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Virginia Community College System Online Student Success: Best Practices and Sustainable Change

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A capstone project submitted in partial fulfillment of the requirements for the degree of Doctor of Education in the Department of Educational Leadership at Virginia Commonwealth University.

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Abstract

Virginia Community College System's (VCCS) Online Student Success: Best Practices and Sustainable Change

By Lucy R. Hudson, Daniel Lindstrom, Monal Patel, and Rosa Ponton

A capstone project submitted in partial fulfillment of the requirements for the degree of Doctor of Education in the Department of Educational Leadership at Virginia Commonwealth University.

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Online learning has an increasingly greater presence in the higher education landscape. Students are able to earn a degree in fully online programs and take courses in modalities that offer the necessary convenience to balance multiple life priorities. The flexibility that online courses offer is valuable for adult learners with young children, students with disabilities including invisible and non-physical disabilities, or populations who must work to support families while pursuing an education. For these populations, community colleges play an important role in providing access to education as they enroll a greater number of adult students and have a higher percentage of minority students for whom having an online option is important. This broad mission of access is both commendable and challenging. The challenge is how to ensure success and increase completion while navigating a switch to online learning. This mixed method study combines three pieces of data and information to develop a sustainable online student success plan for the Virginia Community College System (VCCS). First, the study includes a literature review on best practices related to online student success and sustainable change management. Second, the study provides a detailed examination of student success web portals deployed by institutions. And lastly, the study included a survey and focus group interviews with VCSS administrators, faculty, and staff. The findings led to recommendations for a sustainable implementation plan to ensure online student success.

Keywords: online, change management, self-efficacy, Virginia Community College

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Chapter I: Introduction

The significance and role of community colleges in the United States cannot be overstated as collectively they enroll more than 40 percent of all undergraduate students in the United States (McMillen, 2021). Nearly 10 million students attend the nation's approximate 1,000 community colleges per year (Community College Research Center [CCRC], 2021). Although the enrollment numbers are impressive, the community college mission is even more impressive. Community colleges are differentiated from traditional four-year universities in that they were formed to be accessible to all in a community, offering a variety of programs at a lower cost, providing evening, weekend, and online courses as well as admitting students who do not have conventional credentials (Dougherty et al., 2017).

Due to this broad mission which is heavily based on increasing access, community colleges attract a larger percentage of minority, working class, and older students than traditional universities - undertaking the necessary and complex role of providing opportunity for higher education and social mobility to less advantaged students (Dougherty et al., 2017). In the 2018-19 academic year, 41% of community college students were Black or Hispanic, which is higher than the 30% enrolled in four-year colleges and universities (CCRC, 2021). Similar trends exist with age wherein almost 50% of public two-year college students are 24 or older, and 28% have children or other dependents factoring into an almost 66% part-time student enrollment (CCRC, 2021).

While access is an important mission for community colleges, so is offering an impactful education that results in job opportunities or pursuing further education. Many community college students intend to earn a bachelor's degree, with nearly a fifth moving to four-year universities (Dougherty et al., 2017). Also, students who intend to pursue credentials earned from community colleges that are in occupational training play an important role in workforce

preparation and economic development through first job preparation, retraining unemployed persons, and upgrading skills for current employees.

Regardless of whether the outcome is further education, employment, or professional development, the challenges faced by underrepresented and non-traditional students in higher education threaten to undermine the viability of the U.S. workforce and economy as students struggle to obtain the necessary skills and abilities to succeed in the workplaces of today and tomorrow. The challenges faced by these populations are often structural barriers and competing responsibilities associated with work and family (Johnson, 2020). The larger question for community colleges is how to meet the demands of the twenty-first century economy that consists of 24 million new job openings of which at least 65% require applicants with some form of postsecondary education (Wyner, 2014) while dismantling various barriers to successful completion of a college degree.

The challenge of meeting the needs of the students ensuring gainful employment and contributions to the economy is further complicated by the fact that community colleges, and specifically those within Virginia, have low graduation rates. An audit by the Joint Legislative Audit and Review Commission (JLARC) found that only 39% of Virginia Community College students graduated within seven years while an even lower percentage of underrepresented minority students graduated within the same timeframe (Daniels et al., 2019). Low graduation rates are caused by a variety of factors, but there is evidence that online education may help address some of these factors.

Shift to Online Learning

Online learning is a growing reality in the higher education landscape. The steady growth of online learning has accelerated, at least temporarily, in the COVID-19 environment (Hodges et al., 2020). This growth is evidenced in federal data that show that 51.8% of students attending a U.S. postsecondary institution took at least one online course in the 2019-20 academic year compared to 37% in the fall 2019 enrollment data (Smalley, 2021). While

Hodges et al. (2020) recognized the temporary rise in online enrollment due to the pandemic, community colleges also saw higher percentages in online enrollment prior to COVID-19. In 2015-16, the percentage of undergraduate students taking at least one online course among all public 2-year colleges was as high as 44.5% (National Center for Education Statistics [NCES], 2020). Factors such as flexibility, affordability, and exposure to programs previously inaccessible to most students were credited for this shift to online formats (Wallis, 2020).

The shift to online learning provides the needed flexibility and convenience, but at the same time, online student success can be difficult especially for non-traditional students who did not pursue post-secondary education immediately following high school. Generally, effective online teaching practices should establish personal connections with the course instructor, which then helps students feel connected and strengthens motivation to learn (Li et al., 2021). Non-traditional students may not have time to devote to establishing connections with instructors or peers nor have time for campus activities. In general community college students are more likely than their peers at four-year institutions to be balancing work and family commitments (Johnson, 2020). The balancing of work, life, and school tend to create issues related to a sense of belonging or community. Research indicates that sense of belonging correlates directly with how well students integrate into the collegiate community, perform academically, and persist toward achievement of their goals (Johnson, 2020).

The institution's pedagogical shift to provide online education is inclusive of the increasing student body and online course offerings but also how the institution responds to the changes of the physical campus learning environment. Does the institution simply convert traditional teaching practices and learning spaces to accommodate an online course to offer flexibility and convenience required by diverse learners? Or does the institution realize that learning is not merely a cognitive action but the result of multiple interactions between mind, body and the environment; thus, conceptualizing hybridity as a whole educational ecosystem (Pischetola, 2022)? A hybrid yet whole ecosystem of teaching and learning takes into account

the student's preparedness to learn in varying modalities and physical locations; and the instructor's ability to teach and engage students through the use of a variety of technological tools. Effective teaching and learning practices must be intentionally designed and regularly assessed for quality.

As noted above, the community college access mission of serving a larger percentage of adult age students who are 24 or older, and a greater percentage of underrepresented minorities creates several challenges in the context of online learning. One such challenge is supporting online learners while they contend with existing work and family priorities. Another challenge is to identify and dismantle the existing structural barriers impeding success for learners with diverse needs. The community college system in Virginia has laid out strategies in a bold strategic plan to address these types of challenges. This community college system has expressed a desire to understand successful online learning practices so that they can graduate more students with the skill sets needed for the current workforce economy.

VCCS - The Client

The Virginia Community College System (VCCS), the client for this Capstone project, strives to meet the charge of serving diverse student populations across the Commonwealth of Virginia by offering access to higher education in areas not served by larger state institutions. Established in 1966 when Governor Mills Godwin authorized the first two colleges, VCCS now consists of 23 colleges with 40 campuses spread across the state (Virginia's Community Colleges, n.d.a). Since its founding, VCCS has evolved to provide greater access to higher education through the adoption of online learning earlier than most institutions by offering the first online classes in 1996 (Virginia's Community Colleges, n.d.a). Almost three decades later, VCCS continues to place importance on providing the opportunity to learn and develop the right skills to enable students to thrive in a dynamic and emerging 21st century careers shaped by the future of work (Virginia's Community Colleges, 2021).

VCCS is now in partnership with the Online Virginia Network (OVN) which is an opportunity to streamline the pathway to a bachelor's degree for many VCCS students for whom online education is ideal. The OVN partnership, a state-supported initiative, hosts over 50 high-demand programs such as cybersecurity, business, computer science, engineering technology, human service, teacher preparation, and nursing (Online Virginia Network, 2021). VCCS has seven community colleges partnering with OVN: Blue Ridge, Central Virginia, John Tyler, Northern Virginia, Reynolds, Thomas Nelson, and Tidewater Community College (Virginia's Community Colleges, 2020). Streamlining and simplifying the process to get an online degree through the OVN eases the application process; however, significant student support is still required and the responsibility falls on the institutions to ensure online student success.

VCCS understands the responsibility to provide effective teaching and learning practices in an online environment. The COVID-19 pandemic forced institutions to launch an emergency response to teaching and learning; however now many institutions are re-imagining online environments to become an even greater part of the educational ecosystem. Additionally, VCCS's Chancellor responded by calling for a new six-year strategic plan, *Opportunity 2027,* focused on eliminating equity gaps, remaining sustainable and relevant in a post-pandemic future through program delivery modalities, teaching and learning practices, remote services, integrated student support, funding and financing of colleges, and the future of work (Virginia's Community Colleges, 2021). The project findings reported herein can directly inform *Opportunity 2027*'s strategies for improved flexible hybrid course delivery models, quality certified online courses, competency-based delivery, and other strategies to meet students' scheduling needs and move them more quickly through their programs (Virginia's Community Colleges, 2021, p. 14).

The client's response to the call for capstone project proposals centered around designing and implementing a web portal that could be a one-stop place for students to find support services and to build connections with peers, faculty, and administrators. However,

through many meetings with the client, the project evolved to provide a sustainable online student success plan that is a collection of evidence-based practices. These practices, when implemented collectively by each college, act as a single collection of support services built into the infrastructure of VCCS instead of being only front-facing in a web portal.

Problem Statement

Community colleges educate the nation's underserved students who are disproportionately affected by the move to online learning (Shea & Bidjerano, 2018). The disproportionate effect is seen through performance gaps in face-to-face courses; however, they are more pronounced in online courses for some subgroups including male students, students with lower prior GPAs, and Black students (Armstrong et al., 2021). The access mission of community colleges alongside the shift to online learning creates an urgency for institutions to devote resources to supporting online student success.

As if the many issues faced by community college students isn't enough, the community college sector is in a state of flux as it adapts to a rapidly changing landscape of institutional performance measures along with a fast-changing student body (Wyner, 2014). The VCCS strategic plan acknowledges the vital impact of a diverse and inclusive community on academic programs, workforce development, and an intentional focus on re-imagining teaching and learning. *Opportunity 2027* is a bold and comprehensive path forward, however to successfully accomplish some goals, VCCS's challenge is to determine ways to approach online student success without sacrificing the quality of a student's journey toward degree completion. This approach should be inclusive both from a systems thinking perspective for sustainability and from an equity lens for meeting diverse learner's unique support requirements.

