Academic Leadership Perceptions of Online Program Quality and Course Design

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Abstract
The purpose of this study was to examine college and university leaders' background in, perceptions of, and experiences with the administration of high-quality online programs and design of online courses. The population of this study included academic leaders at higher education institutions within the state of Texas from 2- and 4-year undergraduate and graduate, public and private, for-profit and non-profit institutions that had at least one 100% online program. A quantitative research design was used through the distribution of a survey that contained two parts: part one asked questions related to the background demographics of the leader and their respective institution replicated from Fredericksen's 2017 survey of higher education leaders with additional supplemental questions while part two was a replication of two sections of the Online Learning Consortium's Scorecard for the Administration of Online Programs. Data were analyzed through multiple methods including descriptive, correlation, and causal comparative statistics. Findings include describing current academic leaders' and institutions' background demographics and the perception of online program quality held by academic leaders. Recommendations are provided to institutions looking to improve online program quality or hire an administrator for online programs. Online program quality may be improved by institutions establishing a process for the development/redesign of online courses, establishing course development standards, and requiring faculty to collaborate with instructional designers.

Keywords: Online quality, distance education, course design, academic leaders, instructional design, online programs, Online Learning Consortium Scorecard

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Distance education demand continues to increase across U.S. higher education institutions (Seaman et al., 2018), with 35% of students enrolling in an online course in the fall of 2018 (National Center for Education Statistics, 2021). In response to this continual growth, academic leaders must be able to overcome the obstacles associated with providing high-quality distance education for students. Challenges that administration face include providing adequate instructor support, applying best practices to course design, reducing technology barriers, and maintaining organizational structures that allow faculty members to offer high quality online courses that meet student needs (Nemetz et al., 2017; Sanford, 2017; Scoppio & Luyt, 2017; Tannehill et al., 2018).

Concern over ensuring high quality online courses in higher education institutions was amplified by the COVID-19 pandemic, further highlighting the need for quality online courses (Means, Neisler & Langer Research Associates, 2020). However, determining a measure for quality is challenging when there is no agreed upon definition for "quality online courses" (Allen & Seaman, 2016; Inside Higher Ed, 2019; Shelton, 2010). Regardless of the differences of opinion over what constitutes a quality online course, research has shown that academic structures (Garett et al., 2020b; Tannehill et al., 2018), quality standards (Baldwin, Ching & Hsu, 2018; Zimmerman et al., 2020), and attention to course design (Bolliger & Martin, 2021; OLC, 2018, Sadaf et al., 2019; Zimmerman et al., 2020) are essential elements of high-quality online courses.

Background

As online higher education enrollment within the United States continues to increase, academic administrators must be aware of factors impacting the quality level of online programs. This study aims to understand the perceptions of academic leaders regarding their online course quality. Understanding how academic leadership perceptions influence course design is important due to the direct impact on course quality and, ultimately, student experience (Bigatel & Edel-Malizia, 2018; Scoppio & Luyt, 2017).

Quality Online Courses

Within higher education, especially among faculty members, negative perceptions about online course quality as inferior to face-to-face instruction have persisted (Allen & Seaman, 2013; Picciano et al., 2010) even though numerous researchers, including Nguyen (2015), have concluded that online learning is equally effective as face-to-face courses. This negative perception has shifted, however, as more faculty gain experience with online courses. For instance, Allen and Seaman (2013) found that 77% of faculty members perceive online delivery of learning objectives as comparable to or better than face-to-face instruction. Despite this positive shift in perceptions of online education, it is critical that academic leaders understand what factors influence quality online courses so that the acceptance of their effectiveness persists.

Conflicting recommendations can be found in the literature on best practices and factors that contribute to the quality of online courses. To further complicate the issue, faculty member

and academic leaders within one institution may have different views on course quality (Allen & Seaman, 2016; Inside Higher Ed, 2019). Baldwin, Ching, and Hsu (2018) reviewed six evaluation instruments providing administrators, instructional designers, and course designers with essential standards for quality online courses which included a focus on course design and standards. Similar guidelines were echoed in Lewis's (2021) list of best practices for online course content; however, unique to Lewis are detailed guidelines around course content such as including a syllabus and providing a course overview for students.

Attention to course design is an essential element of high-quality online education since course design impacts both student performance and engagement (Bolliger & Martin, 2021; OLC, 2018; Sadaf et al., 2019; Zimmerman et al., 2020). Understanding student expectations and maintaining course quality through effective online course design is an important consideration for academic leaders as their perceptions have the potential to impact course quality (Tannehill et al., 2018). For example, negative perceptions of online learning increased as courses were forced online during the COVID pandemic (Means, Neisler & Langer Research Associates, 2020). Administrators need to be aware of the concerns and challenges related to course design and how their perceptions may influence the course development process and impact course quality (Tannehill et al., 2018; Ulrich & Karvonen, 2011).

Online Quality Standards

A critical challenge facing online higher education is the quality of online programs, including concerns on how to measure quality programs as there is no standardized model (Allen & Seaman, 2016; Inside Higher Ed, 2019; Shelton, 2010). The necessity of quality standards for online courses was further highlighted by the COVID-19 pandemic (Zimmerman et al., 2020). Multiple researchers have identified the use of institutional standards to guide online development as the most important contributing factor to ensuring quality online programs (Baldwin, Ching, & Friesen, 2018; McGahan et al., 2015; Parscale et al., 2015) and a negative impact to online program success when institutional standards are not used (Baldwin, Ching, & Hsu, 2018).

