A Systemic Approach to Design and Develop Online Programs – State of the Practice and Future Projections

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Abstract— In the past 15 years, higher education institutions have worked diligently to increase educational offerings via distance education and, specifically, online learning. Despite the various administrative and academic structures needed to deliver the enterprise effectively, online programs continue to thrive. Yet, the benefits of a centralized versus a decentralized organization to manage distance education continue to be debated. This paper focuses on the merits of taking a systemic approach to online learning, which uses standardized procedures and practices while leveraging research data related to student learning preferences, student completion rates, workforce needs, and trends, along with statistical evidence from local, state and regional sources. From partial terms to accelerated terms to traditional semester-long courses, online programs benefit from using a systemic approach to design and delivery. This paper delves into these advantages and concludes with recommendations.

Index Terms— online learning, distance learning, accelerated learning, growth, program creation, instructional design, management, faculty development

I. INTRODUCTION

In the past 15 years, higher education institutions have worked diligently to increase educational offerings via distance education and, specifically, online learning. Fueled by the proliferation of the internet, mobile devices and the affordability of computers, online learning has experienced a steady and healthy increase in participants. In the United States, the number of students taking at least one online course rose to 6.3 million [1]. Academic offerings via online learning have increased progressively, evolving from single courses to complete degree programs at both the undergraduate and graduate levels. As students have become more familiar and comfortable with this educational modality, interest in pursuing accelerated options has intensified [2]. That online learning has become "mainstream" and recognized by accrediting agencies led to the issuance of guidelines to ensure online programs offer the same academic rigor as traditional classrooms [3]. It is expected for this trend to continue as more academic institutions seek to boost their enrollment numbers expand service areas and use online learning to

increase revenue [4][5]. A centralized approach to design, develop and manage fully online programs is presented below.

II. FRAMEWORK FOR WORK REVIEW

A. Current State

The proliferation of online courses and programs started at many institutions as a grassroots approach, with early adopters and advocates promoting its implementation. Shortly after, institutions began to experience increased interest for online courses due to graduation requirements [6], and the advantages to recruit expert faculty and students. However, the offerings were limited to single courses, as fully online programs had additional requirements imposed by accrediting agencies [3]

B. Centralized, Intentional, and Focused

Practitioners and scholars continue to debate the advantages and disadvantages of decentralized and centralized units responsible for administering online program offerings, specifically regarding planning for the academic enterprise [7]. A centralized group, and in this case a Campus, was chosen as the stratagem to develop, administer, and deliver 100% online learning programs to widen access to higher education opportunities [8]. A dedicated campus with a well-defined charter to create and implement policy that outlines what programs to develop and deliver represents a sound approach that offers a more certain and more expedient return on investment [8]. Established in 2014 as part of Tarrant County College District, one of the 20-largest higher education institutions in the U.S., TCC Connect Campus is a 100% online campus that serves more than 20,500 students each year.

III. THE INSTITUTION

Tarrant County College was established by a county-wide election on July 31, 1965, as Tarrant County Junior College; the name was changed to Tarrant County College in 1999. In the fall of 1973, TCC introduced distance learning with two courses in instructional television. Nearly 800 students enrolled in these two classes, which immediately demonstrated an

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interest in flexible schedules that were more convenient for the students. TCC Connect Campus opened in 2014 with approximately 12,000 students enrolled in 350 courses and 18 programs, which translates to approximately 25, 000 enrollments. Phenomenal growth has occurred over the five years of the campus¶ existence, making eLearning at TCC one of the largest programs in Texas. Located in Fort Worth, Texas, with a current credit enrollment of more than 100,000 credit and non-credit students, Tarrant County College is a two-year public institution with more than forty years of history delivering distance education offerings.

The campus is mandated by policy to offer online courses, certificates and programs [9], and as a way to accomplish the mandates, operational procedures were developed and anchored by standardization, common syllabus, and peer-developed courses [10]. Campus staff uses research data related to student learning preferences and student completion rates to redesign courses by infusing them with activities that incorporate best practices [11]. Similarly, the impetus to adapt and develop new programs for online delivery is supported by data reports from municipal, regional, state, and national sources, enabling precise alignment between the needs of the community, the workforce, and the students.

%\ KDYLQJ VROH UHVSRQVLELOLW\ for its offerings, TCC Connect Campus was able to expedite the scalability of online course delivery in anticipation of an exponential increase in our offerings [12], [13]. The use of subject matter expert teams instead of individual faculty, combined with the experience of a full squad of instructional as well as graphic designers, strengthened and expedited the course and program development process.

IV. ACCOMPLISHMENTS OR UNDERTAKINGS

The outcome of these efforts has produced several initiatives ranging from academic to operational, quality assurance to student services, and have generated new revenue streams. Between 2014 and 2018, 22 fully online programs² 10 unique to TCC Connect Campus² have been established. The programs are in the areas of Business Administration, Information Technology, Office Administration, and Human Resources.