Purpose and Guiding Questions

The purpose of our project is to provide VCCS with data and information that can best help them support online students along with a sustainable systems-level plan to best meet the many needs of their colleges and online students. After completion, VCCS will be able to refer

to the guide produced by this project so that they have an implementation plan to successfully bring together administrators, faculty, and students towards a shared vision of online learning and growing together.

Elements of our project will incorporate the equity focused strategies outlined in *Opportunity 2027* leveraging the project's deliverables to be useful to VCCS's visionary future. The capstone project will focus on the following guiding questions:

1. What skills, strategies, and best practices are essential for student success in online learning programs that serve traditional and non-traditional student populations?
2. What are other community college systems doing to prepare students for success as online learners and what open resources exist that might be adopted or adapted by VCCS?
3. What components are necessary to make an online student services system accessible, easy to use, inviting, and effective?
4. How can educational leadership strategies encourage collaboration and buy-in from various stakeholders with diverse needs?

Project Design

The capstone project is governed by the previously mentioned guiding questions and is carried out by synthesizing literature, collecting qualitative data, researching online success websites, and finally connecting these three elements to formulate actionable recommendations for VCCS to support online students. The recommendations will assist VCCS as they implement strategies within the guidelines of *Opportunity 2027*. The project is mainly focused on online students; however, some recommendations can be applied generally to best practices and sustainable change for other educational initiatives. Appendix A outlines the recommendations and implementation guide that are the project team's unique contributions to the client because they embed a systems theory framework with a focus on sustainable change.

The project involved significant reviews of the literature and also involved the collection of original data in three ways: 1) survey questionnaires administered to VCCS college administrators and faculty, 2) follow-up focus groups intended for deeper insights based on the survey results, and 3) examination of institutional websites for the purpose of offering VCCS the opportunity to model their own online platforms. Appendix B is a fact sheet on example websites which VCCS can use to model best practices. Appendices C, D, and E outline the survey questions and focus group protocol. The project extensively examined literature on best practices that VCCS can consider to support online students, and how stakeholders can share and learn from each to better support online student success.

Organization of this Document

This document is divided into five main chapters. This first chapter orients the reader to the national background of community colleges, the growth of online enrollment, and the challenges faced by community colleges to support online students. Then the chapter transitions from the national landscape to the state of Virginia and its community college system. An overview of VCCS structure and mission, *Opportunity 2027* priorities, and the OVN partnership is provided to frame the problem statement and associated guiding questions. The chapter concluded with a general overview of the project design which highlights the data collection methods and the project's unique contribution to the client in an easily digestible implementation plan.

For a typical doctoral dissertation or doctoral capstone report, the literature review is in Chapter 2 and the research design is laid out in Chapter 3. For this project, though, for a few reasons, Chapter 2 lays out the design of the project and the literature review is split into two parts and incorporated into Chapters 3 and 4. The two parts of the literature review specifically respond to the client's request for literature-based best practices for online student success and sustainable implementation of a change initiative. Chapters 3 and 4 are meant for the client's

benefit as well as evidence to support the project findings, and the literature review was iterative with frequent scope changes throughout the duration of this project.

Chapter 2, therefore, highlights the overall design of the capstone project. The chapter reports on methods used for conducting the systematic literature review and collecting online institutional web portal examples. The chapter also explains details regarding the open-ended survey and focus group interviews. The number of survey respondents and focus group participants are explained as well as their role in VCCS. Along with the data collection methods, the analysis technique of categorizing results into themes is introduced to the reader. Finally, Chapter 2 introduces a theoretical framework which is important for the reader to understand as it is intentionally woven throughout the final three chapters.

Chapter 3 and 4 are effectively “findings” chapters. Each chapter includes a review of the literature, findings from analysis of relevant data, and a summary. The focus of Chapter 3 is on best practices for online student success which includes a literature review, a review of existing institutional web portals exhibiting best practices, and an analysis of original data collected via a questionnaire and focus groups. Chapter 4 provides information regarding sustainable change and focuses on how VCCS can best implement the student success practices discussed in Chapter 3. The summaries of these chapters integrate the literature, web portal examples, and findings from the survey and focus groups. The summaries act as a preview to the upcoming recommendations in the final chapter.

Chapter 5 outlines the recommendations based on the integrated analyzes in the prior chapters. It is important to note that the theoretical framework is the connective tissue to our recommendations. We want to ensure that all recommendations serve as building blocks to a sustainable change wherein student success initiatives are implemented system-wide throughout all VCCS colleges. Finally, the appendices can be referenced for the implementation guide, institutional web portal examples, data collection instrument, focus group protocols, and other resources.

Chapter II: Design of the Project

Prokes and Housel (2021) identified support services such as tutoring, advising, libraries, technology, mental health and other social supports that are necessary and important for students to complete online learning. VCCS understands the importance of many of these services to improve online student success. As VCCS is a system of colleges, this project incorporated a systems theory framework to identify teaching practices and support services that can be shared across colleges to best serve all VCCS online students. This chapter outlines the purpose of the project and associated guiding questions to provide a segue into the project design and associated data collection methods. Additionally, this chapter outlines the data analysis plan, the steps taken to complete the literature review and web portal collection, and finally, offers a few limitations to our study.

Statement of Purpose and Guiding Questions

The purpose of this project is to provide VCCS with data and information that can best help them support online students along with a sustainable systems-level plan to best meet the many needs of their colleges and online students. Colleges and universities across the country are always working to identify strategies to improve student success in the ever-changing landscape of online education (Dhawan, 2020; Robinson & Hullinger, 2008).

Given this purpose, the capstone project focuses on the following guiding questions as each of the deliverables are developed:

1. What skills, strategies, and best practices are essential for student success in online learning programs that serve traditional and non-traditional student populations?
2. What are other community college systems doing to prepare students for success as online learners and what open resources exist that might be adopted or adapted by VCCS?

3. What components are necessary to make an online student services system accessible, easy to use, inviting, and effective?
4. How can educational leadership strategies encourage collaboration and buy-in from various stakeholders with diverse needs?

Theoretical Framework

This project was framed by systems theory. The utilization of this framework allowed for the recognition that many factors must be considered in understanding and evaluating student success within online environments. Systems theory acknowledges that institutions are complex and composed of parts which both directly and indirectly impact one another (Adams, 2012; Mele et al., 2010). Our project identified similar complexities within the community college system. For example, the access mission of VCCS combined with the growth in online learning and further complicated by the hybrid nature of course offerings to meet all student's needs as well as the nested nature of the VCCS, is a complex system of multiple factors directly impacting any recommended change. Acknowledging these complexities is important as VCCS colleges and OVN partners work as a system to support online students.

The foundations of systems theory is knowing that a system is more than the sum of its parts, information is key to understanding the relationship between the parts, and feedback loops are causal connections to return the system to equilibrium (Gillies, 2010, p. 33). Gillies (2010) applies the systems theory framework to foster sustainable change in the complex, dynamic system that is education. Gillies (2010) conceptualizes the framework by introducing three dimensions of an educational system: political, institutional, and technical. The political dimension represents institutional norms pertaining to a culture of ownership. The institutional dimension represents existing policies and procedures. Finally, the technical dimension pertains to technological capability. We took the liberty to frame our literature review, and recommendations, on similar dimensions except for the political dimension. Instead of the

political dimension we choose to apply the systems theory framework to the personal dimension. This modification is based on Edwards's (2019) adaptation of Gillies's (2010) original dimensions.

Edwards's (2019) study on an El Salvador program called the Education with Community Participation (EDUCO) built upon Gillies's (2010) three dimensions. Edwards (2019) modified the dimensions to best-fit the situation in El Salvador. Additionally, the dimensions guided Edwards (2019) literature review and analysis to better understand the EDUCO program practices. Similarly, our systems' thinking dimensions are modeled to best fit this project's guiding questions. The institutional dimension may include policies, norms, and existing practices that are designed to help students succeed in all course modalities. Institutions often offer such resources that are specifically designed to address students' needs and may include tutors, counselors, program advisors, and writing centers. In the online environment, such interventions may have to be adjusted to meet the needs of online students - especially for students who are non-traditional and underrepresented.

The technical dimension is one with relevance to all stakeholders within the online community college space. The technical ability to teach and learn online requires a certain level of competence in the use of various technologies. Instructors must be comfortable with the software to ensure effective communication and connectedness is achieved with the students. To do this effectively, instructors will likely have to learn new software which allows for the visual and audio capabilities to be utilized and construct their courses with the understanding that the online space is different from traditional classroom settings.

The personal dimension culminates in what essentially matters the most to individual students - the personal factors which may affect students and influence their ability to succeed in online learning environments. Personal dimensions include those factors or characteristics which are specific to each student and which could affect the challenges faced in online spaces. Personal factors may include, but are not limited to, the student's competency with information

technology systems and software, full or part-time employment to maintain financial stability, familial commitments, and a feeling of connectedness with faculty and peers (Stephen & Rockinson-Szapkiw, 2021).

Despite the usefulness of systems theory, Edwards (2019) notes it has limitations which include the absence of focus on social capital. Edwards (2019) is referring to social capital as social skills necessary to negotiate solutions. Our project was cognizant of this potential limitation and attempted to capture the social capital element within the personal dimension of the framework wherein we understood the importance of individuals' choices and the impact such choices have on system stability. For example, instructors who resist innovative teaching practices can inhibit online student success to the point where it affects downstream course success. This is an individual, personal choice that could have long-term negative impact on progress within the curriculum.

Another limitation to systems theory, noted by Gillies (2010), is the threat of sustained improvement in education programs due to the lack of stability of both policy and leadership. Gillies (2010) conducted case studies based on reflections from experienced professionals on how policy and institutional change is sustained over a 20-year period. Our project addresses this limitation based on the literature review of effective leadership skills for implementing change through shared decision-making and ownership models to strengthen sustainability.

Project Design and Methodology

This project was not a straightforward research project in that it was necessarily time bound, iterative, and responsive to client needs. For the most part, though, the project could be considered a mixed methods research design involving the collection and analysis of data for responding to the guiding questions. A mixed methods research approach allowed the project team to collect multiple forms of data using various forms of data collection techniques. For example, the project involved examining available information found in the literature and

highlights from student success web portals utilized by institutions which promote the academic and personal success of online students. The project also utilized overlapping phases and forms of data and information collection that built upon each other. These overlapping and sometimes iterative phases included a systematic literature review, conducting client meetings, examining institutional student success portals, administering an open-ended survey, and finally conducting focus group interviews.

The project team used a coding system to generate themes throughout the iterative phases. A member on the team created a shared document wherein each team member entered categories or built upon categorizations entered by a teammate. The project team took notes and summarized data while reading and reviewing collected data, and linked the themes to codes developed by the team. The codebook helped guide the analysis of all data in relation to the guiding questions (Creswell & Poth, 2018) through the overlapping phases.