In 2000, the Institute for Higher Education Policy (IHEP) published "Quality on the Line: Benchmarks for Success in Internet Based Distance Education," which established 24 standards for quality online education. Using the original IHEP standards, Shelton's 2010 Delphi study sought to determine the relevance of the IHEP standards, resulting in the creation of 70 quality indicators and a scoring system known now as the Online Learning Consortium (OLC) Quality Scorecard for the Administration of Online Programs (Littlefield et al., 2019). In addition to the creation of the OLC Scorecard, the Quality Matters Rubric was also established as a result of a study with funding from the U.S. Department of Education as researchers desired scalable quality online programs that were informed by research (Littlefield et al., 2019). These scorecards provide a framework for administrators which assist in budget concerns, process alignment and identification of needs at both the program and institutional level for distance education (Littlefield et al., 2019).

Starting in 2010, OLC released its first scorecard to provide administrators with a mechanism to evaluate the quality of online program administration (Online Learning Consortium, 2021a). According to the Online Learning Consortium (2021b), the scorecard is

beneficial in strategic planning for program improvement, benchmarking, developing high quality online courses, and evaluation and demonstration of quality administration. In Fredericksen's (2017) survey of academic leaders, the OLC was the most common institutional membership (77% of institutions surveyed). Ensuring that institutions and academic leaders possess a similar understanding of course quality has the potential to positively impact online programs within higher education.

Administrative Factors Related to Quality Online Programming

To create quality online programs, administrators need knowledge of planning and continual improvement strategies in addition to the knowledge faculty must have on best practices in online teaching (Littlefield et al., 2019). At the administrative level, additional factors must be considered to ensure the quality of a program, including institutional support, technology support, course development and instructional design, teaching and learning, faculty support, student support, and finally, evaluation and assessment (Online Learning Consortium, 2018).

The large increase in online programs due to student demand caused a fundamental shift in academic structures and the administration of programs supporting these courses, resulting in online courses becoming a significant part of university culture and a change agent for how institutions handle policies and responsibilities (Garrett et al., 2020b). How the institution structures their online programs impacts other departments throughout the organization, including academics, enrollment, student services, and information technology (Paolucci & Gambescia, 2007). Pedro and Kumar (2020) conducted a review of literature of 13 online quality frameworks, including the OLC Scorecard, to determine the institutional services necessary to support quality online teaching. They found that institutions need to provide support in technical skills, course design standards, professional development, instructional design, program/course effectiveness, and academic and administrative support for students, including accessibility.

The role of Chief Online Officer (COO), a title used to describe the most senior leader responsible for online education in higher education, has recently expanded its responsibilities (Garrett et al., 2020a). In a national survey of leaders in online higher education, most participants were in positions newly created within the past 5-6 years with 60% of administrators overseeing all types of courses at their institution (Fredericksen, 2017). COOs identified major responsibilities as including faculty training, instructional design, quality assurance, online policies, and course development. Those surveyed stated that their top three goals for the next five years were to improve or maintain quality of online learning, support faculty and professional development for online teaching, and increase student engagement and success. Institution goals for the next five years also had the top goal of increasing quality; the other two highest goals were increasing online course offerings and online enrollment.

Given that leadership positions in online higher education are relatively new for most universities (Garret et al., 2020a), further research is warranted to understand how these academic leaders understand their role relevant to quality course design and delivery. Understanding current academic leaders' perceptions of the instructional design role and their academic goals may provide insight into the perceived knowledge gap in quality course development.

Purpose of the Study

The purpose of this quantitative research study was to examine college and university leaders' background in, perceptions of, and experiences with the administration of high-quality online programs and design of online courses. The following research questions were used for the study:

> RQ1: How do higher education academic leaders perceive the quality of online programs at their institution based on their reported score on the Online Learning Consortium Scorecard for the Administration of Online Programs?
>
> RQ2: What are the background demographics of current higher education academic leaders who administer online programs?
>
> RQ3: What is the correlation between a higher education academic leaders' reported score on the Online Learning Consortium Scorecard for the Administration of Online Programs and demographic variables?
>
> RQ4: Is there a significant difference between an institution's use of course development standards, requirement of instructional designers to collaborate with faculty, and the use of an established process for the development/redesign of new and existing online courses and a higher education academic leaders' reported score on the Online Learning Consortium Scorecard for the Administration of Online Programs?

Methods

Multiple quantitative research designs, including descriptive, correlational, and causal comparative designs were utilized in this study to investigate academic leaders' background in, perceptions of, and experiences with the design and administration of high-quality online courses and programs.

Population and Sample

The study population consisted of academic leaders of online programs serving at two- and four-year undergraduate and graduate level public and private, for-profit and non-profit higher education institutions within the state of Texas that had at least one 100% online degree program. Trade schools such as culinary programs were eliminated from the population. In the Fall of 2021, there were a total of 234 higher education institutions in the state of Texas (National Center for Education Statistics, n.d.). After removing duplicate institutions and institutions that did not have at least one 100% online degree program, as well as removing our own institution, 150 eligible institutions remained.

This study was approved by an Institutional Review Board (IRB) before any study participants were recruited or data collected. IRB ethical guidelines were followed during this research study including the anonymous collection of data and secure storage of de-identified data on a password-protected secure hard drive. Participants were assured of confidentiality as

we did not collect any identifying information such as the participant's name, email address, or institution in the survey.

Websites, organization charts, web searchers, and direct inquiry with institutions led us to identify one academic leader as the administrator of online programs for each institution. Job titles of survey participants included variants of online learning, education technology, learning and teaching centers, deans, vice presidents, and directors. Surveys were distributed to the identified academic leaders containing a prequalification question on the survey to prevent ineligible academic leaders from participating. If the first identified academic leader did not participate in the survey, then a second academic leader identified from the institution was asked to participate in the survey. Participants received multiple reminders via email about participating in the survey, which included the benefits of participation.

