



Guam Community College: Market Assessment and Needs Analysis

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Table of Contents

| | |
|---|-----------|
| INTRODUCTION | 3 |
| POSTSECONDARY ONLINE PROGRAMS | 3 |
| WHAT CAN GCC OFFER THE POSTSECONDARY MARKET | 4 |
| GUAM COMMUNITY COLLEGE – CURRENT STATUS | 5 |
| CURRENT COURSE OFFERINGS | 5 |
| CURRENT INSTITUTIONAL INTEREST | 5 |
| RECRUITMENT AND MARKETING | 5 |
| STUDENTS | 6 |
| RECOMMENDATIONS: MARKETING AND RECRUITMENT | 6 |
| EMPLOYMENT | 7 |
| TABLE 1: 20 MAJOR OCCUPATIONS BASED ON HIGHEST LEVELS OF JOBS AVAILABLE IN GUAM | 7 |
| TABLE 2: HIGHEST PAYING OCCUPATIONS IN GUAM, BY ANNUAL PAY | 8 |
| TABLE 3: HIGHEST LEVELS OF JOBS AVAILABLE IN GUAM – WITHIN TOP 20 | 9 |
| TABLE 4: OCCUPATIONAL TITLES IN GUAM WITH MORE THAN 5% RISE IN EMPLOYMENT | 10 |
| FIGURE 1: PROJECTED CHANGE AND ANNUAL GROWTH RATE, NONAGRICULTURAL SECTOR-GUAM | 10 |
| WHAT ARE PEER INSTITUTIONS DOING? | 11 |
| TABLE 5: COMPARISON OF GCC PEER INSTITUTIONS | 11 |
| CONCLUSION | 12 |
| TABLE 7: TUITION AND FEES ACROSS PEER INSTITUTIONS | 13 |
| WHO IS LOOKING FOR INFORMATION ON GCC’S WEBSITE? | 13 |
| TABLE 8: GCC WEBSITE TRAFFIC – LOCATION DATA (FEB ’14 DATA) | 13 |
| MARKET DIFFERENTIAL | 14 |

Introduction

As Guam Community College (GCC) continues to expand its sphere of influence and provide high quality education and career training for its students, the college seeks additional ways in which it can support the needs of both local Guam based students and Micronesian students at large. As part of this process, the college has embarked on an analysis of its Distance Education needs by engaging Ellucian consultants. During the week of February 10th – 14th, Dr. Christine Martey-Ochola and Martin LaGrow from Ellucian visited the GCC campus in Mangilao and through the coordinated efforts of Wesley Gima (GCC) met with students, faculty and staff members as part of the assessment process. Through these meetings, it was determined that although the college has already offered a few distance education courses, a thorough market analysis and needs assessment was not utilized to drive the development of online course offerings.

This document outlines the findings from both onsite and off-site assessments, and specifically addresses the market needs, GCC's recruitment, marketing and retention management processes, student needs and the current status of distance education in Micronesia. In addition, a summary of recommendations are included, which if considered and implemented, would enable the college to gauge what programs to offer and which target markets to consider.

Postsecondary Online Programs

For at least the past decade, enrollment growth in higher education has been concentrated in the online market. The Sloan Consortium (<http://sloanconsortium.org>) has been tracking the growth of online delivery within higher education since 2002 via a comprehensive annual survey. The Consortium's most recent report notes that the 10% percent growth rate for online enrollments far exceeds the 2% percent growth rate for the overall higher education student population.¹ The difference between the growth rate in the online market and the overall higher education market makes it clear that any institution of higher education with enrollment growth as part of its strategic agenda cannot afford to ignore the online market.

Gender Differences in Educational Attainment

Educational attainment data published by the U.S. Census Bureau indicates that women continue to outpace men with respect to college degree attainment.² Among the employed population 25 and older, 37 percent of women had attained a bachelor's degree or more as of 2010, compared with 35 percent of men.³ Furthermore, among the population 25 to 29, 36 percent of women had a bachelor's degree or more, compared with 28 percent of men.⁴

The same trend holds true when analyzing degrees conferred in the United States. For 2008-09, the most recent year for which U.S. Department of Education data are available, women earned 62.1 percent of all Associate's degrees; 57.2 percent of all Bachelor's degrees; 60.4 percent of all Master's degrees; and 52.3 percent of all Doctoral degrees awarded in the U.S.⁵ Numerous studies have documented that women are more likely than men to enroll in online courses and programs as well.^{6 7}

Postsecondary institutions implement online learning programs for numerous reasons including: to increase student access to courses and programs via the asynchronous and remote access online delivery provides; to reach students who have scheduling and/or transportation barriers to face-to-face

¹ Allen, I. Elaine, and Jeff Seaman. *Going the Distance: Online Education in the United States, 2011*. The Sloan Consortium (Sloan-C), Babson Survey Research Group, Nov 2011. Web. 21 Jan 2012. <http://sloanconsortium.org/publications/survey/going_distance_2011>.