Phase One: Systematic Literature Review, Client Meetings, Web Portal Review

According to Creswell and Clark (2006), researchers can first qualitatively explore the research topic with key participants. In this first phase of the project, the key source of data and information was VCCS, the client. The project team reviewed literature and websites on online student success and met with the client to refine and validate the common understanding of the deliverables. The systematic literature review, meeting with the client, and website review was used to examine best practices related to how students could succeed in online learning and how to engage students to access an online portal for relevant resources. This phase of the project helped the team develop the survey instrument used to collect data in phase two.

Systematic Literature Review

The systematic literature review allowed the project team to examine existing literature about best practices in online learning and change management strategies for a sustainable implementation plan. The literature review helped the project team develop a general

understanding and background knowledge about the issue to assist with identifying best practices from current literature (Paul & Criado, 2020). A systematic literature review examined existing literature on the efficacy of online learning for community college students, and student success initiatives, practices and challenges in the online learning space. The literature review, although used by the project team to gather preliminary information for the project design and data collection process, had an important role for suggesting future research and delivering an actionable implementation plan to the client.

A systematic literature review is a method that reviews relevant research and proven practices to provide evidence to answer specific research questions (Paul & Criado, 2020). As this project was a team-based approach, the project team utilized Google Scholar and Virginia Commonwealth University's library databases to search terms such as: student success, student engagement, online learning best practices, business plans, community colleges, student service models, and online retention rates. From the identified terms, the project team then selected peer-reviewed journal articles to review. The articles reviewed were recorded in a literature grid and shared with each team member via Google Sheets.

The project team used a systematic approach to article selection based on the following criteria: topic relevant keywords, a publication date after the year after 2018 if possible, community college focus, frameworks of online learning, and best practices in educational leadership and governance plans. During the review, if the title seemed applicable to the topic, then the abstract of the article was reviewed. If the abstract showed hints of applicability to the guiding questions, then the full article was downloaded, inventoried, and stored in a software tool such as Zotero. The systematic approach generated a primary collection of knowledge for which secondary articles were processed through a snowball technique of examining the reference lists from the primary article.

The team used a thematic analysis to review, analyze, and summarize information from the literature. Thematic analysis is a strategy of identifying, summarizing, and communicating

patterns in data, especially used in transcribing open-ended surveys and interview questions (Castleberry & Nolen, 2018; Creswell & Poth, 2018). The process allowed the project team to organize the data into groups based on relationships. These relationships helped to guide the conversations with the client by gaining an understanding of online learning and student success, and to develop themes for the open-ended survey questions.

Client Meetings

Much of the literature was reviewed in order to inform meetings with the client. The client meetings captured preliminary perspectives about current practices and resources available within VCCS, the desired resource needs of online learners, and allowed the project team to provide regular updates to the client on progress and asked for feedback at critical moments in the process. These client meetings were important to ensure alignment of client expectations as modifications to the project arose. These critical meetings allowed for project modifications which are a natural part of a project design because the team was building upon learned knowledge from prior phases.

The client meetings were held via Zoom on multiple occurrences throughout the year-long project. The main client contact was always available and ready to assist with connecting the project team to other VCCS stakeholders. The initial meet-and-greet meeting discussed the deliverables expected from the client. During the course of the project, additional virtual meetings were conducted at critical junctures. For example, one meeting was dedicated to gaining insight from leadership about the scope of the project. During this meeting, the project team met with key stakeholders consisting of the client and members of the VCCS OVN team and provided an overview of the project. The stakeholders had the opportunity to pose questions, express interest in the project, provide feedback, and suggest real interest in the literature review.

After an extensive literature review, another meeting was set to provide the client with a synopsis of what the literature cites and then aligned the project team’s understanding with the

client's current online learning situation. These two meetings were a major turning point for the project and the project scope transitioned from a toolkit to a focus on best practices and literature that could be used to generate a discussion and enhance the foundation of online learning across the VCCS system. The client meetings were recorded meetings with permission, and notes were stored on Google Drive and referenced occasionally to assist in developing the capstone project.

Web Portal Review

As mentioned above, the client was initially mostly looking for support from the capstone team in developing a student success web portal. That request guided much of the early work in that the project team reviewed designs, strategies, and samples of student success web portals from other institutions to gather examples to assist with creating a strategy to support online student success at VCCS (Newlyn, 2013). This review of web portals utilized by institutions and college systems allowed the project team to build a robust list of common best practices and example web portals for VCCS to reference for networking purposes. The list of web portals can also serve as a resource during implementation of a similar portal. Many of the visuals, navigation, placement of links, can be duplicated with ease; the examples provided a roadmap for how and which resources could be delivered to online learners.

The project team chose a wide variety of student success web portal examples from community colleges and discussed the pros and cons. The features of each web portal were analyzed for alignment to the literature review. This list of best practices from each portal were listed in a spreadsheet. The list of higher education institutions to examine were derived from an extensive review of at least 20 community college and four-year institutions online learning sites that focused on access, equity, and quality of online learning. Educational non-profit organization white papers also informed the resulting list of institutions. From the broad list of higher education institutions, which included VCCS community colleges, the team conducted an in-depth analysis to identify the best way to provide resources to online learners to support their

success. The client meetings, literature review, and review of institution web portals provided data and knowledge around themes of supporting student success, technology, and self-efficacy. The mentioned themes from the literature and web portal review assisted with developing questions for the open-ended survey.

Phase Two: Open-Ended Survey

In phase two, an online survey was distributed to faculty and administrators employed within the seven VCCS OVN institutions. A list of the survey questions is included in Appendix C. The reason for administering an open-ended survey was to collect experiences and perspectives from faculty and administrators around online student success, support, and available and needed resources. The open-ended questions provided in-depth response, numerical values or lists in response to questions about their lived experience (Dillman et al., 2014). The survey results allowed the project team to understand the current challenges faced by faculty and administrators while also asking about what is needed to support online student success.

The open-ended survey was targeted toward key online stakeholders, faculty and administrators within the seven OVN VCCS institutions, with five institutions participating in the survey:

- J. Sargeant Reynolds Community College
- Northern Virginia Community College
- John Tyler Community College (renaming to Brightpoint)
- Central Virginia Community College
- Thomas Nelson Community College

The survey was used to gather valuable feedback on current practices and perceptions around support for online learners. Many of the open-ended questions were developed from knowledge gathered from phase one. The project team created and administered the survey via Google Forms. Google Forms was an efficient platform to use due to the low number of participants and

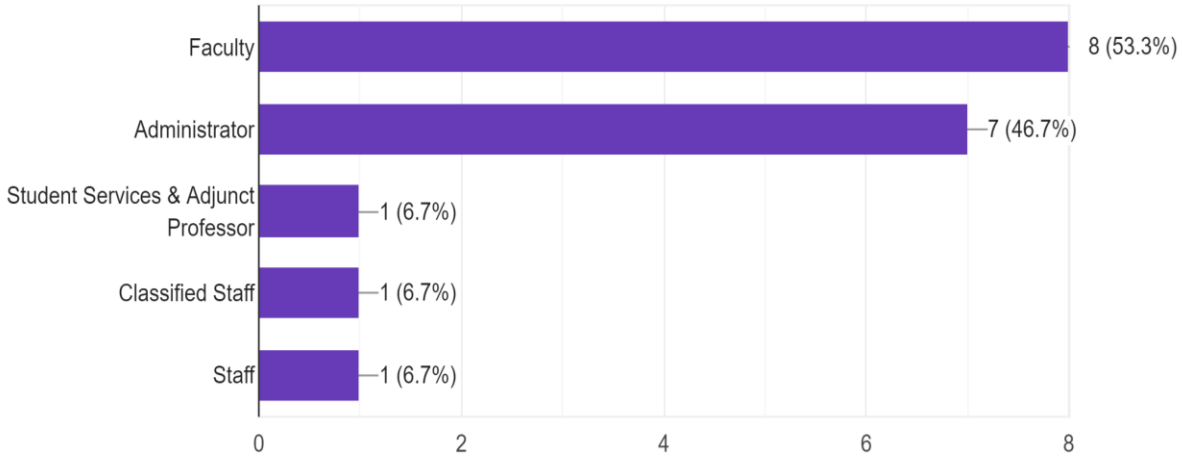
allowed the collection of responses to both close-ended and open-ended questions. The survey posed 3 close-ended questions asking about the college of employment and their role, and 11 open-ended questions centered around student success and implementation.

To solicit participants for the survey, an initial list of contact emails was received from the client and then a snowball technique was used. The questionnaire was emailed to contacts at the above-mentioned institutions, and the contacts were asked to complete the questionnaire and share it with others within their respective institutions who they believed would be able to provide us valuable feedback. The questionnaire was available for completion for approximately three weeks, and a reminder email was sent to encourage completion of the questionnaire.

The survey yielded 15 total responses. Respondents could select more than one role based on their institutional connection (See Figure 1). The roles listed on the survey consisted of faculty and administrator, but respondents entered other affiliations in the other category. Some of the other categories were staff, student service specialist, adjunct professor, and classified staff. In addition, some respondents serve in dual roles at their institution and were able to identify both roles.

Figure 1

Respondent Numbers and Institutional Roles of Respondents



The project team analyzed the data collected from the survey and categorized them into themes. The themes were selected by reviewing the responses to the open-ended survey questions and identifying repetition of phrases or ideas (Castleberry & Nolen, 2018). These ideas and phrases were highlighted and categorized. The themes from the data were collected in a spreadsheet. The themes observed from the survey data indicated consistent problems as well as recommendations. These observed themes from the survey were then utilized as discussion topics in the focus groups. Raising the topics observed from the survey in the focus groups allowed for further discussion of the issues and a deeper understanding of the VCCS system by the project team.

Phase Three: Focus Groups

In phase three, the project team scheduled focus groups with volunteer participants to gain a better understanding of practices and current resources at their institution, and to pose questions to delve deeper into themes gathered after a preliminary analysis of the data. The participants volunteered to participate in the focus group by responding to the participation call at the end of the open-ended survey. Upon completion of the survey, participants were asked to email the project team if interested in participating in the focus group. All who volunteered for the focus group were sent an email to select between three days to participate in a focus group and were notified via email about their assigned date.

These focus group interviews were intentionally designed as small group interviews to facilitate engaging conversations. The focus group allowed the capstone team to collect some new data, but they were also a form of member checking. That is, we were able to ask the participants to reflect upon and speak to some of the information gleaned from the survey. The focus group protocol is provided in Appendix D.