Materials and Instruments

A quantitative survey was deemed an appropriate instrument for answering the research questions. Qualtrics, a web-based survey tool, was used to administer the survey. This professional survey tool was selected because it was provided by the authors' institution, allowed for complex survey response collection, and provided participant anonymity. The survey consisted of two main sections: the first collected background information from the academic leader and the institution at which they serve, and the second collected academic leaders' perceptions of online program quality at their institution. Fredericksen (2017) surveyed United States higher education leaders in online learning with a 30-question, multiple-choice survey. Questions from his original survey were duplicated with permission and used to design section one of the survey. Additional questions were added to supplement Fredericksen's original survey to learn more about current academic leaders and their institutions. These additional questions ascertained professional certifications, number of training sessions attended, current job title, amount of time dedicated to the administration of online programs, classification of institutions as for-profit or non-profit, and specific enrollment questions related to the number of students participating in online courses and degree programs. As the study focused on perceptions of quality online program administration, we also wanted to understand the current policies and practices at the institution participating in the survey.

The second section of the survey utilized the Online Learning Consortium Scorecard for the Administration of Online programs (Online Learning Consortium, 2018). This scorecard consisted of seven sections: Institutional/Administration Support, Technology Support, Course Development/Instructional Design, Teaching and Learning, Faculty Support, Student Support, and Evaluation and Assessment. Given the goals of this study to examine relationships between online higher education academic leaders' background in, perceptions of, and experiences with the administration of high-quality online programs and design of online courses, two sections of the scorecard (Institutional/Administrative Support and Course Development/Instructional Design) were included. These two sections focused on how administrative leaders perceive the quality of their online programs. These sections from the OLC Quality Scorecard Suite for the Administration of Online Programs were replicated exactly with permission from the OLC and utilized the same scoring method as prescribed by the OLC.

Reliability and Validity

Face validity was used for section one of the survey that included demographic questions (Teo, 2013). The second section of the survey consisted of two subsections from the OLC Quality Scorecard for the administration of online programs. In 2000, the Institute for Higher Education Policy was commissioned by National Education Association and Blackboard, Inc. to identify quality indicators in online higher education (Shelton, 2010). The results of Shelton's research provided a scorecard with 70 quality indicators adopted by the OLC which became the quality scorecard for the administration of online programs. Validity of the quality indicators that make up the scorecard was achieved through Delphi methodology resulting in evidence for content validity.

Reliability for the OLC scorecard can be ensured by either intra-rater reliability or inter-rater reliability. The OLC provides a handbook to guide individuals completing the scorecard (Online Learning Consortium, 2018). This handbook, written by the original participants of the Delphi study by Shelton (2010), ensures intra-rater reliability by training an individual reviewer on correct use of the OLC scorecard to assess online programs for quality. For inter-rater reliability, the OLC scorecard uses training through the handbook to ensure multiple reviewers accurately assess online programs for quality. Institutions can submit their scorecard for an official review by the OLC which will review the grading of the scorecard to ensure consistency across the evaluations (Online Learning Consortium, 2021b). While the OLC uses training, handbooks, and official reviewers to ensure inter-rater reliability, the method for scoring the rubric in this study was self-reporting by academic leaders. Since inter-rater reliability is not feasible for this study, internal consistency analysis was used to ensure reliability in the survey results. Using Cronbach's coefficient alpha for internal consistency determined to what degree items of the survey are correlated among each other (Teo, 2013).

The survey instrument designed for this study combined Fredericksen's 2017 survey (section one) and the OLC's quality scorecard for the administration of online programs (section two); both were shown to be valid and reliable instruments.

Data Collection and Analysis Procedures

Survey results were anonymous and securely captured through Qualtrics, a survey and data analysis tool. SPSS was used to conduct the statistical analyses of the data. Various types of quantitative research design techniques and statistical analysis were used to answer the research questions, including descriptive, correlational, and comparative statistical analysis. Research Questions 1 and 2 were analyzed using descriptive statistics, specifically mean, mode, frequency counts, and data normality check. Correlation research design was utilized for Research Question 3. Research Question 4 was a comparative research design where statistical analysis was used to determine any significant difference among variables.

After the data were collected, the mean, standard deviation, and normality check were conducted before a one-way analysis of variance (ANOVA) and an independent t-test were applied. For the ANOVA tests, if a significant omnibus difference was found, a Tukey post hoc test was conducted to indicate where the differences occurred among the groups (Laerd Statistics, 2018).

Results

Forty-one academic leaders completed the survey. The overall survey response rate was 27.3%. In the sections below, we include the findings for each research question.

Research Question 1

RQ1: How do higher education academic leaders perceive the quality of online programs at their institution based on their reported score on the Online Learning Consortium Scorecard for the Administration of Online Programs?

Survey respondents completed two sections from the Online Learning Consortium Scorecard for the Administration of Online Programs. Section one investigated Institutional/Administration Support scored on a scale of 0-3 in which 0 = deficient, 1 = developing, 2 = accomplished, and 3 = exemplary. The total number of points for this section was 24 points. Section two consisted of two different subsections related to course development, the first being Course Development: Institution or Program Level (33 points) and the second being Course Development: Course Level (21 points). The same 0-3 scale was used for scoring each of these subsections.

Among the three scorecard subsections, Course Development: Course Level had the highest mean score (2.39 ± .47) followed by Course Development: Institution or Program Level mean score (2.08 ± .57), with Institutional/Administration Support having the lowest mean score (1.92 ± .60).