² U.S. Census Bureau, "More Working Women Than Men Have College Degrees, Census Bureau Reports." Published April 26, 2011. <http://www.census.gov/newsroom/releases/archives/education/cb11-72.html>. Retrieved 012112.

³ Ibid.

⁴ Ibid.

⁵ U.S. Department of Education, National Center for Education Statistics. (2011). *The Condition of Education 2011* (NCES 2011-033), Table A-26-2. Retrieved 020112 <http://nces.ed.gov/fastfacts/display.asp?id=72>

⁶ Primary Research Group, *The Survey of Distance Learning Programs in Higher Education, 2007-2008 Edition*.

⁷ Rooney, Jill. "Cracking the Glass Screen: Gender and Online Higher Education." *The Open Academic*. Onlinecolleges.net, 27 Dec 2011. Web. 21 Jan 2012. <<http://www.onlinecolleges.net/2011/12/27/cracking-glass-screen-gender-online-higher-education-2/>>.

learning; to expand the institution's enrollment reach and to decrease the costs associated with brick and mortar delivery/increase efficiencies.

William H. Graves, Ph.D., a co-founding Board member of the National Center for Academic Transformation (www.theNCAT.org) and Senior Vice President for Academic Strategy with Ellucian, shared the following perspective on the value of technology-enabled learning for postsecondary institutions:

The National Center for Academic Transformation (www.theNCAT.org) is the best source for proving via multiple examples that IT-enabled learning can improve learning outcomes while simultaneously reducing per-enrollment costs. When applied to the top 20-30 highest enrollment courses (each course section counted as part of one course), the IT-enabled course redesign strategy can measurably improve learning outcomes and reduce per enrollment costs by 40%, on average. In a community college, the top 20-30 highest-enrollment courses account for approximately 50% of all enrollments, while overall direct instructional costs amount to about 50% of all annual operating costs. The math ($40\% \times 50\% \times 50\% = 10\%$) then reveals possible annual cost offsets (or savings) of approximately 10% of annual operating costs.

... these results have been proven several times over during the past 10-15 years. There are five or so models for redesigning these courses, and effectiveness is amplified when applied in common across a state system or a multi-campus district. These models are explained on the NCAT website, and plenty of case-study examples are available there.

When we think about virtual campus offerings, [therefore] we should think not only about entire degree programs, but also and always about this cluster of the highest-enrollment courses – because these intro and basic-skill courses are the same everywhere and are also the gatekeeper courses on which retention and graduation rates depend so strongly. These courses are also often over-enrolled and therefore unavailable to the student who needs a few such courses to satisfy the requirements of her degree program to graduate on time.⁸

What can GCC offer the Postsecondary Market

Guam Community College (GCC) is seeking guidance in selecting programs for online delivery. Some of the factors that GCC offers include;

- a) Good accreditation status in Micronesia - The college is an advisor to colleges that belong to the Pacific Post-Secondary Education Council, through which it is able to share best practices with peer institutions (pacificpec.org)
- b) Affordable tuition
- c) The existence of adult education programs offered at the college
- d) career-based programs that offer students sound employment opportunities
- e) Institutional infrastructure that is stronger than its community college peers in the Micronesian region
- f) Low faculty turnover – As a result, investment in programs that are built for distance learning may be able to exhibit longevity for as long as the program remains relevant to market needs
- g) Strong industry partnership - Local businesses are advisors to the college departments in determining program viability
- h) Program funding through grants – the college has a strong grants organization that has supported the spearheading of several student success initiatives.

⁸ Per William H. Graves, Ph.D., Senior Vice President for Academic Strategy, Ellucian Higher Education, e-mail correspondence, 072311.

Guam Community College – Current Status

Current Course Offerings

GCC is offering a few courses using hybrid, distance or web-enabled learning. *Creating an Online Environment Using Moodle* and *Creating Online Communities* are courses at GCC in the Information Technology department. The Education department has also offered *CD221 Child Growth and Development* and *ED220 Human Growth and Development* fully online; however, the students come to the college to enroll in the courses. In addition, *ED270 Behavior Management* has run in Moodle as a hybrid course. Computer science as well as business and technology have run web enhanced courses.

