is used to manage all assessments, with the exception of math exams and tests. Perception helps makes assessments more rigorous and easier to statistically analyze and thereby improve. A new package called QuestionMark Live should be coming online soon and will be appropriate for small to medium-sized organizations. (**Rio Salado College**)

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COMMUNITY COLLEGE LEADERSHIP FORUM

Maintaining Academic Integrity in Online Courses
Networking Contacts • January 21, 2011

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Appendix IV

Yavapai College Recommended Guidelines for Online Instruction

Yavapai College and the Teaching and e-Learning Support (TeLS) staff have developed best practices and guidelines for online instruction, including training and resources.

Please refer to Yavapai College Academic Policies:

- Teaching & eLearning Support, Online Teaching Best Practices web page
- Academic Policy 3.4.1 - Yavapai College Recommended Guidelines for Online Instruction