A. Peer-developed Courses

As a quality assurance and student success initiative, we developed a robust peer-based course development process. The process follows a project management approach, leveraging the expertise of groups of subject matter experts (faculty) paired with instructional and graphic designers [10], [14]. The goal is to align teaching tools and strategies with learning outcomes. More than 75 courses have been designed or redesigned using this process.

B. Accelerated Initiatives

The needs and preferences of the 21st century students are changing rapidly. Availability of high-paying jobs, the prospects of social mobility and the need to complete an academic degree in a reduced time led us to implement three accelerated initiatives. Our signature accelerated program, Weekend College, is a seven-week, once-a-week on site program. Students enroll in two courses every term, allowing them to complete their associate degree in 18 months or less. The initiative began in the fall 2014 with 72 students, with 52 percent (38) graduating within two years. Experiencing steady growth since 2014, the program now serves more than 750 students per semester and enabled more than 2,200 to complete their associate degree in a shorter amount of time. The Weekend College program boasts a remarkable 72% success rate [15], [16]

C. Monthly Starts

In 2017, monthly starts began, letting students enroll in one course that lasts four weeks beginning every first Monday of the month. Research conducted on accelerated online courses indicate ³significant ULIIHUHQFHV found in academic performance, with students in the five-week session showing stronger academic performance than the full-VHPHVWHU VWXGHQWV´ >S17], "Shorter term length facilitates the regularity and frequency of assignments, exams, and other projects, providing the necessary structure and routine that might otherwise be lacking." Other studies have validated the academic advantages of short-term courses [18], [19] The literature has shown that the compressed schedule allows students to hone in on the course, thus increasing their chances to successfully complete it. Table I shows the number of initiatives implemented since the inception of the campus.

TABLE I. INITIATIVES IMPLEMENTED

INITIATIVES PER YEAR	
Initiative	Implementation date
Online Peer Course Development	Fall 2014
Redesigned Online Certification	Fall 2014
Wintermester Online	Winter 2016
Summer Online	Summer 2016
8-week Programs	Spring 2017
Monthly Starts	Fall 2017
Online Advising	Fall 2018
eFaculty Coach	Fall 2018

D. Wintermester

Following a similar strategy, and keeping student preferences in mind, in 2016 we implemented the first online Wintermester. This is an accelerated four-week term offered during the holidays, beginning the last day of the fall semester and ending the first week in January², with the sole goal to help students get ahead of the spring semester. Students enroll in one course. TCC rules require students to enroll in the same or fewer number of hours than weeks in a term, reducing the chances for student to drop or fail the course. Approximately 1,100 students enroll in Wintermester

with an 88% success rate. A total of 1,002 students were enrolled in the 2019 TCC Connect Campus Wintermester session. Of the 1,002 students enrolled 890 passed with a grade of "C" which is 88.9% of the total enrollment. 6.9% received a grade of "D" or "F". The withdrawal rate for this session was only 2% (see Table II).

TABLE II. WINTERMESTER ENROLLMENTS AND SUCCESS RATES

Year	Enrollments	Passed with C or better		Received D or F		Withdrew	
2019	1,002	890	88.90%	69	6.90%	42	4.20%
2018	753	613	81.40%	63	8.40%	77	10.20%
2017	499	420	84.20%	36	7.20%	43	8.60%

E. Online Advising and eFaculty Coaches

Centralizing the administration of an online campus also allows for the identification of specialized academic and student services. A key component of student success (see Table III) is online advising, which provides students with time management, course and program selections. In addition, advisors "shadow" students throughout their academic journey in two ways: after an early alert is initiated, and once students have made initial contact with an advisor [20], [21]. Recently, we added another success initiative known as eFaculty coaches. The initiative is designed to help faculty with the management of the course from facilitation to discussion forums and from grading to their online presence. The coach observes how a group of faculty performs in the virtual classroom and identifies common areas where improvements can be made through training [22].

TABLE III. SUCCESS RATES FOR ONLINE COURSES

Semester	FL 2018	SU 2018	SP 2018	FL 2017	SU 2017
Success Rates	68.40%	79.70%	69.30%	66.40%	79.80%
% Change Success Rate	2	-0.13%	1.3	-1.7	-0.4

For students to be successful in their higher education endeavors, they need dedicated services that include faculty experienced in accelerated, online and andragogy to professional development, instructional design and digital scholarship [21]. These are quality assurance strategies institutions need to implement as they embark upon distance education plans.

V. CONCLUSIONS AND RECOMMENDATIONS

We recommend that institutions consider centralizing distance education operations. Data shows that students benefit from dedicated and specialized services that align with the modality and their individual learning styles. The student experience needs to be one, minimizing the chances for variables in classroom learning versus online learning, and that prioritizes sound system navigation, activities, assignments, and outcomes [10]. Expedited course design and redesign, as well as the creation of new programs. Accordingly, a centralized operation is better able plan strategically and expedite course design and redesign by leveraging research and best practices specific to this modality.