Current Institutional Interest

The college has not outlined which programs they would like to run for full DE offerings; however, the English Department, Social Studies, Education and Math have indicated interest in offering DE courses. This information was obtained following meetings with faculty members or department chairs of the respective academic areas. Additional information was provided by Academic Affairs. Continuing Education also discussed a health certification process that may lend itself well in a DE environment.

The selection of courses mentioned above was not driven by market research, nor based on data obtained from students seeking online courses in these fields. The college will need to run an analysis on the need for all selected courses prior to developing the courses for an online offering. Factors to consider while seeking to develop new online courses or expand existing courses would be:

- a. Student need for online courses in these fields.
- b. Lack of institutional capacity to offer more traditional face to face courses therefore driving the need for online courses.
- c. Need for specific courses by non GCC students who have been unable to enroll in courses because the current offered sections are full.

Recruitment and Marketing

Guam Community College has a modern website that has a clean background, one-click access to a prospective student landing page and access to information that allows a student to determine what type of student they want to be. The **Apply now** page redirects the student to the admissions page, which has links to PDF documents that the student can download and use for application to the college. The main institutional landing page has a poll portal which allows the college to easily manage polls from both institutional constituents and site visitors. However, the dropdown menu bar that contains Academics, About GCC, Admissions, and other tabs is not convenient to use because it requires the user to hover their mouse over the given header so as to highlight the dropdown menu options which disappear upon cursor movement. This user experience can lead to difficulty in accessing information that is needed to convert a prospective student to an enrolled student. The undesirable effect of *frustration* and consequent migration to another institution that offers similar online programs/courses would not support performance indicators on student conversions, in the event that GCC established a conversion goal for prospective students as part of its performance dashboard.

The overall college website has a lot of information, but it sometimes requires multiple clicks to find pertinent information for a specific program. In order to find the actual courses for the Criminal Justice (CJ) certificate for example, a prospective/returning student would have to make four clicks in the following order; (1) Academics → (2) Social Science and Criminal Justice Department → (3) Certificate in Criminal Justice → and (4) Required Courses for Certificate. The second click provides social science courses but not the CJ courses, which require two additional clicks. A student looking for the social sciences course would therefore need to scroll beyond CJ links in order to access this information, which may create confusion or frustration⁹.

⁹ Due to minimal student advising (sometimes related to student disinterest or low access to advisors), a student seeking social science courses for example may select a criminal justice course and extend their length of study, due to unwarranted course selections resulting from insufficient guidance from advisors or counselors.

The website was updated in the past three years by a third party web developer who will be revising the website in the coming year and addressing search engine optimization. Currently, the website is managed by the Assistant Director of Communications and Promotions, with periodic support from MIS or students. Several departments within the college also have access to content updates. Additional web analytics is supported through the admissions office by the registrar.

Programs and Courses

Currently, the college does not have a marketing strategy that is consistent for all programs. Each department is responsible for both marketing and recruitment efforts. The college requires each department to generate recruiting and marketing materials, manage fulfillment of requests that come directly to the department, with a final expectation that prospective students will be redirected to the application portal.

The Office of Communications and Promotions (OCP) assists each program with requested marketing efforts; however some programs are marketed more than others. Usually the Assistant Director of Communications & Promotions makes requests for marketing and program updates from the departments, so that they can showcase their successes, or provide changes on their specific programmatic landing pages or the main website. The director sometimes has work-study students support marketing efforts through graphic design and other auxiliary functions.

Students

The students at GCC have indicated an interest in online courses and would probably be the first to enroll in online courses. It is critical for the college to create programs that will not cannibalize the current student body and strategically select courses for online delivery that will be marketable to the greater Guam and Micronesian community. The matter of minimizing in-seat enrollment to online enrollment was discussed with the taskforce, and it was recommended that as the college continues to determine DE offerings it takes into consideration the current institutional needs of maintaining in-seat students and supporting faculty who prefer to teach online. In a recent poll run by OCP on the GCC website, a total of 293 students responded to a poll asking if they would take online classes and why. Of these respondents, 82.59% mentioned that they would take online courses due to the need for flexibility in scheduling, 11.95% indicated the desire for online courses due to transportation issues, while 5.46% indicated lack of interest in online courses (survey on GCC website, March 2014).