The focus groups provided an opportunity for the project team to understand the lived experience and perspective of individual stakeholders involved with the problem being analyzed

(Creswell & Poth, 2018) in a small group. This small group setting was critical to collect in-depth details through enthusiastic and honest conversations to obtain an understanding and appreciation of the issues they face related to the transitions required for successful online program development and administration. The information obtained through the focus group interviews informed and guided recommendations for online student success and implementation guide created to encourage sustainable value to users as well as support strategic goals included in *Opportunity 2027*. To accomplish this, the project team facilitated three small focus groups to interview stakeholders including end users such as instructors and administrators.

The focus group interviews were conducted with key stakeholders amongst the aforementioned OVN VCCS institutions and there were seven participants who responded to an open call to participate in a focus group as a member check following the survey. The participants within the community colleges self-identified as faculty who have taught at least one course online and administrators responsible for the management of online programs.

The project team conducted three focus groups with two groups consisting of three members each and one focus group with one participant. The virtual interviews conducted via Zoom followed the focus group protocol to guide the interviews to ensure a consistent process across all sessions (Appendix D). Prior to participating in the focus group, the project team read a confidentiality and participation statement to the participants. The participants were asked to verbally consent or utilize the Zoom reactions to confirm participation in the focus group and to record. The project team utilized a presentation (Appendix E) to help guide the focus group which consisted of five questions that helped gain a deeper perspective about current resources and needs of the institutions around online student success resources, support, and faculty collaboration.

The focus group interviews were facilitated and transcribed by two team members. All documents were kept confidential and non-identifying information was documented for sharing

purposes. The identifiable qualitative documents were destroyed upon completion of the project. To analyze the transcripts, team members reviewed each transcript, took notes and summarized the collected data into themes using the codebook. The team members listened to the recorded focus group interviews or read the transcripts prior to providing notes into a shared spreadsheet. This team approach to theme development incorporated multiple perspectives and therefore can increase the reliability of the interpretation made on the speaker's intentions (MacQueen et al., 1998).

Limitations and Biases

Students were identified at the beginning of the study as key stakeholders within community colleges and the student success models utilized. Therefore, students were originally targeted for engagement in both the focus group and survey portions of the study. The study was limited, however, as a few of the community colleges indicated student participation would require Institutional Review Board (IRB) approval at each of the VCCS institutions. IRB approval at VCU was not sought as discussions with VCU's IRB indicated approval would not be required as the scope of the study was not considered generalizable research. VCU IRB viewed this study as a process improvement initiative not requiring their approval. Regardless, the time frame necessary to complete the doctoral program's requirements necessitated our forgoing the process to obtain IRB approval at each respective community college. Therefore, there is no student voice represented in the findings.

An additional limitation of this study was the small sample size for the survey. The questionnaire had a total of 15 respondents who indicated their roles were that of both faculty and staff within community colleges in Virginia. After that, the project team conducted a total of three focus groups with a total of seven participants from three different community colleges in Virginia. The number of responses to the questionnaire and total number of participants in the focus groups limited the generalizability of the responses due to the limited sample size.

However, the combination of the questionnaire and the follow-up focus groups did prove very helpful in generating valuable data and information.

The project team did not solicit or collect information from participants in either the questionnaire or the focus groups related to participant gender identity or racial/ethnic background. An observation within the focus groups revealed an apparent lack of ethnic or gender diversity. Participants appeared to be primarily female with only one male participant. Additionally, participants appeared to all be white. The project team recognizes that gender and racial identification are not determinative of specific responses. However, not having a representative sample of male and ethnically underrepresented participants may have limited the perspectives which were shared with the project team.

The project team identified publicly available online web portals from higher education institutions across the country which offered resources to assist students enrolled in online educational programs. Publicly available is meant to delineate those outward facing websites and does not include websites or software programs which require institutional affiliation and login credentials. Many institutions have student success portals or websites that are behind their institutional authentication system. Given the limitation imposed by only reviewing publicly available resources, the team recognizes this review as being limited and not fully reflective of the resources available to students, faculty, and staff. In addition, the review of the websites and portals was limited because the effectiveness or success of the reviewed websites and portals was unknown. To accurately label the observed websites or portals as exemplars, the team would have needed additional data regarding the success of the website or portal amongst student or faculty users.

All of the team members are of underrepresented populations within higher education. During the time period for this project, all were also employed by four-year colleges and universities and had limited experience and exposure to community college faculty, staff, and students operating in the online environment. The project team also did not have direct

experience with the theoretical framework dimensions believed to impact community colleges student success. Lastly, all team members recognized the possibility of biases which could alter the results and analysis. The project team took affirmative steps to minimize this possibility by ensuring all focus groups had at least two team members present. All recorded focus groups along with the associated transcripts were de-identified before analysis was conducted and all survey responses were anonymous.

Chapter III: Best Practices in Supporting Student Success in Online Learning

Three of the four guiding questions of this project revolve around effectively supporting student success in online learning. This chapter seeks to answer these guiding questions in the following sections: a literature review of best practices that support student success in online learning, an analysis of original data gathered from the questionnaire and focus group interviews, and an exploration of student success web portals.

First, the literature review portion of this chapter was organized according to the three dimensions of systems theory framework: institutional, technical, and personal. The institutional dimension covers institutional responsibilities and concerns regarding online student success. In the context of this study, it is this dimension that encompasses the other two; institutions have authority to greatly impact the technical and then personal dimensions. The technical dimension moves from the roles of the institution to instructional design, course development, and the impact that instructors have on online student success. The personal dimension focuses on the student, their role and responsibility as online learners, factors that impact their academic performance, and predictors of online success.

Next, is a review of select existing student service portals from higher education institutions and associated systems that could serve as models in terms of available resources and design is provided. Last, is an analysis of original data collected from the original survey and focus group interview results as it pertains to student success. The chapter concludes with a summary of findings that highlight the intersections between the three sections.

Literature Review on Student Success in Online Learning

There are inherent differences between online and face to face learning. Ideally, courses would be designed according to the specific modality in which they are delivered. Research shows that online learning and traditional learning modalities can be comparable in terms of student success (Woldeab et al., 2020). To fully realize the potential of online learning, aspects

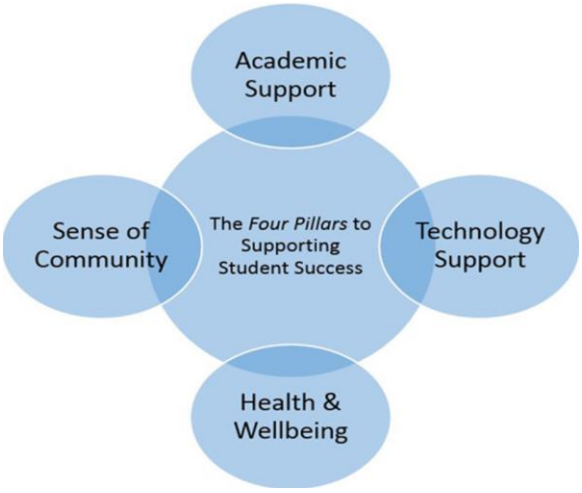
of traditional learning need to be reimagined rather than replicated. Online student success is driven by a multitude of factors which connect and intersect within the three dimensions identified as part of this study's theoretical framework. In the following review of the literature, best practices in online learning and student success are separated and examined by each dimension.

Institutional Dimension of Student Success

Online learning is distinct from traditional modalities with its own set of basic considerations. Roddy et al. (2017) conducted an integrative review of acknowledged best practices in online education. From an institutional perspective, Roddy et al. (2017) outlined four pillars that need to be considered in terms of online students and their learning experience: online-friendly academic supports, assistance with navigating technology, health and well-being facilities, and a sense of belongingness, or community. These pillars are presented in the Figure 2:

Figure 2

Four Pillars of Online Learning Experience



Note: The four pillars of the learning experience were adapted from "*Applying best practice online learning, teaching, and support to intensive online environments: An integrative review,*" by C. Roddy, D. L. Amiet, J. Chung, C. Holt, L. Shaw, S. McKenzie, F. Garivaldis, J. M. Lodge, and M. E. Mundy, 2017, Frontiers in Education, 2 (https://doi.org/10.3389/feduc.2017.00059).

Roddy et al.'s (2017) review is organized around three sets of factors: teaching, learning, and student support and well-being services. From these factors, the four pillars represented in Figure 2 above were developed (2017, Student Support section):

> The "four pillars" of supporting student success… are often the intangibles that educators might take for granted when providing fully online courses. These pillars include online-friendly academic support (Coonin et al., 2011; Huwiler, 2015), assistance with navigating technology (Lee, 2010), health and well-being facilities (Anderson, 2008), and a sense of belongingness, or community (Kumar & Heathcock, 2014).

Implementing online learning can be challenging, especially as technology advances rapidly. Higher education administrators and faculty reported that institutional support services are top factors in helping students complete online courses and influence student retention (Salim Muljana & Luo, 2019). Despite the importance placed on support services, many institutions

reported that services were only deployed for on-campus students, thus making the support inadequate for online students (Salim Muljana & Luo, 2019).

Institutions could address the four pillars by adopting a specialized approach to supporting online students and instructors through strategies outlined by, for example Salim Muljana and Luo (2019), such as online course orientation, tutoring services, technological support, and understanding of online students' needs and circumstances.

Academic Support

The first pillar, and arguably the most crucial support an institution can offer to online students, revolves around online-friendly academic resources and ample opportunities for student–instructor interaction (Roddy et al., 2017)**.** Similarly, research finds that institutions should provide support for foundational academic resources such as admissions, registration, scholarship, and research (Trespalacios et al., 2021). Roddy et al. (2021) highlights that institutional leverage of student readiness assessments, orientation services - particularly before students begin course work - and comprehensive library resources can positively impact student retention, performance, and confidence. However, institutional systems may be falling short in providing quality online support (Barefield & Meyer, 2013; Roddy et al., 2017; Salim Muljana & Lou, 2019; Trespalacios et al., 2021).

A principal challenge with providing the various levels of institutional support in an online environment is technical - systems that were previously housed on campus need to be just as accessible and navigable online (Barefield & Meyer, 2013). Students and instructors also need to be provided guidance on how to use these online resources, which can be addressed with orientations and online help services (Roddy et al., 2017). However, these supports may not address needs students have that are specific to coursework. Students need support with completing assignments as well as understanding course material and instruction (Trespalacios et al., 2021). As for specific course support, instructors are the main providers, however, there is

an institutional responsibility to ensure that faculty and instructors can adequately provide that support (Barefield & Meyer, 2013).

With new online technologies, instructors are being required to use software, programs, and resources with which they may be unfamiliar. For instructors, the integration of these new technologies implies an increased workload and may come with lack of effective training, increased frustration, and little incentive creating a barrier that prevents instructors from wanting to teach online, let alone design and deliver effective courses (Barefield & Meyer, 2013). In order to propose a systematic method to improve the necessary resources, structures and culture during institutional technological adoption, Meyer and Barefield (2009), as cited by Barefield and Meyer (2013), developed the Administrative Support Matrix (ASM) shown in Table 1.