The researchers of this study created a metric referred to as the Online Learning Consortium (OLC) scorecard total quality score calculated by averaging the results of all questions across the three scorecard subsections yielding a total quality score. The subsections included Course Development: Course Level, Course Development: Institution or Program Level and Institutional/Administration Support. The perceived OLC total quality score evaluated by academic leaders was a mean score of 2.11 ± .51.

Research Question 2

RQ2: What are the background demographics of current higher education academic leaders who administer online programs?

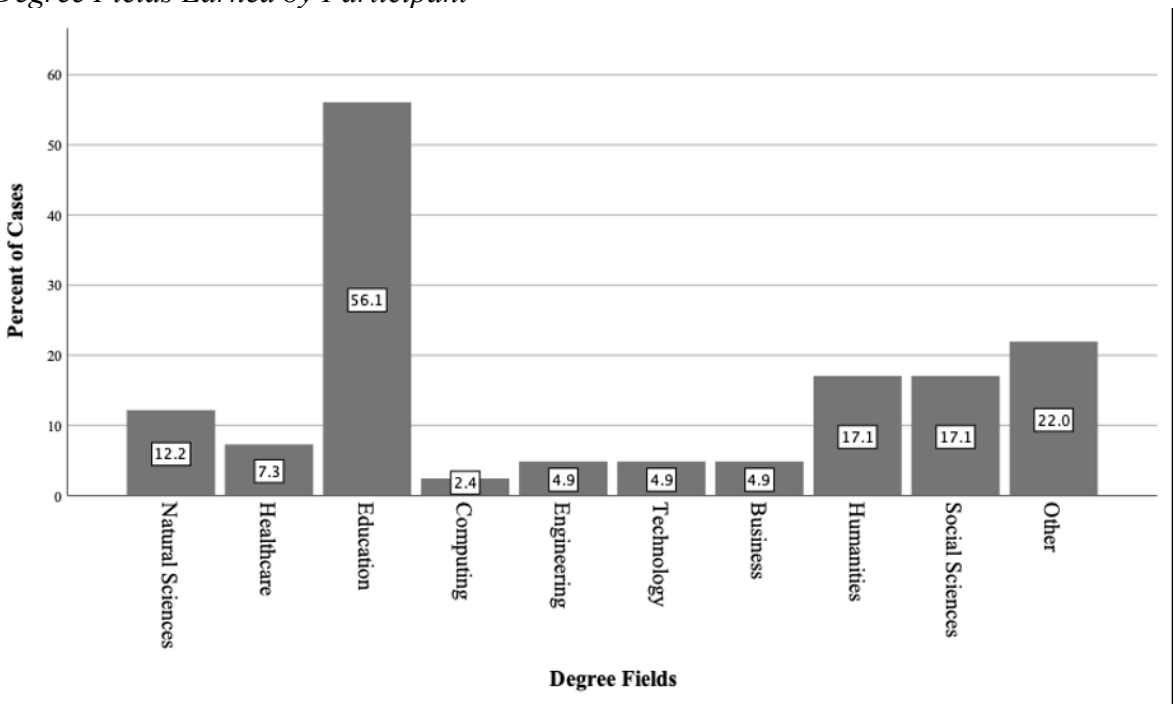
Academic Leader Demographics and Backgrounds

Survey participants had similar representation from female and male subjects with most respondents being female (58.5%). Participant ages ranged from 35 to 78 years with an average age of 55 years. Most participants (80.5%) had completed a Doctorate degree and 19.5% had completed a Master's degree.

Participants were asked to identify their degree field and all applicable fields. As revealed in Figure 1, most participants (56.1%) had earned at least one degree in education. Participants who selected "other" (22%) included response categories of leadership, library science, educational technology, industrial technology, nursing, religion, and instructional design.

Figure 1

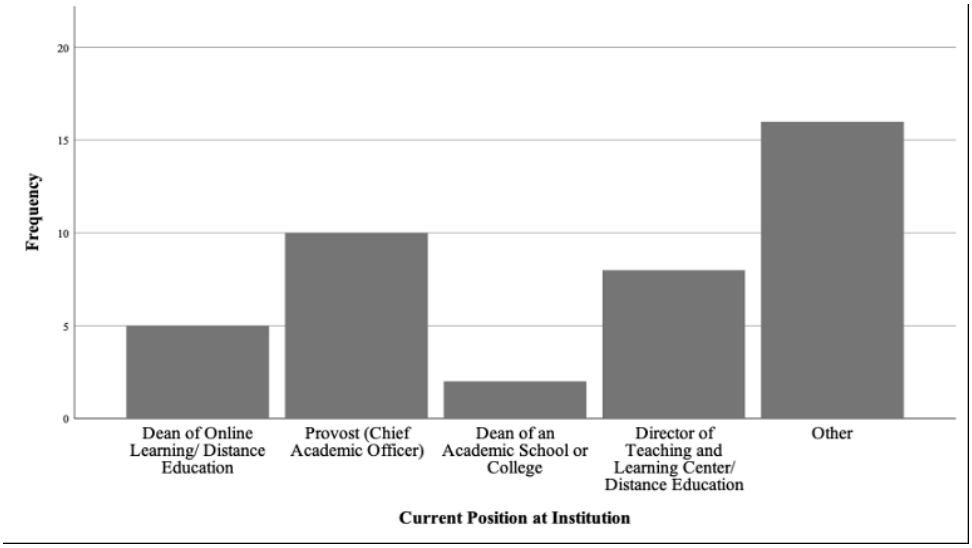
Degree Fields Earned by Participant



Participants were asked to indicate their current position at their institution (Figure 2). The largest category, which was selected by 16 participants, was "other." Within this category, 50% of participants identified their role as Vice Provost/President or Associate/Assistant Provost/President. The next largest group in the "other" category (37.5%) consisted of various types of Deans, including executive and associate level deans.