Recommendations: Marketing and Recruitment

1. Optimize GCC website navigation. Review current website navigation and run a survey with current and prospective students. GCC may want to review web navigation for prospective students and what information will convert online prospective students to enrolled students. Also, an assessment of website Google analytics may lead to more clarity on what information to retain and what to migrate out of the website to allow for better user experiences and faster page loading times.
2. Provide easily accessible DE landing page. The college may also want to create a distance learning programs/courses "landing page" that is easily accessible. Currently, the online courses are found in the continuing education section of the "Majors/Programs" tab (<http://www.guamcc.edu/Runtime/onlinecourses.aspx>).
3. Add link to application portal on college website. In order to support fully online students, the college website "Apply Now" function would need to be configured to take the student to the actual application portal within Banner, rather than to the PDF documents that describe what is needed to apply. This information is important and can be included as "Documents needed and Steps to take prior to applying for a GCC online program/course."
4. Provision of consistent GCC marketing collateral for programs. If online programs will be marketed directly at the departmental level, then institutional approved marketing and fulfillment resources would need to be provided to the departments to ensure consistency in outreach efforts.
5. Develop a review process for departmental marketing efforts to ensure that all departments are meeting Key Performance Indicators that govern successful recruitment, fulfillment and

conversion of prospective students to enrolled GCC students. Periodic meetings with the department representatives responsible for marketing efforts are recommended. These meetings, if coordinated by the office of communications and promotions, will support synergistic marketing and recruitment efforts across the institution. This process would entail a review of marketing personnel and may require additional hire (dependent on scope of DE programs)

Employment

Employment projection data from the U.S. Department of Labor indicates that the services-providing sector of the Guam's economy will continue to dominate the employment picture in the U.S. for some time to come. Of the 20 industries gaining the most jobs, seven are in the health care and social assistance sector, and five are in the professional and business services sector¹⁰. The health care and social assistance sector is projected to gain the most jobs (5.6 million), followed by professional and business services (3.8 million), and construction (1.8 million)¹¹. In addition to identifying the largest industries in the U.S. with respect to total employment numbers, the Bureau of Labor Statistics (BLS) has also identified the fastest-growing industries in terms of employment.

Note: Industry sectors which appear strongest are "Health care and social assistance" and "Professional and business services". Office and Administrative Support is at the top of Guam's major occupational areas, while Food Preparation, Construction and Management Occupations as well as Education closely follow in hiring status. See Table 1.

Table 1: 20 Major Occupations Based on Highest Levels of Jobs Available in Guam

| | Annual Jobs | Jobs /1000 |
|---|-------------|------------|
| Office and Administrative Support Occupations | 10,890 | 33,650 |
| Food Preparation and Serving Related Occupations | 6,430 | 19,010 |
| Construction and Extraction Occupations* | 5,370 | 30,800 |
| Management Occupations* | 5,300 | 74,590 |
| Education, Training, and Library Occupations | 4,290 | * |
| Sales and Related Occupations | 4,270 | 23,340 |
| Transportation and Material Moving Occupations | 3,470 | 31,830 |
| Installation, Maintenance, and Repair Occupations | 3,430 | 37,450 |
| Building and Grounds Cleaning and Maintenance Occupations | 3,110 | 19,440 |
| Protective Service Occupations | 2,710 | 43,050 |
| Business and Financial Operations Occupations | 2,400 | 61,990 |
| General and Operations Managers | 2,000 | 70,090 |
| Production Occupations | 1,720 | 35,940 |

¹⁰ Bureau of Labor Statistics, U.S. Department of Labor, The Editor's Desk, Employment projections for major industries, 2010–20 on the Internet at http://www.bls.gov/opub/ted/2012/ted_20120202.htm (visited February 11, 2013)

¹¹ Ibid

| | | |
|--|-------|--------|
| Healthcare Practitioners and Technical Occupations | 1,710 | 63,010 |
| Cashiers | 1,710 | 19,380 |
| Personal Care and Service Occupations | 1,660 | 22,760 |
| Waiters and Waitresses | 1,610 | 18,790 |
| Carpenters | 1,450 | 30,240 |
| Maintenance and Repair Workers, General | 1,390 | 27,990 |
| Retail Salespersons | 1,360 | 23,350 |
| Customer Service Representatives | 1,340 | 25,940 |

Table 2: Highest Paying Occupations in Guam, By Annual Pay

| | Jobs/1000 | Annual Pay |
|--|-----------|------------|
| Chief Executives | 880 | \$115,760 |
| Pharmacists | 60 | 109,470 |
| Cost Estimators | ** | 109,070 |
| Architectural and Engineering Managers | 40 | 106,360 |
| Transportation, Storage, and Distribution Managers | 70 | 99,870 |
| Education Administrators, All Other* | 220 | 95,860 |
| Lawyers | 120 | 94,090 |
| Managers, All Other | 60 | 92,730 |
| Education Administrators, Postsecondary* | 30 | 89,330 |
| Electrical Engineers | 90 | 88,590 |
| Mechanical Engineers | 30 | 82,300 |
| Legal Occupations | 320 | 81,060 |
| Architects, Except Landscape and Naval | 50 | 77,700 |
| Financial Managers | 270 | 76,630 |
| Computer and Information Systems Managers | 40 | 76,170 |
| Management Occupations | 5,300 | 74,590 |
| Environmental Scientists and Specialists, Including Health | 40 | 73,400 |
| Compliance Officers | 190 | 73,380 |

| | | |
|--|-----|--------|
| Civil Engineers | 290 | 73,110 |
| Architecture and Engineering Occupations | 910 | 72,010 |
| Purchasing Agents, Except Wholesale, Retail, and Farm Products | 160 | 71,100 |