Table 1

Administrative Support Matrix

Foundation Stage	Development Stage	Maintenance Stage
1. Administration's ability to listen and respond to faculty needs	1. Online program policies	1. Continuously evaluate new online technology
2. A supporting and responsive information technology (IT) team	2. Staff development program	2. Update technology only when new technology adds value
3. Effective and well-supported campus network	3. Faculty incentives	3. Periodically assess and update quality of course content
4. Effective server support	4. Teamwork approach	4. Set limits on intrusion of technology on online faculty personal time
5. Online student registration, billing, and payment system	5. Faculty development program	5. Survey faculty semiannually
6. Online bookstore services	6. Faculty mentoring program	6. Survey students at end of every semester
7. Online library services	7. Course management system	7. Make changes to programs based on faculty and student input
	8. Lecture capture or course online delivery system	
	9. Online test security	

Note: The Administrative Support Matrix displays strategies for supporting academic development. Adapted from "*Leadership's Role in Support of Online Academic Programs: Implementing an Administrative Support Matrix,*" by A.C. Barefield and J. D. Meyer, 2013, Perspectives in Health Information Management, 10(Winter), 1f–1f.

This matrix helps model how institutions can support overall development of academic support systems that are directly related to course design, creation, delivery, and maintenance. It is important to note the first action item in the foundation stage is equivalent to assessing faculty needs. A comprehensive understanding of faculty training needs, administrative support needs, and faculty perception of institutional response to needs forms the basis on which institutions can determine which resources to secure, how to develop structures, and in what ways to influence organizational culture that support online academic success (Barefield & Meyer, 2013).

Technology Support

As stated above, it is an institutional responsibility to provide the technology necessary for online learning to students and faculty (Barefield & Meyer, 2013; Roddy et al., 2017; Schrenk et al., 2021). When providing the technology, it is imperative that necessary training is also available and accessible to both students and faculty, although students are more likely to be consistent technology users (Barefield & Meyer, 2013). Recent studies show that less than 44% of instructors received software training and less than 33% demonstrated proficiency of said technology even though they serve as the first line of technical troubleshooting with students (Schrenk et al., 2021). Students and instructor success is directly impacted by technology competencies and both benefit from readily accessible technology support to address challenges as they arise in the online learning environment (Bruner, 2009).

In addition, institutions should consider what resources students need to properly use the technology provided, particularly software and programs that require laptops and/or internet connection. Schrenk et al. (2021) reviewed several recent studies that highlighted a serious consequence of removing students from campus during the pandemic - many students relied on campus computers and internet. Less than 24% of low-income students had home computers, nearly 8% did not have internet access at home, and 51% of students did not have frequent experience using the internet at home. Thankfully, there are programs to help increase student access to public wi-fi and student use of cell-phones as a substitute for computers or laptops. It is a reality that can be addressed with mobile compatible apps in some, but not all cases. A rise in Open Educational Resources (OER) has also helped students and faculty manage the shift to online learning as many of these resources are free and accessible on mobile devices (Schrenk et al., 2021). Considering the various ways technology is integral to online learning, institutions should focus on mitigating factors that could be detrimental to faculty and student access, acquisition, and use of necessary technology resources (Bruner, 2009).

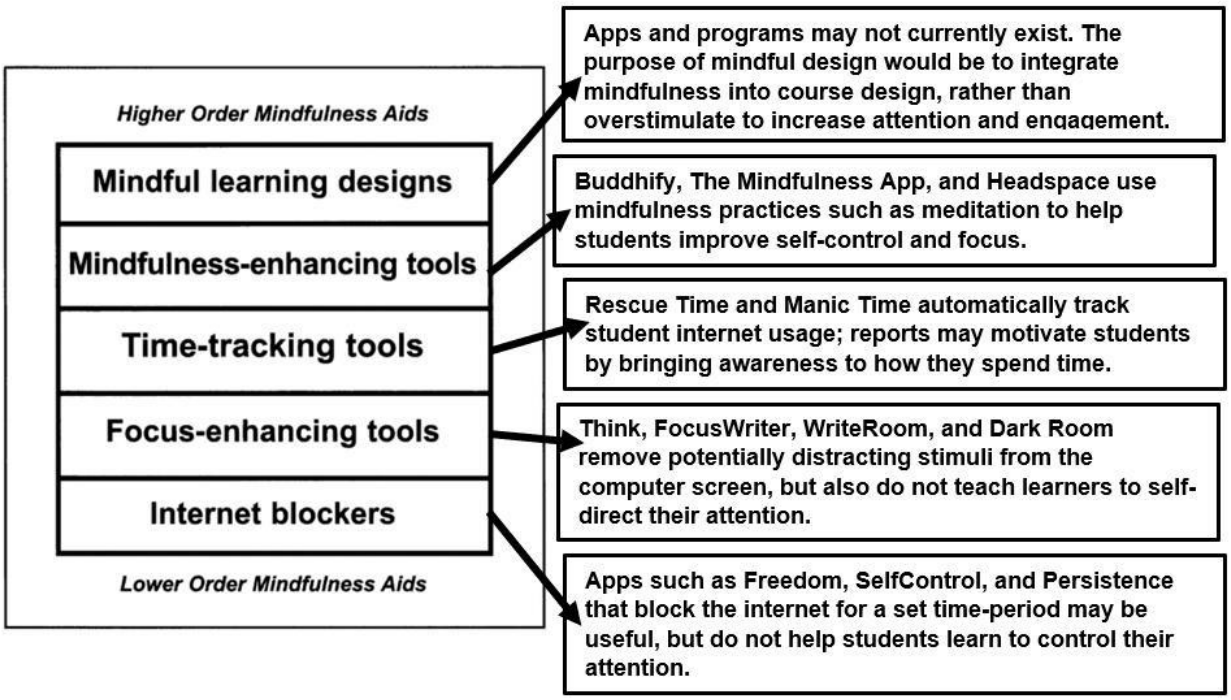
Health and Well-Being Support

Institutional support goes beyond providing technology and training. Health support and well-being services are also needed and impactful to alleviate the undeniable realities that students encounter. The supports afforded to on-campus students need to be extended to online students such as counseling services, career services, mindfulness workshops, and psychological services (Roddy et al., 2017). There is a growing realization that student support services that address the whole student outside of the academic context can positively impact student retention and engagement. Providing these services to online students can be a challenge for institutions, but there is value in investing in online counseling services and mindfulness programs that can be made available to all students regardless of location (Roddy et al., 2017).

Academic stress compounded by home and professional responsibilities can have a negative impact on student concentration, memory, and problem solving, and therefore, student retention and academic success (Spadaro & Hunker, 2016). Mindfulness has been emerging as an effective strategy to reduce the psychological stress students face, including online students, as can be evidenced by the growing number of online mindfulness programs (Roddy et al., 2017). Mindfulness is the ability to bring oneself into the present moment without judgment and make decisions based on conscious choice instead of reaction (Spadaro & Hunker, 2016). As mindfulness is a way to address attention, it has also been connected to student engagement and the ongoing pursuit of increasing engagement in online instructional design, teaching, and learning (Ellen Rose, 2016). In response to the need to capture student attention online to encourage engagement, it is often encouraged to use more videos, graphics, and games. However, Ellen Rose (2016) introduces the notion that more stimuli may actually detract from deeper learning and introduces a Taxonomy of Online Tools to Support Mindfulness shown in Figure 3 with added descriptions of each level.

Figure 3

Online Tools to Support Mindfulness



Note: Online Tools to Support Mindfulness was adapted from "*Can online teaching and learning support mindfulness?*," by E. Rose, 2015, Educational Technology, 55(4), 48–50.

Although mindfulness is still emerging as an academic objective in higher education (Rose, 2016), institutions can leverage existing apps and programs to help students develop skills that will positively impact their learning experience through stress management and self-direction.

Sense of Community

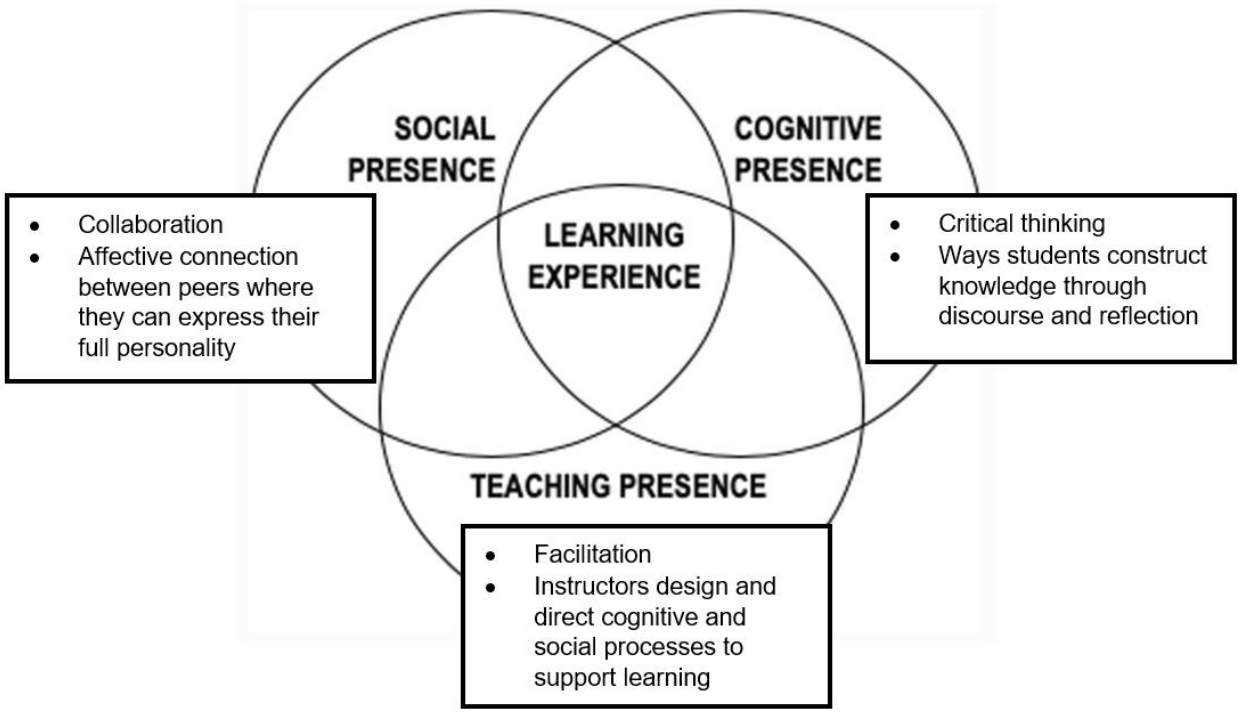
On a more social level, Roddy et al. (2017) underline the institutional responsibility to foster an inclusive, supportive, and structured environment for students to engage with their peers socially within a community. Engagement in various forms is crucial to student success which has been evidenced across studies where students who are actively engaged with peers and faculty are more likely to succeed in their courses (Pardino et al., 2018). Because online learning places more responsibility on the student to be proactive and self-directed, it is important that students are able to actively engage with academic materials, peers, and

instructors which are considered core components of successful learning (Roddy et al., 2017). Factors such as technical skills, time management skills, online self-efficacy, and individual differences in learning style which greatly impact learner experience can be addressed with peer, faculty, and community support.