Institutions of higher education seeking to expand online learning operations should embark upon long-term planning, supported by data related to enrollment, success rates, completion, economic forecast, and student success. The preparation of a separate plan for online learning that includes timelines, budget, marketing, faculty and human resources and technology is critical to its success.

The institution also benefits from a centralized approach by avoiding duplicative staff and efforts, and ensuring consistency of the virtual classroom's navigation, look, and feel. Institutions also benefit from cost reductions, as highly specialized staff, such as instructional designers, multimedia technicians, trainers, and graphic designers, can be organized and managed in a uniform way to advance a common goal. Our centralized practice has shown, through planning, that it is better equipped to manage the scalability of courses and programs thus increasing its ability to respond to opportunities, mandates, or business proposals.

CONFLICT OF INTEREST

The author declare no conflict of interest.

AUTHOR CONTRIBUTIONS

This is a single author contributor conducted research, analyzed the data and wrote the paper.

REFERENCES

[1] J. E. Seaman, I. E. Allen, and J. Seaman, Grade Increase: Tracking Distance Education in the United States. Wellesley MA: The Babson Survey Research Group, 2018.

[2] J. Ferguson and A. DeFelice, Length of online course and student satisfaction, perceived learning, and academic performance, The International Review of Research in Open and Distributed Learning vol. 11, no. 2, pp. 73-84, 2010.

[3] S. Keil and A. Brown, "Distance education policy standards: A review of current regional and national accrediting organizations in the United States," Online Journal of Distance Learning Administration, vol. 17, no. 3, pp. 1-15, 2014.

[4] C. M. Hoxby, "The economics of online postsecondary education: MOOCs, nonselective education, and highly selective education," American Economic Review, vol. 104, no. 5, pp. 528-33, 2014.

[5] G. Rumble, Papers and Debates on the Economics and Cost of Distance and Online Learning, Oldenburg: University of Oldenburg, 2004.

[6] Texas Higher Education Coordinating Board. (2015). THECB 60 x 30 Strategic Plan [Online]. Available http://www.thecb.state.tx.us/index.cfm?objectid=5033056A-A8AF-0900-DE0514355F026A7F

[7] K. P. Pisel, "A strategic planning process model for distance education," Online Journal of Distance Learning Administration, vol. 11, no. 11, pp. 1-9, 2008.

[8] Tarrant County College District. TCC Connect Concept Plan. Fort Worth, TX, 2013.

[9] Tarrant County College District. (2018). EBA (LOCAL) - Alternate Methods of Instruction: Distance Education [Online]. Available: https://pol.tasb.org/Policy/Download/1097?filename=E

BA(LOCAL).html&title=ALTERNATE%20METHODS%20OF %20INSTRUCTION&subtitle=DISTANCE%20EDUCATION

[10] A. Bailey, N. Vaduganathan, T. Henry, R. Laverdiere, and L. Pugliese, "Making digital learning work: Successful strategies from six leading universities and community colleges," Boston, MA: The Boston Consulting Group and Arizona State University, 2018

[11] Quality Matters Project. (2018). About quality matters. [Online]. Available: http://www.qualitymatters.org

[12] P. Shapiro, C. Morales, and S. Biro, "Distance learning growth and change management in traditional institutions," Paper presented at the 25th annual Conference on Distance Teaching and Learning, 2009.

[13] C. Morales, "Managing rapid growth of online programs: State of the practice," in Proc. 27th annual Conference on Distance Teaching and Learning, 2011.

[14] K. Shaw, "Leadership through instructional design in higher education," Online Journal of Distance Learning Administration, vol. 12, no. 3, 2012.

[15] C. R. Morales and D. Pearse, Using an accelerated approach: A weekend college associate degree completion in 18 months. Presented at 2016 SACSCOC Annual Conference, Atlanta, Georgia, 2016.

[16] C. Scott. Persistence and Success Rates of Community College Students in an Accelerated Learning Program. Dissertation, Wilmington University, Delaware, 2015.

[17] D. Diaz and R. Cartnal, "Term length as an indicator of attrition in online learning," Innovate, vol. 2, no. 5, 2006.

[18] M. Furr, "A comparative study of the accelerated 8-week and traditional 16-week online course formats at a north carolina community college," Available ProQuest Dissertations & Theses Global (Order No. 3541516), 2012.

[19] L. A. Boeding, "Academic performance in compressed courses: A phenomenological study of community college student success," Available ProQuest Dissertations & Theses Global (AAT 10168260), 2016.

[20] K. Jones, "Developing and implementing a mandatory online student orientation," Journal of Asynchronous Learning Networks, vol. 17, no. 1, pp. 43-45. 2013.

[21] K. Nolan, "Online advising pilot at the community college of Vermont," Journal of Asynchronous Learning Networks, vol. 17, no. 1, pp. 47-51, 2013.

[22] C. R. Morales and G. Tapia, "La implementación de un programa de mentoría para la faculDGHQ OtQHD (Q´iñ)PoE.XOW\ &RD 5th Congreso Internacional de Innovación Educativa (CIIE), 2018.

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