The nine (9) occupations highlighted in Table 1 above are highly correlated between this BLR chart for highest level of jobs available, the *Guam Short Term Occupational Projections*, and existing programs at Guam Community College.

Seven (7) of the top 20 high paying occupations highlighted above are not only part of the offerings at Guam Community College in the AA and AS degrees, but correlate highly to positive increases in job availability in the *Guam Short Term Occupational Projections* from the Bureau of Labor Statistics (BLS).

Table 3: Highest Levels of Jobs Available in Guam – Within Top 20

| Job | Degrees and Certificates at GCC |
|---|--|
| Food Preparation and Serving Related Occupations | |
| Office and Administrative Support | AA and Certificate Programs |
| Education, Training and Library Occupations | AA, Certificate, and High School |
| Healthcare Practitioners and Technical Occupations | Certificate (Early Childhood) |
| Personal Care and Service Occupations | Certificate (Cosmetology) |
| Construction and Extract Occupations | Certificate (Construction |
| Installation, Repair and Maintenance Occupations | Technology) |
| Carpenters | |
| Maintenance and Repair Workers, General | |
| Architectural and Engineering Managers | AA |
| Education Administrators, Postsecondary + All Other | AA, Certificate, and High School CTE |
| Electrical Engineers | AA |
| Mechanical Engineers | AS (Automotive Technology) |
| Computer and Information Systems Managers | AA, Certificate, High School CTE |
| Environmental Scientists and Specialists, Inc. Health | AA, Certificate (Nursing-related) |

Table 3 provides information that may support future institutional context and potential commitments to new programs and course. Current rises and declines in enrollments in existing programs may also help focus on future developments, and those data will assist faculty to work with their department chairs in deciding where to offer new courses and programs.

While the figures above may provide interesting information about best paying and highest level of jobs available it is also important to scan the *Guam Short Term Occupational Projections* (2012 – 2014) to assess how much and where high employment projections (Table 4) ride to assimilate and understand strategic directions for GCC to explore in the near future, especially if Distance Education opportunities will increase for current and future students.

Table 4: Occupational Titles in Guam With More Than 5% Rise in Employment

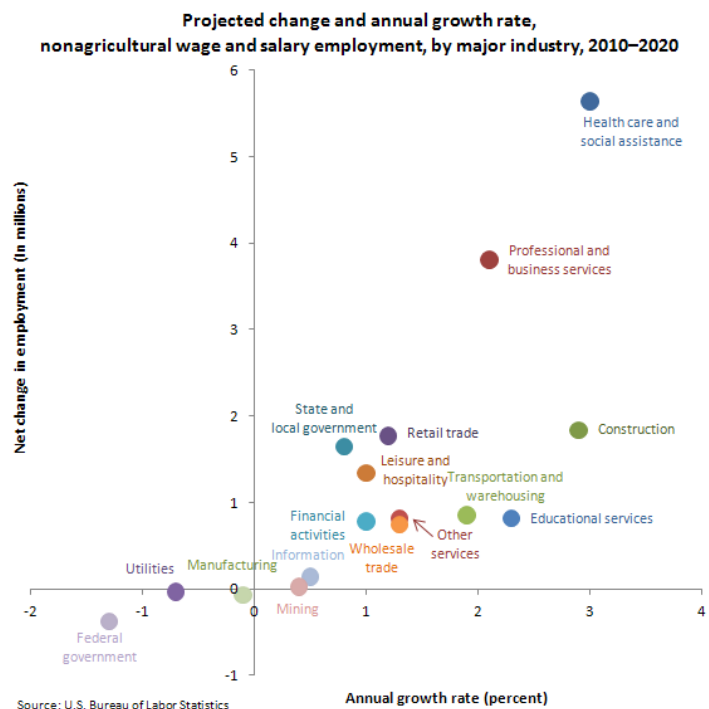
| <u>Titles</u> | <u>% Change</u> | <u>Average annual openings</u> |
|--|-----------------|--------------------------------|
| Construction Managers | 8.4% | 8 |
| Food Service Managers | 4% | 9 |
| Medical and Health Services Managers | 5.3% | 2 |
| Loan Officers | 6% | 3 |
| Database Administrators, Network Systems and Data Communications Analysts | 8.3 - 10.5% | 43 |
| Education (All types) | Up to 8.3% | |
| Environmental Engineering Technicians | 21% | 52 |
| Healthcare Support, Home Aides and more | 6% | 27 |
| Market Research Analysts | 5.3% | 2 |
| Lifeguards, Ski Patrol, and Other Recreational Protective Service | 8% | 18 |
| Food preparation, Serving and Related Occupations | ~6% | 1,058 |
| Tourism Industry including personal care, guides, concierges, sales, hotel/motel resort desk clerks, travel agents | 1 – 9% | 253 |
| Construction and trade workers of all kinds, helpers, and supervisors | 4 – 19% | 471 |
| Guam Short Term Occupational Projections (2012 – 2014): http://bls.guam.gov/sites/default/files/attachments/Guam_Short-Term_Occ_Proj_2012-2014.pdf | | |