Figure 2

What Is Your Current Position at Your Institution?



Participants were asked to provide the number of years in their current position and responses demonstrated that 61% of participants had been in their roles for five years or less. Participants were asked to list how many years of experience they had in the following areas: total teaching (including in-person, hybrid, and online), online teaching, and online curriculum development/instructional design. Participants had an average of 20 years of total teaching experience, 12 years teaching online, and 14 years of online curriculum development/instructional design.

Participants were asked to indicate which of the professional certifications/trainings related to online learning they had received and to check all that applied. Most participants (51.2%) did not possess any of the certifications or trainings listed (see Table 1). The next largest group (22%) had earned a Quality Matters (QM) Peer Reviewer certification. The "other" category encompassed a wide variety of responses, including institution-specific training, University Professional and Continuing Education Association (UPCEA), library training, coursework related to adult learning, self-taught, workshops, Texas Digital Learning Association (TxDLA) accessibility certification, and applying the Quality Matters (QM) rubric.

Table 1

Professional Certifications/Trainings Related to Online Learning

Professional Certification/Training	Percent of Cases
I do not have any of these certifications and/or trainings	51.2
Quality Matters (QM) Peer Reviewer	22.0
Other	19.5
Blackboard Academy	14.6
Online Learning Consortium (OLC) Online Teaching Certificate Program	12.2

OLC Institute for Emerging Leadership in Online Learning	12.2
Moodle Educator Certification Program	9.8
QM Review Course for Program Reviews	9.8
Association of College and University Educators (ACUE) Certification Program for Effective Teaching Practices	7.3
OLC Advanced Online Teaching Certificate Program	7.3
QM Online Facilitator Certification	7.3
EDUCAUSE Institute	4.9
Canvas Certified Educator	2.4
D2L Brightspace Teaching and Learning Certificate Program	2.4
OLC Master Series	2.4
QM Higher Ed QM Coordinator Training	2.4
QM Master Reviewer Certification	2.4
QM Course Review Manager Certification	2.4
Society for Information Technology and Teacher Education TETC PD Courses	2.4
Canvas mastery Connect Leadership Series	0.0
EDUCAUSE LX (Learning Experience Pathways)	0.0
International Society for Technology in Education (ISTE) Certification for Educators	0.0
Society for Information Technology and Teacher Education TETCs 1-3: Planning to Teach with Technology	0.0
Society for Information Technology and Teacher Education TETCs 4-7: Applying Knowledge for Technology to Teacher Education 01	0.0
Society for Information Technology and Teacher Education TETCs 8-11: Foundations of Technology in Teacher Education 01	0.0
Society for Information Technology and Teacher Education TETCs 12: Resolving Technology Issues 01	0.0

Institution Demographics

Most of the institutions surveyed (53.7%) belong to the Doctoral University (R1, R2, or R3) Carnegie classification system. Master's institutions represented 12.2% of the institutions and 31.7% were baccalaureate colleges. It was found that 68.3% of participants surveyed worked at public institutions and 31.7% at private institutions. Participants selected whether their institution was non-profit or for-profit, resulting in the majority (90.2%) of institutions surveyed being non-profit.

Each participant was asked three enrollment questions about their institution, including the number of students currently enrolled, the number of students registered in at least one online course, and the number of students participating in an online degree program. The average institution size surveyed was 15,804 students with a range between 135 and 110,000 students. The number of online students averaged 9,367 with a range between 17 and 60,000 students. The average number of students participating in an online degree program (3,761 students) was less than the number of students in an online course. Some institutions reported having online students, but no students enrolled in an online degree program.

Academic leaders were asked to identify all organizations/associations listed in Table 2 to which they or their institution belonged. The organization with the highest membership rate was the Online Learning Consortium (OLC) at 61.1% followed by Quality Matters (QM) at 55.6%, and Educause (ELI) at 38.9%.

Table 2

Membership of Organizations/Associations

Organization/Association	Percentage of Cases
Online Learning Consortium (OLC)	61.1
Quality Matters	55.6
Educause (ELI)	38.9
United States Distance Learning Association (USDLA)	36.1
Other	36.1
Association for the Advancement of Computing in Education	8.3
International Society for Technology in Education (ISTE)	5.6
Society for Information Technology and Teacher Education	2.8

Academic Leaders Roles and Responsibilities

Participants were asked to identify groups/departments for which they had direct responsibility related to online education, checking all that apply. The three groups most commonly under the direct responsibility of online program administrators included faculty development and training (85%), online learning policy development (77.5%), and course design (70%).

Table 3

Groups/Departments Under Direct Responsibility in Relation to Online Education

Groups/Departments	Percentage of Cases
Faculty Development and Training	85.0
Online Learning Policy Development	77.5
Course Design and/or Multimedia Development	70.0
Instructional Design	65.0
Learning Management Systems (LMS)	60.0
Academic/Educational Technology	52.5
Center for Teaching and Learning	40.0
Library Support for Faculty	37.5
Faculty IT Support	32.5
Other Department	20.0

Administration Policies and Procedures

This section of the survey had questions related to the policies and procedures for online program administration. When asked whether their institution had a clearly defined process for the development/redesign of new and existing online courses, 61% of academic leaders indicated that their institutions do have a process while an additional 31.7% are working to establish a process. Institutions lacking a process represented a minority (7.3%). Academic leaders were also asked whether their institution established course development standards for the development/redesign of online courses. The majority (73.2%) of institutions do have standards and 22% are currently working towards establishing a process. Only 4.9% of institutions lack course development standards. Participants were asked whether their institution requires faculty to collaborate with instructional designers in the development/redesign of online courses. It was found that 56.1% of institutions required collaboration with instructional designers and 43.9% did not require collaboration.