Within the Community of Inquiry (COI) framework, “a collaborative-constructivist process model that describes the essential elements of a successful online higher education learning experience” (Castellanos-Reyes, 2020), there are three interconnected elements: cognitive presence (CP), social presence (SP), and teaching presence (TP). Figure 4 shows the three elements and major characteristics from Castellanos-Reyes (2020).

Figure 4

Elements of Successful Online Learning Experience



Note: The Elements of Successful Online Learning Experience was adapted from “*20 Years of the Community of Inquiry Framework*,” by D. Castellanos-Reyes, 2020, TechTrends 64, 557–560 (https://doi.org/10.1007/s11528-020-00491-7).

The basis of the COI framework is communication and support and how the relationship between the presences “influenced student satisfaction, perceived learning, and sense of community” - including a growing acknowledgement of the importance of TP (Castellano-Reyes, 2020, p.558). The COI framework is often used at the course level; however, institutions provide resources, develop structures, and influence the culture that ultimately determine the success of implementation (Barefield & Meyer, 2013).

It seems prudent for institutions to consider the various ways they serve students embarking on the journey of learning how to learn, or in the words of Yeh et al. (2019, p.26), becoming “masters of their own learning processes”. Overall, institutions must see themselves as the facilitators of the needs, structures, resources, and processes necessary to support faculty and students in their learning journey.

The pillars described by Roddy et al. (2017) nearly fully explain the institutional dimension of supporting online student success. However, the literature also suggests another major factor for supporting student success from an institutional perspective. The next subsection addresses another institutional factor that emerged from the literature around student support - assessing student readiness.

Assessing Student Readiness

Particularly important for community colleges that serve a diverse student population with various levels of educational experience, is to understand and account for the baseline of learner competencies and characteristics such as gender (more women chose online modes than men), age (online learners are usually older), and lifestyle (online learners typically have to contend with work and/or family commitments) which have been found to impact completion rates. Other common barriers that must be considered are technical difficulties, lack of technical competencies, work/life balance, lack of support, perceived isolation, and lack of motivation (Roddy et al., 2017). Colleges should analyze their specific online student populations in order to accurately target learners' needs.

Assessing student readiness is crucial to understanding the online learner and how to meet and support their academic needs. Khairuddin et al. (2020), developed an online learning readiness instrument to understand how ready students were to participate in online learning based on technology, technology usage, self-confidence, acceptance, self-directed learning, and training. The research suggests that universities should explore a student's online readiness through an assessment, since some students are not sure about their academic readiness, especially around technology and the ability to learn online (Khairuddin et al., 2020). According to Joosten and Cusatis (2020), student readiness (online work skills, social tech skills, online learning efficacy, self-directedness, organization, and socialization) increases successful learning outcomes. Successful learning outcomes are important to ensure high student retention rates (Hamann et al., 2020).

There are multiple factors that affect a student's success and readiness such as technology, time management, and proper study skills (Dhawan, 2020). The preparation of students can come in the form of providing resources, toolkits or administering readiness assessments (Doe et al., 2017; Khairuddin et al., 2017). Henson (2020) suggests institutions can help students assess their own readiness for online learning by offering a readiness course so that students are aware if they are ready or not for online learning. These courses may improve overall student experience by providing them with technical knowledge that improves their experience overall, including accessing online support services.

The next section of the literature review shifts to the technical dimension which explores course-level predictors of success. Due to the interconnected nature of the topic, there is overlap in the conversation and relationship between the three dimensions.

Technical Dimension of Student Success

For the purposes of this project, the technical dimension includes critical considerations of online course delivery that cover instructor readiness, training and development, student engagement, and course design. In shifting to the technical dimension, it is important to

remember that the development of overall institutional competence depends on course design and instructor readiness to deliver online courses (Salim Muljana & Luo, 2019). Instructors are crucial to student online success as the curators of course content and facilitators of knowledge acquisition. Across established research, the direct and important role of instructor presence and competence is among the most critical to online student success, particularly in helping to engage, retain, and ultimately graduate online students (Barefield & Meyer, 2013; Roddy et al., 2017; Salim Muljana & Luo, 2019). Several critical factors for online teaching are identified: 1) online instructor readiness, 2) staff training and development, 3) workload investment, and 4) careful determination of instructor duties and responsibilities (Roddy et al., 2017). The institution plays an important role in terms of these factors as it must provide the access, support, and training for instructors and relevant staff to successfully fulfill their duties and create viable online courses.

Instructor Readiness

Just as students need certain skills to be successful in online learning, online instructor readiness is crucial to ensure that faculty have the unique competencies necessary for online teaching success - some of the existing frameworks are listed below in Table 2 (Roddy et al., 2017).

Table 2

Instructor Competencies

Source	Key competencies
Dennis et al. (2004)	● Pedagogy ● Communication ● Discipline expertise ● Technology
The International Board of Standards for Training, Performance and Instruction (Beaudoin, 2015)	● Applying for situational leadership ● Managing change to enable innovation ● Persevering through slow or incremental periods of change ● Willingness to advance the online education agenda for the next generation of online education professionals.
UNESCO ICT Competency Framework for teachers (UNESCO, 2011)	● Ability to teach technological literacy ● Encouraging knowledge deepening ● Knowledge creation **Intended outcome** ● Increased technological literacy ● Ability to apply learnings to real-world problems ● Help students handle challenges of being active citizens.

Note: The instructor competencies table for online environments was adapted from "*Applying best practice online learning, teaching, and support to intensive online environments: An integrative review*," by C. Roddy, D. L. Amiet, J. Chung, C. Holt, L. Shaw, S. McKenzie, F. Garivaldis, J. M. Lodge, and M. E. Mundy, 2017, Frontiers in Education, 2 (https://doi.org/10.3389/feduc.2017.00059).

A review of established research shows the following are important instructor competencies in online environments (Roddy et al., 2017):

- Communication skills
    - Effective communication between instructor and students is dependent upon timely and clear interaction via email, chat, live class conversation, assessments, and feedback.
- Technological competence

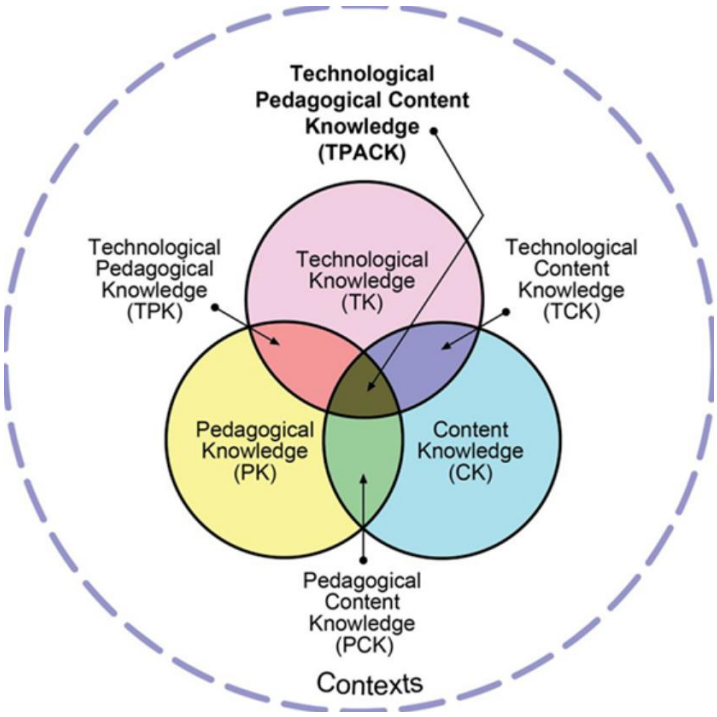
    - Instructors need adequate technological skills to resolve technology-based problems which could impact student access to necessary learning materials.
- Provision of informative feedback
    - It is crucial that instructor feedback on assessments and activities is clear and meaningful to students especially when immediate feedback methods are limited.
- Administrative skills
- Responsiveness
- Monitoring Learning
    - Instructors need to anticipate and be able to answer key questions and/or learning challenges that may come up during coursework.
- Providing student support
    - From academic to basic technical support, instructors should monitor student progress, maintain communication, and be able to provide necessary assistance to students.

These instructor competencies and responsibilities are paramount in minimizing student withdrawal and have been found to positively impact student engagement and successful course completion (Roddy et al., 2017).

The Technological Pedagogical Content Knowledge (TPACK) model developed by Mishra and Koehler (2006), shown in Figure 5, serves as a useful framework to consider instructor competencies as mentioned in Roddy et al. (2017).

Figure 5

TPACK Model



Note: Mishra and Koehler TPACK Model is a framework to consider instructor competencies as cited and adapted from “Applying best practice online learning, teaching, and support to intensive online environments: An integrative review,” by C. Roddy, D. L. Amiet, J. Chung, C. Holt, L. Shaw, S. McKenzie, F. Garivaldis, J. M. Lodge, and M. E. Mundy, 2017, Frontiers in Education, 2 (https://doi.org/10.3389/feduc.2017.00059).

This model explores meaningful integration of technology, content knowledge, and pedagogy in online instruction (Roddy et al., 2017). Used in thousands of publications since its conception, TPACK has been heralded as an important theory of educational technology research in that it describes what instructors should know to effectively incorporate technology in course development and delivery (Saubern et al., 2020). Although Roddy et al. (2017) and other publications discuss the intersections of technological, pedagogical, and content knowledge as it pertains to instructor competencies, Saubern et al. (2020) assert there needs to be a shift in research that focuses more on practical applications. Still, the model can help

instructors evaluate their competencies within online course design and delivery. Areas where faculty lack knowledge and skills can be supported with training and development.