In drawing conclusions regarding effectiveness of program and instructional strategies, systematic and regular collection and evaluation of timely data is required. Best practices from accrediting groups such as ACCJC/WASC require regular assessment and evaluation feedback from students as customers about their experiences, skills accumulation and success in meeting their stated goals within a reasonable period of time with current programs.

Regularly scheduled in class and online evaluations provide valuable lessons to the direction and overall success of the college program to keep learning thriving. An increased emphasis on Gainful employment, use of federal funds for online courses or programs that have not been accredited are beginning to take on more relevance with the US department of Education. As the college reviews programs and prepares for DE offerings, it will be important to see the voice of the potential student, but also have a clear understanding of current and future market trends.

Figure 1: Projected Change and Annual Growth Rate, Nonagricultural Sector-Guam

Bureau of Labor Statistics, U.S. Department of Labor, The Editor's Desk, Employment projections for major industries, 2010–20 on the Internet at http://www.bls.gov/opub/ted/2012/ted_20120202.htm (visited February 11, 2013)



What are peer institutions doing?

As part of the market analysis, it is important for GCC to review which institutions offer distance education programs within its geographic region. Current research suggests that most students enroll in programs that are within a 100 mile radius of their institution¹². At this time the institution that fit this model as a potential competitor for students on Guam is University of Guam (UoG) which offers online courses. Other colleges that can be considered are presented below (Table 5).

As indicated below, many of the colleges do not offer online programs; however, several offer ed2go courses similar to GCC as an added benefit for workforce development students. GCC's continuing education team indicated that there is minimal enrollment in the courses offered through Ed2go¹³ once the students realize that the courses do not offer credit. Other institutions such as Northern Marianas College also offer online courses; however, the infrastructure is unstable and socioeconomic factors make it difficult for students to take advantage of the opportunities provided by the college to online students. The College of Micronesia, whose students are eligible for Pell Grants, is of particular interest because students from the Federal States of Micronesia (FSM) attend GCC¹⁴. At this time, the College of Micronesia has not successfully implemented distance learning; however, if they develop their infrastructure, they would be an institution to consider as a competitor.

Transfer Articulation Partnerships.

As GCC considers DE and develops and strengthens its articulation agreements with transfer partners, it will be beneficial for the college to review the online courses it offers and determine if they transfer to their partner colleges and also ensure that the transfer colleges do not offer robust online courses that are similar to GCC's. This level of oversight will support GCC's investment in DE and will also maintain the college's relevance in the DE market. Currently GCC has several transfer partners; University of Guam, Chaminade University of Honolulu University of Alaska - Fairbanks, DusitThani College, Kadan Automotive Technical Colleges, American Hospitality Academy Philippines, Bellevue University, University of Phoenix, University of Makati, Bellevue College.

Table 5: Online Courses/Programs at GCC Peer Institutions

| College | Online courses or programs? | Link to online program information | Additional Comments |
|---------------------------------|-----------------------------|---|--|
| Guam Community College | Yes | http://www.guamcc.edu/Runtime/online/courses.aspx | A few courses have been offered by the Education department, and developed by GCC faculty members. College also offers Ed2Go , YouGotClass and JER online. |
| College of the Marshall Islands | No | N/A | Does not appear to have a DE or web-enhanced learning presence. |
| Northern Marianas College | Yes | http://www.nmcnet.edu/media/ed2go_nmc_flyer_2012.pdf | Ed2Go and Gatline Education provide vendor online courses. These courses are not developed by the college. |