Research Question 3

> RQ3: What is the correlation between a higher education academic leaders' reported score on the Online Learning Consortium Scorecard for the Administration of Online Programs and demographic variables?

The goal of this research question was to determine whether relationships exist among any of the demographic variables collected from academic leaders or their institution and the reported scores on the Online Learning Scorecard for the Administration of Online programs.

Listed below (Table 4), each subsection scorecard was compared against academic leader and institution demographic variables. The Institutional/Administration Support Scorecard was positively correlated with the academic leaders' age, number of years of online teaching experience held by the academic leaders, and the numbers of professional organizations/ associations to which academic leaders or institutions belong. The Course Development: Institution or Program Level Scorecard subsection was positively correlated with the academic leaders' age, number of years of online teaching experience held by the academic leaders, and the number of years of online curriculum development/instructional design experience held by the academic leaders. Finally, the Course Development: Course Level Scorecard subsection is positively associated with academic leaders' age, number of years of total teaching experience held by the academic leaders, number of years of online teaching experience held by the academic leaders, and the number of years of curriculum development/instructional experience held by the academic leaders. Additionally, each OLC scorecard subsection was positively correlated with each other.

Table 4

Correlation Between Scorecard and Demographic Variables

Description	Institutional/ Administration Support Scorecard	Course Development: Institution or Program Level	Course Development: Course Level

Age	.597**	.377*	.345*
Years in Current Position	.239	.190	.211
Total Teaching Experience	.268	.247	.323*
Online Teaching	.346*	.393*	.501**
Online Curriculum Development	.292	.332*	.481**
Carnegie Classification	-.217	-.307	-.212
Total Student Enrollment	.225	.233	.055
Online Course Enrollment	.156	.149	.010
Online Degree Enrollment	.088	.137	.008
Number of Certifications by Participant	-.051	.181	.244
Number of Organizations by Part. and/or Inst.	.368*	.320	.262
Institutional/Administration Support Scorecard	-	.737**	.691**
Course Development: Institution or Program Level		-	.821**
Course Development: Course Level			-

Note: *correlation is significant at the 0.05 level (2-tailed). **correlation is significant at the 0.01 level (2-tailed).

Research Question 4

RQ4: Is there a significant difference between an institution's use of course development standards, requirement of instructional designers to collaborate with faculty, and the use of an established process for the development/redesign of new and existing online courses and a higher education academic leaders' reported score on the Online Learning Consortium Scorecard for the Administration of Online Programs?

The goal of this research question was to examine differences in the OLC scorecard total quality score (average of all questions across the three subsection scorecards) evaluated by academic leaders, and an institution's use of course development standards, requirement of instructional designers to collaborate with faculty, and the use of an established process for the development/redesign of new and existing online courses. The data were checked for normality and the statistical tests being used were robust, so ANOVA tests and an independent t-test were conducted to answer this research question (Laerd Statistics, 2018). Additionally, a Bonferroni correction was applied to the statistical analysis because three multiple comparisons were conducted using the same subjects and the dependent variable to avoid a type I error (Sauder & DeMars, 2020). An ANOVA test was used for two of the variables (institution's use of course development standards and use of an established process for the development/redesign of new and existing online courses) that required comparison. An independent t-test was used for the requirement of instructional designers to collaborate with faculty variable because the comparison occurred between only two groups.

The first survey question related to policies and processes of online program administration asked survey participants whether their institution had a clearly defined process for the development/redesign of new and existing online courses. Participants could choose one of three options: yes, no, or working towards establishing a process. To compare the OLC scorecard total quality score against the use of institutional processes for online course development, an ANOVA test was conducted.

Institutions with a defined process for the development/redesign of online courses displayed the highest OLC scorecard total quality score mean (2.37) followed by institutions that did not have a process (1.96) while institutions working towards establishing a process having

the lowest average OLC scorecard total quality score mean (1.65). A significant mean difference in institutional process for course development and OLC scorecard total quality score was found ($F(2, 38) = 14.657$, $p = <.001$). A Tukey post hoc test was conducted to determine how the institutional process for course development compared to one another. There was a significant difference in the mean OLC scorecard total quality score of the institutions working on a process for development and the mean OLC scorecard total quality score at institutions that do have an established process for development ($p = <.001$). There was no significant mean difference between institutions that do have a process and those do not have a process ($p = .213$ and the schools that do not have a process and those that are working towards one ($p = .443$).

The second survey question, related to policies and processes of online program administration, asked participants whether their institution established course development standards for the development/redesign of online courses. Participants could choose one of three options: yes, no, or working towards establishing standards. To compare the OLC scorecard total quality score against the use of course development standards, an ANOVA test was conducted. Institutions with course development standards had the highest OLC scorecard total quality mean score (2.27) followed by institutions that do not have standards (1.96) while institutions working towards establishing standards having the lowest average OLC scorecard total quality mean score (1.64). A significant mean difference was found in the ANOVA test ($F(2, 38) = 7.110$, $p = .002$). A Tukey post hoc test was conducted, revealing a significant difference between the mean OLC scorecard total quality score of the institutions working towards establishing course development standards and the mean OLC scorecard total quality score at institutions that do have an established course development standards ($p = .002$). There was not a significant mean difference between institutions that do have course development standards and those that do not ($p = .617$) and the institutions that do not course development standards and those that are working towards establishing standards ($p = .621$).

The final process and policy survey question, related to online program administration, asked academic leaders whether their institution required faculty to collaborate with instructional designers in the development and redesign of online courses. To determine whether there was a difference between collaboration with instructional design and the OLC scorecard total quality score, an independent t-test was conducted. The average total quality score for institutions that require instructional design collaboration was 2.28 while for the average total quality score for intuitions that do not require instructional design collaboration was 1.90. A significant difference in the means for requiring an instructional designer to collaborate with faculty in the development/redesign of online courses with the OLC total quality score and not requiring an instructional designer was found ($t(39) = 2.581$, $p = 0.014$).

Discussion

Summary of Results

In this study we sought to examine college and university leaders' backgrounds in, perceptions of, and experiences with the administration of high-quality online programs and design of online courses. The study was designed to understand how academic leaders perceive quality and what factors may impact their perceptions in the administration of online programs. The quantitative survey consisted of two main sections: the first collected background

information from the academic leader and their institution, and the second collected academic leaders' perceptions of online program quality at their institutions.

Research Question 1 sought to garner academic leaders' perceptions about the quality of online programs at their institution to gain an understanding of how online programs are being perceived by those administering them. Academic leaders assessed the quality of their institution's online program(s) using two sections from the Online Learning Consortium Scorecard for the Administration of Online Programs, Institutional/Administration Support and Course Development/Instructional Design. The Course Development/Instructional Design section of the scorecard contains two subsections, a) Course Development: Institution or Program Level and b) Course Development: Course Level. This resulted in three scorecard subsections being evaluated by academic leaders. Survey respondents completed their assessment using the prescribed OLC scorecard grading scale in which 0 = deficient, 1 = developing, 2 = accomplished, and 3 = exemplary.

In comparing the three scorecard subsections assessed by academic leaders, the Course Development: Course Level scorecard had the highest mean score followed by Course Development: Institution or Program Level, and finally Institutional/Administration Support. When placing the mean scores on the OLC scorecard grading scale, the Course Development: Course Level quality was scored as accomplished approaching exemplary. The Course Development: Institution or Program Level quality score was accomplished, and the Institutional/Administration Support quality score was developing, almost accomplished.

In addition to looking at each scorecard subsection's average score, all questions across the three scorecards were combined to create what this study refers to as the Online Learning Consortium (OLC) scorecard total quality score. The mean total quality score of institutions surveyed placed the quality score for the administration of online programs at "accomplished," indicating that this is how current academic leaders in the state of Texas perceive the quality of their institutions' online programs.

For Research Question 2, we collected background demographics of academic leaders' administering online programs to provide context into who is leading online programs and to describe their institutional makeup. The synthesis of the participants is as follows: academic leaders on average were 55 years old, ranging from 35 to 78 years in age and 61% had held their role 5 years or less. The majority (81%) had a doctoral degree and 56% held a degree in education while 51% of academic leaders did not have any professional certifications/trainings related to online learning. Participants had an average of 20 years of total teaching experience, 12 years online teaching, and 14 years of online curriculum development/instructional design. Leaders held a variety of job titles, including Provost, Vice Provost/ President, Dean (at various levels), and Director of Teaching and Learning Centers/ Distance Education. Half of the participants spent 10 hours or less per week dedicated to online program administration and when ranked, teaching/learning was the highest priority of academic leaders related to online learning.

The institutions of these academic leaders were mostly non-profit (90%) and 68% were public with about half (54%) designated as Doctoral institutions by Carnegie classification. Of institutions surveyed, the average number of students participating in one online course was 9,367 students with a range of 17 to 60,000 students. Organizations that most institutions and/or academic leaders belong to include the Online Learning Consortium (61%) and Quality Matters (QM), (56%). Most institutions (73%) have established course development standards for the development/redesign of online courses, with about half (56%) requiring faculty to collaborate with instructional designers in the development/redesign of online courses. Finally, 61% of institutions have a clearly defined process for the development/redesign of new and existing online courses.

Research Question 3 sought to understand relationships between an institution's quality score on the three scorecard subsections from the OLC Scorecard for the Administration of Online Program and demographic variables. A positive correlation between academic leaders' age and years of online teaching experience with each of the three scorecard subsections was found. Total teaching experience was only positively correlated to the Course Development: Course Level scorecard subsection. Online curriculum development experience was positively correlated with both Course Development scorecard subsections and was significant for the Course Level scorecard subsection. Age was significantly correlated with the Institutional/ Administration Scorecard further emphasizing the need for seasoned professionals in high level leadership roles dedicated to online programs. The number of organizations that an institution and/or academic leader belonged to positively correlated with the Institutional/ Administration Support scorecard. All three of the OLC scorecard subsections positively correlated with each other indicating a relationship between improving the quality score of one scorecard with improving the quality scores of the other scorecards.

Research Question 4 aimed at understanding whether an institution's OLC total quality score from the OLC Scorecard for the Administration of Online Program would be impacted based on whether the institution had established standards for course development, required instructional designers to collaborate with faculty, and included a process for the development/redesign of new and existing online courses. When reviewing all three variables, there was a significant difference in the OLC total quality score. A significant difference in the OLC total quality score occurred between institutions who had course development standards and institutions who were working on establishing course development standards. A significant difference in the OLC total quality score also occurred between institutions who had a course development process and institutions who were working on establishing a course development process. Finally, a significant difference in the OLC total quality score occurred between institutions that require faculty to collaborate with instructional designers and institutions that do not require collaboration.

Implications for Practice

This study demonstrates several implications for online program quality within higher education. Online education is critical to current higher education institutions because of the financial sustainability it provides as traditional enrollment decreases while distance education increases (Allen et al., 2016; Brown, 2018; Garrett, et al., 2020a). Academic leaders should

distinguish themselves in this saturated market (Brown, 2018); one way to do so is through high quality online programs.