¹² "Mobility rates are another important factor for traditional-age student strategic enrollment planning. Unfortunately, for target populations located more than 100 miles from campus, the fact that more than 50 percent of first-year students choose a college within 100 miles of home, may lead to disappointing out-of-state recruitment efforts." Noel Levitz report on 2014-24 Projections of High School Graduates by State and Race/Ethnicity, Based Primarily on Data From WICHE

¹³ Data review from GCC course enrollment data - Academic Affairs

¹⁴ DE is mentioned in the 2013-2017 strategic plan for College of Micronesia – FSM

Table 5: Online Courses/Programs at GCC Peer Institutions

| College | Online courses or programs? | Link to online program information | Additional Comments |
|---|-----------------------------|---|--|
| College of Micronesia (FSM) | Yes | http://www.comfsm.fm/?q=search/node/online%20courses | Offers 4 accounting courses online Strategic plan mentions the need to explore distance learning opportunities in association with “emphasize academic offerings in service to national needs. The associated goal: Strategic Plan Goal 2.1: Increase the number of 4 year program opportunities. |
| Hawaii Community College | No | http://www.hawaii.edu/dl/programs | The online course/program tab redirects students to University of Hawaii. The college does not offer its own distance courses. |
| University of Guam | Yes | http://www.uog.edu/search/node/online%20courses http://campus.uogdi.stance.com/course/search.php?search=online http://campus.uogdi.stance.com | Offers courses in English, Business, Art, Education, Various Adult Education courses. They also provide some online readiness course(s) for both faculty and students. |
| <i>Institutional information was obtained from the respective institutional websites and IPEDS data where relevant.</i> | | | |

Conclusion

Guam CC is in a prime position to become a leader in providing its target population with online courses and programs that have been developed with student success in mind. The limited number of peer colleges and universities that offer robust online programs would allow GCC to differentiate quite effectively in this pacific marketplace, furthermore GCC has a good accreditation standing, in addition to a competitive tuition rate. Several students select GCC as their institution of choice because of cost differentials. As presented in the table 6, amongst colleges in the Pacific islands, its tuition & fees are by far the lowest for resident students, followed by College of Micronesia. University of Phoenix and College of Micronesia both offer online courses and have a standard tuition rate for all students irrespective of their geographical location. Please note that the tuition and fees presented were from the 2012-2013 school year and may be variant at this time. The data indicates that GCC would remain relevant in the marketplace and could definitely differentiate on price if the tuition and fee structure were to remain the same or relatively similar for the online courses.

In order to attract students from FSM to attend GCC, the \$450 tuition & fee difference would have to be made compelling for the student. Although this difference may seem like a barrier, the FSM student would be able to remain at home and minimize expenses on room and board. A student from FSM would be spending about \$145/month¹⁵ on internet access but that is still relatively minimal when compared to room and board for a whole semester, in addition to costs incurred for travel.

Table 6: Tuition and Fees Across Peer Institutions

| Institution | Tuition & Fees (\$) (Full time students) | |
|--|--|--------------|
| | Resident | Non-Resident |
| Guam Community College | 3120 | 4320 |
| University of Guam | 5058 | 14058 |
| College of Marshall Islands | 4370 | 4370 |
| College of Micronesia | 3891 | 3891 |
| University of Phoenix | 4608 | 4608 |
| <i>Tuition information was obtained from institutional websites, and may vary from actual tuition rates scheduled for Fall '14</i> | | |

Who is looking for information on GCC's website?

In reviewing potential territories for DE delivery a snapshot of the latest traffic to the college website was provided by the Office of Communications and Promotions. As indicated below (Table 7), residents on Guam are the largest group of website visitors, followed by the US main land. The Micronesian islands fall under the purview of the college mission, but Northern Mariana Islands and Micronesia have minimal traffic volume, albeit they exhibit the highest number of pages viewed per visit and the longest average duration per visit.

Table 7: GCC Website traffic – Location data (Feb '14 data)

| Country/Territory | Visits | % New visits | Pages per Visit | Avg. Visit Duration (min) |
|--|--------|--------------|-----------------|---------------------------|
| Guam | 59432 | 35.66 | 1.68 | 2.45 |
| United States | 1717 | 58.3 | 2.81 | 2.54 |
| Philippines | 117 | 63.25 | 2.04 | 2.47 |
| Japan | 88 | 76.14 | 3.3 | 2.59 |
| Northern Mariana Islands | 82 | 65.85 | 4.15 | 6.16 |
| Federal States of Micronesia (FSM) | 28 | 42.88 | 4.5 | 5.56 |
| GCC - WSI Location report 1/28/14 to 2/27/14 | | | | |

Guam has a population of 182,111 (2013), while FSM has an aggregate population of 103,395 (2012) and the Northern Mariana Islands was estimated to have a population of 51,170 in 2013. Although the combined population of FSM and Northern Mariana Islands is a little less than Guam's¹⁶, there is a significant gap in GDP, infrastructure and access to resources.