In this study, academic leaders assessed the total quality score of online programs to be "accomplished" when following the OLC scorecard scoring scale. Across institutions, academic leaders perceive that their institutions consistently achieve a high level of quality in the Course Development: Course Level scorecard subsection. One area for institutional improvement would be to focus on the quality indicators in the Institutional/Administration Support scorecard subsection and on quality indicators that address governance related to online learning, process for online education continuous improvement, strategic planning for resource allocation, sufficient resource allocation, and continuous improvement to the strategic plan for online programs. Leaders should reflect on how distance learning is being supported because the structure of online programs within an institution impacts other departments throughout the organization (Paolucci & Gambescia, 2007).

Academic leaders can compare themselves to the demographic information synthesized from this study to identify areas for professional development and continual growth such as participation in professional certifications or trainings. We also found a positive correlation between academic leaders' age and years of online teaching experience with each of the three scorecards. Based on the results of this study, higher education institutions looking to improve their online program quality may benefit from hiring a seasoned professional with an increased number of years of online teaching experience with additional experience in online curriculum development/instructional design. Institutions looking to improve their online program quality or fill vacant positions can use these demographic variables to inform their decision making related to academic leaders of online programs.

Implementing best practices in course design can directly impact online program quality. Researchers demonstrated that a lack of any quality standards at an institution negatively impacts an institution's online program success (Baldwin et al., 2018). As shown in this study, there was a significant difference in online program quality between institutions who had established course development standards and a defined process for course development versus institutions who were working towards standards. Institutions working towards establishing processes and course development standards should see an improvement in their online program quality once course development standards and processes are established.

Collaborative partnerships between faculty and instructional designers may alleviate course development and design issues as well as close the knowledge gaps in online course design best practices (Bazluki et al., 2018; Scoppio & Luyt, 2017). But higher education institutions are not providing adequate support to reduce this gap (Sanford, 2017). This lack of support was confirmed in this study through a significant difference in OLC total quality scores between institutions requiring faculty to collaborate with instructional designers and those that did not. Resource allocation for online programs was a concern identified by leaders. To improve online programs, institutions should consider how resources are currently being allocated to online programs, addressed by quality indicator six under Institutional/ Administration Support scorecard subsection. Furthermore, institutions or academic leaders may consider joining the Online Learning Consortium or Quality Matters as the number of organizations an

institution/academic leader belonged to did positively correlate with the quality score for Institutional/Administration Support Scorecard.

Recommendations

Recommendations for further research include replicating this study on a national scale rather than within the state of Texas. Expanding this study to include all of the sections from the OLC Quality Scorecard for the Administration of Online Programs rather than those focused on in this study would provide a more comprehensive total quality score for online programs. Future studies could also compare different degree programs within or across institutions to discover variation in quality.

This study could also be modified to collect quality perceptions from multiple individuals rather than one academic leader per institution. It may also be insightful to see how online program quality perceptions vary among academic leaders within the same institutions. This could be done through conducting a qualitative study, allowing the researcher to gain additional insight from multiple perspectives and details regarding specific quality indicators. Beyond the use of instructional designers, course development standards, and establishing a process for course development, further research could look at additional practices and policies in place at institutions that may significantly impact online program quality. This could be done both through additional quantitative as well as qualitative research design studies.

Limitations

There are several limitations of this study. The most impactful limitation was the sample size. While we reached out to every eligible institution within the state of Texas to participate, the survey had a 27.3% response rate, indicating that the sample may not be representative of all academic leaders' perceptions. Furthermore, in this study, only the state of Texas was sampled, and findings cannot be generalized to all academic leaders within online higher education.

Of those who participated in the survey, all data collected were completely anonymous. However, respondents may have been skewed towards scoring the quality of their online programs higher than the actual quality level. The ongoing COVID-19 pandemic, which forced many institutions to rapidly shift to online education, may have influenced how academic leaders and their respective institutions perceive online course quality. It is also important to note that only self-reported perceptions of quality were gathered. No official quality score or review was conducted of an institution's online programs or courses.

While this study was aimed at collecting the perspectives of the highest-level decision makers over online education at each institution, the most appropriate person may not have been the participant of the survey. Additionally, online program administration duties may be housed with more than one individual, and this survey was designed to only capture one individual's perspectives per institution.

Conclusion

In this study we sought to examine college and university leaders' backgrounds in, perceptions of, and experiences with the administration of high-quality online programs and

design of online courses. Current academic leaders in the state of Texas perceived the quality of their institution's online program(s) at the "accomplished" quality level. In the three scorecard subsections from the Online Learning Consortium Quality Scorecard for the Administration of Online Programs assessed by academic leaders, the scorecard subsection Course Development: Course Level had the highest mean quality score. Analysis of the quality indicators within the scorecards revealed that institutions may benefit from addressing how resources are currently being allocated to online programs to improve quality.

Demographic information of current academic leaders and their respective institutions within the state of Texas demonstrated that a seasoned professional with substantial online teaching experience might improve an institution's online program quality. Improving the quality score of one scorecard subsection may also improve the quality score of other scorecard subsections in the administration of online programs as these scores are positively correlated. Institutions should be encouraged that implementing course design standards, establishing a process for course development, and having faculty collaborate with instructional designers in online course development does directly impact online program quality.

Online program quality will continue to be a concern of higher education leaders across institutions. The results of this study may be used to help improve online program quality by understanding how academic leaders perceive quality and what factors may impact their perceptions in the administration of online programs. As online education continues to evolve, future research should continue to focus on understanding the factors that directly impact online program quality as distance education will remain critical to higher education institutions and its leaders.

Declarations

The authors declare no conflicts of interest.

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Ethics Approval

This study was approved by the Abilene Christian University Institutional Review Board (approval no. 21-186) on December 08, 2021.

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