¹⁵ Information obtained from the Federated States of Micronesia Telecommunications Corporation.
<http://www.telecom.fm/internet.htm>

¹⁶ US Census Data. <http://www.census.gov/#>

Cost efficient, stable and easily accessible internet is critical for DE students. Following extensive review, it was determined that internet access in FSM is expensive and limited. FSM telecommunications corporation (FMCTC) charges 8 cents per mb (either received or sent). Dial up rates through FMCTC are at about \$149.95 for 15 users for a total of 120 hours of dial up access. A full time online student would probably use all of those hours in a single month to support their course work when coupled with recreational browsing. Some cheaper dial options are \$19.95 per user for 10 hours of dial-up access, however the students would encounter significant difficulties downloading course content (especially audio-visual) and would still incur about \$150 in order to successfully participate in the online environment. Dial-up speeds are slow, and may account for the longer average minutes per visit noted on the website from FSM browsers. Although the college is very interested in providing access to FSM, it seems there may be both infrastructure and financial barriers for student populations from the islands at this time. Based on the large Philippine and Japanese communities on Guam, it may be worthwhile to determine if these are plausible markets for specific programs offered by the college.

Note: Additional website analytics to determine what pages are most visited and specific programs being sought would be a good starting point for the college to determine whether the web traffic can indicate interest in current institutional programs.

Market Differential

To differentiate an educational program in the online market place, students seek *value add* qualities. An example of a *value add* quality is an external validation of a student's competency through accreditation or certification. With the increase of student engagement in online learning and a ripe employment market, it is Ellucian's recommendation that GCC discuss and strategize around loosely categorized new programs in areas shown above that demonstrate considerable increase in hiring, wages or availability of jobs for focus areas within Guam. New programs will minimize cannibalization of current students and will increase the prospective pool of students.

1. In drawing conclusions regarding effectiveness of program and instructional strategies, systematic and regular collection and evaluation of timely data is required. Best practices require regular feedback from students as customers in their experiences with DE programs and courses. Regular review of survey data designed to identify improvement, success and further work in DE is necessary. Preliminary results from the following surveys will enable the college to determine its current readiness to enter the DE market.
 - a. Online student readiness -- This survey explores student expectations of online classrooms, technology preparedness, study skills and habits, access to computers and knowledge of common software. Students receive immediate feedback upon completion of the survey, and the college ensures that each student is provided with both thoughtful responses about their intrinsic knowledge of technology, study habits and organization, learning style, and directions on how to increase their abilities to follow focused directions and attention to detail. Students then decide whether or not to wait to take an online class while they improve one or two skills needed to be successful.
 - b. Faculty self-evaluation of online teaching readiness. In this case, faculty complete a survey that measures online teaching philosophy, DE awareness, DE expectations and overall online skills and preparedness. As a result, faculty often receive additional training for improvements in managing their online classroom.

Taken together, an assessment of institutional faculty and students in addition to prospective faculty and students will provide the college with a clear perspective on student and faculty needs and gaps. The investment in creating a culture of online learning would then be assessed relative to the benefit obtained from developing online programs, and a Return-On-Investment determined -- insufficient student and faculty readiness have been shown to cripple online programs.

2. Also worthy of review is the development of higher level courses that meet the needs of rising graduates and the Guam workforce. Students that see extended time to completion while awaiting

200 level courses would have their needs met, in addition to providing an avenue for the local workforce to enroll in courses offered by the college, but at their own time.

3. There are about 18,000 potential adult education students on Guam. Diploma readiness courses that are flexible but interactive may be appealing to this demographic on Guam, however a clear needs and technology capability assessment would be required to determine whether who would be best suited for DE at GCC.
4. Lastly, research has shown that most online students prefer to enroll in a program that is within a 100 mile radius of their home. The college attracts close to 500 students/year/high school in dual enrollment and college readiness programs. There are five high schools directly affiliated with GCC, suggesting that there are anywhere from 2,000 – 2,400 students directly impacted by GCC culture on an annual basis. It was noted that there is an attrition rate of about 50% from 10th → 11th grade and an additional 50% attrition from 11th- 12th grade. These students are already primed for a college experience when they first engage with GCC in 9th grade and would be a ready market for online courses that meet their needs. A survey of these students interest in DE would be beneficial in determining whether GCC has an opportunity to cater their needs since they already see the value of a GCC education. This mitigates risk involved in seeking students that are greater than 100 miles away from the college.