Training and Development

Faculty and staff training and development can benefit both students and instructors in that instructors can build skill sets that will directly impact student experience, both in online and in person environments (Roddy et al., 2017). In a study to measure the impact of faculty training on teaching effectiveness through a TPACK lens, Brinkley-Etzkorn (2018, abstract section) stated:

> (1) effective training can influence the quality of one's teaching (Cole et al., 2004; Knight, Carrese, & Wright, 2007; Steinert et al., 2006); and
>
> (2) instructors who teach online need thorough and continued support (Abel, 2005; Luck & McQuiggan, 2006; Reidinger & Rosenberg, 2006; Shelton, 2011; Smith, 2005).

Notwithstanding, all training is not necessarily effective. Guskey's (2000) model of five critical levels to evaluate professional development can help measure the effectiveness of a training program as described in Shattuck and Anderson (2013). Table 3 below is adapted from a more detailed table that can be found in the resources table within Appendix A.

Table 3

Measures of Effective Training Programs

Evaluation Level	Purpose of the Information
Level 1: Participants' reactions	• Improve program design and delivery
Level 2: Participant's Learning	• Improve program content, format, and organization
Level 3: Organizational Support and Change	• Document and improve organizational support • Improve future change efforts
Level 4: Participants' Use of New Knowledge/ Skills	• Document and improve program content implementation
Level 5: Student Learning Outcomes	• Focus and improve program design, implementation, and follow-up • Demonstrate overall impact of professional development

Note: Guskey's Measures of Effective Training Programs displays a model to evaluate professional development training programs. Adapted from *"Using a design-based research study to identify principles for training instructors to teach online*," by J. Shattuck and T. Anderson, 2013, The International Review of Research in Open and Distributed Learning, 14(5) (https://doi.org/10.19173/irrodl.v14i5.1626).

As indicated in Table 3, the lowest level of evaluation of the effectiveness of faculty training is the reactions of faculty participants. This is based on the assumption that ultimately the effectiveness of instructor training should encourage changes in course design and delivery that positively impact student learning outcomes (Shattuck & Anderson, 2013). The highest levels of evaluation are levels 4 and 5; although there is need and value at all levels. Three major observations came of the Shattuck and Anderson (2013) study that evaluated a specific online instructor training program:

1) faculty were able to gain new perspectives about their online teaching practices by experiencing being an online student;

2) the training program forced faculty to reflect on their role and readiness as online instructors; and

3) faculty participants found that collaboration and communication during the training program positively impacted their learning experience.

These observations are very similar to recommendations from the Brinkely-Etzkorn (2018) study that sought to elicit the effects of training on instructor beliefs and attitudes on online teaching. The four recommendations by Brinkely-Etzkorn (2018) are:

1) the training program should manage participant expectations of what can be realistically learned in the time-frame allotted;

2) facilitators should integrate social learning, participant collaboration, and should put instructor participants in the role of actively engaged student;

3) ongoing training should be built into the training program to ensure instructor competency of new knowledge and skills as well as ongoing support which may include mentoring and instructional design support; and

4) educational developers should consider the desired effects of the program and use multiple data sources to evaluate impact over time.

The overall goal of instructor training should be to help instructors create and deliver engaging and meaningful online courses which includes experiential and active teaching strategies. The next subsection discusses this in more detail.

Student Engagement: Experiential and Active Learning

Effective course delivery is important to encourage student success, particularly in online courses where there is more responsibility on the student to facilitate their own learning (to be discussed later in this chapter in further detail). There is a shift in the perception of online learning from individual work to one where students are able to participate in active learning and experiential education through collaboration and authentic application of learning (Smith Budhai & Skipwith, 2017). Although similar, active learning and experiential education are defined differently.

Experiential education, defined by the Association of Experiential Education, is a philosophy in which educators intentionally engage learners through direct experience and focused reflection to increase knowledge, develop skills, clarify values, and encourage the capacity to contribute to their communities (Smith Budhai & Skipwith, 2017). Several types of experiential learning detailed by Smith Budhai and Skipwith (2017) are: problem-based learning, project-based learning, service learning, field experiences, cooperative education, internships, practicums, service learning, and study abroad. These models require learners to connect their learning to wider world context and future professional fields.

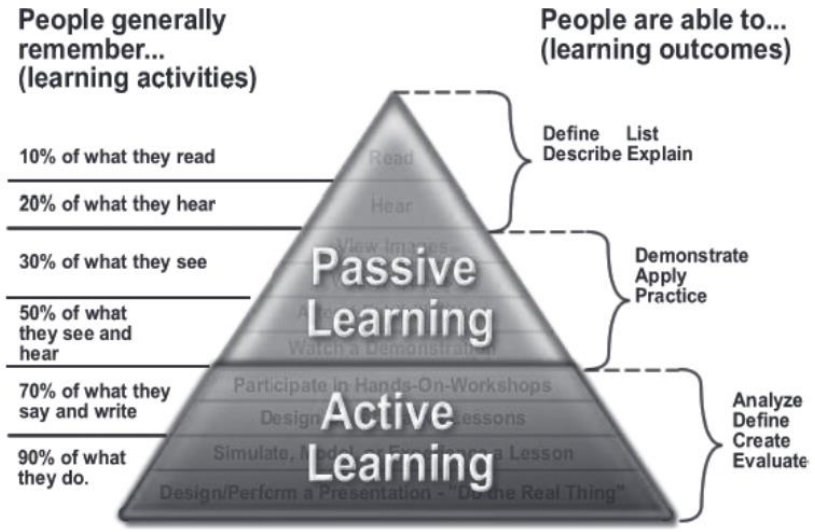
Active learning is an instructional approach that emphasizes learner participation in meaningful activities that require critical thinking about the learning process (Smith Budhai & Skipwith, 2017). These types of activities include hands-on experience, interactive lessons, authentic experiences, and collaboration which can lead to high retention of valuable learning objectives. Still, Smith Budhai and Skipwith (2017) stress the importance of passive learning activities such as reading and lecture presentations which should be paired with active learning activities to reinforce skills and content.

It can be challenging for instructors to design online courses that parallel in-class structure and delivery. Two standard tenets of experiential learning as expressed by John Dewey, engaging with community and reflective thinking, often get translated into discussion boards (Smith Budhai & Skipwith, 2017). Discussion boards are used as a tool to increase student engagement; however, research shows that learners prefer games, videos with quizzes, simulated virtual worlds, role-playing, and interactive case studies (Smith Budhai & Skipwith, 2017). These activities may include designing avatars or characters that allow learners to explore different identities and engage in peer-to-peer interactions which can stimulate self-reflection within social and professional situations to increase learning and deepen understanding of concepts (Smith Budhai & Skipwith, 2017).

The work of Kolb (1984) that added to Dewey's concepts can help conceptualize active and engaging learning experience through four stages - concrete experience (learners are presented with and participate in an experience), reflective observation (learners reflect on the experience and their participation), abstract conceptualization (learners draw meaning from their observations and reflections), and active experimentation (learners apply what they have learned to their lives and future professions) as cited by Smith Budhai and Skipwith (2017). Figure 6, Dale's Cone of Learning, is a visual representation of the relationship between learning activity types and learning outcomes.

Figure 6

Dale's Cone of Learning



Note: Dale's Cone of Learning displays the relationship between learning activity types and learning outcomes as cited and adapted from "Best Practices in Engaging Online Learners Through Active and Experiential Learning Strategies," by K. Smith Budhai and K. Skipwith, 2021, 2nd ed., Taylor & Francis Group.

The shift of incorporating active and experiential learning into online courses can be challenging for instructors who rely on face-to-face and group activities in the classroom. There

may be additional scaffolding and planning required to ensure that students have what they need to successfully complete these types of activities in a virtual format. Course design becomes a crucial aspect as development and preparation of online courses can take significantly more time and effort on the part of the instructor (Bruner, 2009). The next section discusses course design specific to online learning.

Course Design

To meet the evolving demands of higher education including serving the needs of a diversifying student population, technological advancements, and increased demand on teaching staff, many universities have hired more instructional designers and provided more professional development to instructional staff (Bennett et al., 2017). Still, it is imperative that the importance of instructor course design be addressed, particularly as much of the research on the topic has been focused on teaching concepts and approaches more suited for face-to-face learning (Bennett et al., 2017). As faculty are being increasingly required to move their traditional face-to-face courses online, the issue of course design at the instructor level is becoming more urgent, particularly as online course design is very different from face-to-face course design.

Joosten and Custais (2019) suggest that online course design and organization is the most influential factor in student learning outcomes - specifically by determining learning objectives, creating aligned activities, and the organizing of the course by instructors and instructional designers. It is also important that students are given thorough orientation to the course, policies, expectations, and associated technology and be provided with ongoing learner support built into course design (Joosten & Custais, 2019). Pardino et al. (2018) asserts that course design should have some flexibility to address the needs of students, and recommends that it is a best practice for faculty to give students a pre-course assessment to measure their experience with virtual learning, preferred learning methods, technological competency, expectations, and apprehensions. Understanding the students' pre-assessment could allow the

instructor to predict possible challenges, plan ahead, establish necessary support resources, and adapt certain course delivery elements based on the results. This strategy is in line with research previously mentioned in this literature review of assessing online student readiness.

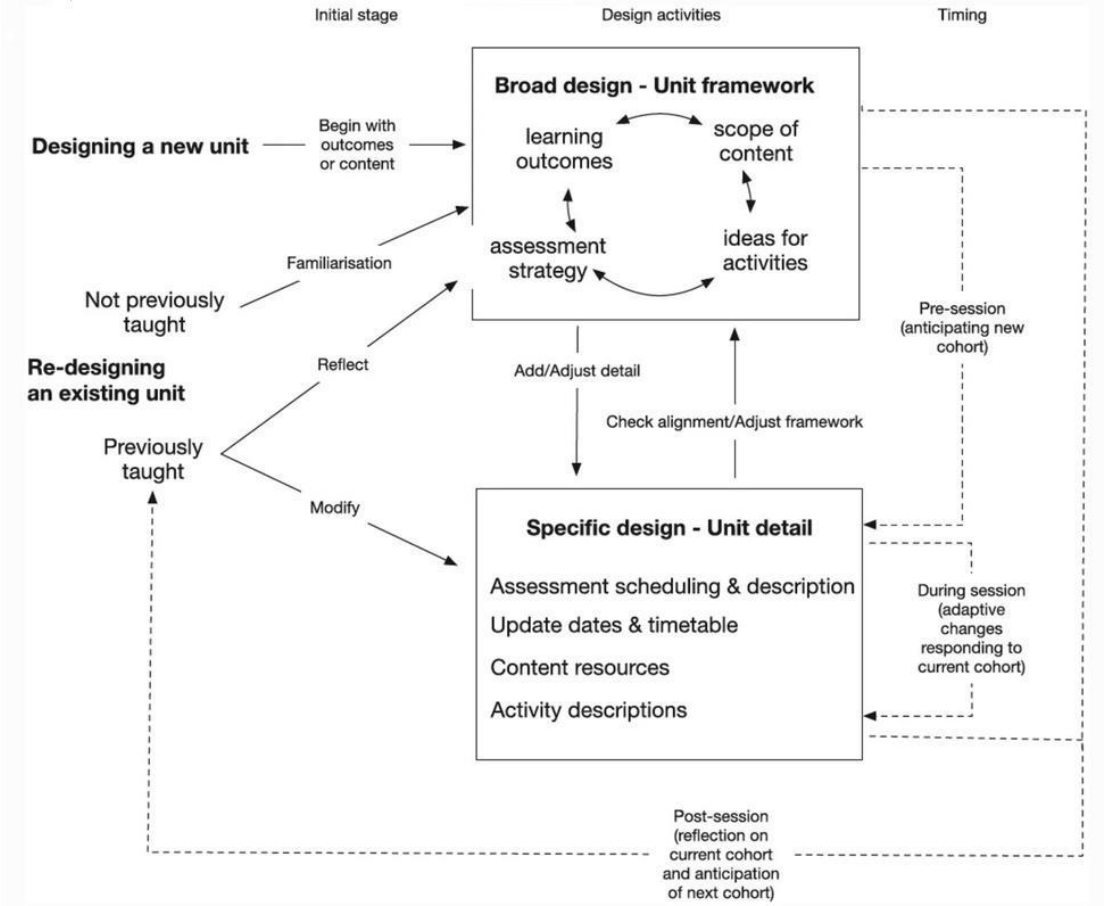
Lee (2021) expands upon Bennett et al. (2017) and presents three design practices congruent with existing instructional design models:

1) The first is divided by the starting point of the course design - new units and revising existing units.
    a) New units begin with establishment of learning outcomes and selection of scope/topics.
    b) Existing unit revisions depend on the cause of revision including:
        i) student feedback,
        ii) updating content,
        iii) addressing areas of improvement perceived during teaching,
        iv) shift in delivery mode, and
        v) changes in faculty.
2) Design should progress from broad to specific.
    a) New units move from selected learning outcomes and scope/topics to selection of reading/media materials, development of content, assessments, and learning activities.
    b) Existing units should enter a non-systematic cyclic design process as depicted by the descriptive model of faculty design derived from Bennet et al. (2017) pictured in Figure 7 below depending on instructor style or specific situation.
3) The iterative process should occur before, during, and after course implementation in which revisions to units, content, and activities can be implemented throughout the teaching process and after reflections.

In this model, a course can be continuously adapted to fit the changing needs of students, development of course content and teaching style (Lee, 2021).

Figure 7

Course Design Model



Note: The Course Design Model displays strategies for supporting academic development. Adapted from “Leadership's Role in Support of Online Academic Programs: Implementing an Administrative Support Matrix,” by A.C. Barefield and J. D. Meyer, 2013, Perspectives in Health Information Management, 10(Winter), 1f–1f.

It is imperative that faculty have access to support throughout the course development, design, and delivery process. The three stages of support as presented by Lee (2021) are identified in alignment with the broad to specific approach of the three design practices:

1) Support in general resources and training on how content can be delivered online and what activity and assessment options already exist,
2) Support and training specific to necessary technology tools for content creation and delivery.
3) Support and training during the interactive process (mentoring and/or support groups) in online pedagogy and technology based on reflection and feedback.

Lee (2021) emphasizes that instructors will not go through the same process or have the same needs - therefore readily accessible support and actionable instructor resources may function better on an as needed basis that can bypass blanket, and possibly misguided, professional development.

While online courses will differ based on instructor and subject, there are several elements that contribute to effective experiential online learning spaces. In their article “Ten Best Practices for Taking Experiential Learning Online”, Cridland et al, (2021) presents their observations as ten best practices based on their research:

1) Provide clear structures and objectives for the virtual program.
2) Provide Zoom and virtual etiquette training.
3) Find out what concerns students have.
4) Create a mentoring network for students.
5) Use synchronous tutorials when possible.
6) Facilitate community building and networking with social events.
7) Leverage online resources.

8) Utilize workshops to supplement training experiences.

9) Make time for 1-on-1 meetings.

10) Leverage virtual conferences.

More specifically, Cobb et al. (2018) describe best practices for module development. One major finding was the difficulty of recreating real-time presence to assess and redirect student learning in a virtual environment which highlighted the importance of module organization, clarity of information, and helpfulness of course content (Cobb et al., 2018). It was important to researchers to use virtual instruction to increase interactivity, collaboration, teamwork, and active learning in a way that would reduce lecture hours, provide standardized content, reduce faculty schedule constraints, and improve student access to course content (Cobb et al., 2018). The best practices identified in the single institution study are:

1) Consistently format online learning modules,

2) Explicitly refer to embedded content in the text,

3) Organize coherent lessons including learning objectives,

4) Summarize critical points to provide take-home messages,

5) Supplement with feedback-based formative assessments, and

6) Purposefully choose and simplify length and content of included text, figures, audio/visual lecture capture clips, and activities.

Cobb et al. (2018) was useful as it leveraged the requirement for students to be self-regulated learners and integrated medical education with the adult learning theoretical framework to create faculty-generated, student-centered, self-directed learning modules. Self-direction is a fundamental factor in student success and one of the principal responsibilities of student learners. The next section moves the conversation to the personal dimension of student success.

Personal Dimension of Student Success

Research on the institutional responsibilities with respect to student success outline the structures and supports needed by students to become self-driven learners. This section of the literature review will look more closely at the online student and the skills they need to effectively use those supports including their role and responsibility as online learners, factors that impact their academic performance, and other predictors of online student success. The subsections in which these topics are addressed are online student readiness, self-efficacy, and self-regulated learning.

Online Student Readiness

While institutions are responsible for providing the technology and support necessary for student success, there are certain skills that students need to develop to be successful. Joosten and Cusatis (2020) explored online student readiness with an instrument meant to identify key factors that influence success. They derived three areas of comprehension that encompassed the nature of student learning: 1) online comprehension that required technology skills, access, and self-efficacy; 2) flexibility comprehensiveness that required students use discipline and control to self-manage their individual learning; 3) mediated comprehension that requires students to interact and communicate with others online. Joosten and Cusatis (2020) operationalized the three areas of comprehension with six measures: 1) online work skills, 2) familiarity with social technology, 3) online learning self-efficacy, 4) self-directedness, 5) organization skills, and 6) socialization. In conceptualizing online student success, Joosten and Cusatis (2020) make an important distinction - understanding what factors contribute to student success is not necessarily to improve student cognitive or academic ability, but to understand how students need to be supported. It is important for students to be aware of what they will need to know to be successful, one of the benefits of student readiness assessments, however the research seems to lean toward institutions and faculty creating the space for students to

acquire and apply that knowledge. Still, the students must also develop self-efficacy and self-regulated learning skills.

Self-Efficacy

There is consensus that students, virtual and in traditional on-campus spaces, come into higher education with a desire to learn. However, the initial motivation may decrease in the face of life priorities, difficult and unengaging instructional material, and/or, frustrating instructional delivery. There are numerous factors that impact learning outside of the student's direct control; however, strong self-efficacy is an important indicator of student persistence and success in an online learning experience (Zimmerman & Kulikowich, 2016). Self-efficacy is the belief in one's capabilities that impacts task choice, effort, persistence, and achievement and students with positive self-efficacy are motivated and perform better in online courses (Wang et al., 2013).

Trespalacios et al. (2021) reviews the foundation of self-efficacy research starting with Bandura (1986, 1997) and the expansion of his work by Margolis and McCabe (2006) which identify four sources of self-efficacy:

1) mastery experiences - learning activities that allow students to feel successful;

2) vicarious experiences - students observe peers finding success which can raise confidence;

3) verbal persuasion - positive feedback that motivates students to give more effort; and

4) emotional stimulation - positive emotions empower students' beliefs about their abilities.

While studies on online self-efficacy are often focused on technology, there are various types and factors of self-efficacy for online students such as student attitude, self-directedness, communication skills, time-management skills, motivation, learning performance, and digital literacy (Trespalacios et al., 2021; Zimmerman & Kulikowich, 2016).

In their review of the literature, Trespalacios et al. (2021) also includes five dimensions of online learning self-efficacy from Shen et al. (2013):

1) ability to complete an online course;

2) ability to interact socially with classmates;

3) ability to navigate tools in Course Management System (CMS);

4) ability to interact with instructors online; and

5) ability to interact academically with peers.

The intersection of these skills and competencies impact student self-efficacy and can be developed simultaneously or separately. The mixed method study found that participants had high levels of self-efficacy which was directly correlated to the fact that nearly 81% of participants had previous online experience (Trespalacios et al., 2021).

However, for students without prior experiences in online courses, it is important to understand student competency levels in order to provide adequate training and support. Previous instruments that measure student self-efficacy do not necessarily account for the experiences, perceptions, and needs of diverse students with varying levels of online experience (Zimmerman & Kulikowich, 2016). Taking these factors into account, Zimmerman and Kulikowich (2016) developed the Online Learning Self-Efficacy Scale (OLSES) to measure online self-efficacy for research purposes as well as practical application in that institutions, faculty, and students can also use the instrument as an assessment of online self-efficacy. The instrument consists of three subscales (learning in the online environment, time management, and technology use) and seeks to identify specific student self-efficacy tasks - the following were stand out findings (Zimmerman & Kulikowich, 2016):

- completing an online group project scored lowest across student experience levels;
- focusing on schoolwork in the face of distractions and efficiently using online library resources also scored relatively low across participants;
- locating course syllabi online scored highest across participants - common knowledge of using learning management system for basic information; and

- students with prior online experience felt significantly more confident in learning without being in physical proximity to an instructor.

When using this instrument to determine student self-efficacy, it is posited that the low scoring areas and activities are those which will require more scaffolding, instruction, and support to encourage student success (Zimmerman & Kulikowich, 2016).

Research has also shown a connection between self-regulated learning (SRL) and self-efficacy in both online and traditional learning environments (Trespalacios et al., 2021; Wang et al., 2013) This suggests utilizing resources that support self-regulation may also increase student self-efficacy due to the independent nature of online learning (Trespalacios et al., 2021).

Self-Regulated Learning

The nature of online learning requires students to be self-directed learners that autonomously and actively participate in the learning process including the ability to control, manage, and plan their learning actions which has been referred to as self-regulated learning (SRL) (Broadbent & Poon, 2015). Three important characteristics contribute to the acquisition of SRL within the social cognitive view based on research by Zimmerman (1989): 1) the most important is self-observation - self-monitoring of actions; 2) self-judgment - self-evaluation of performance; and 3) self-reactions - response to performance outcomes as cited by Broadbent & Poon (2015).

SRL strategies that can help students acquire and retain knowledge include cognitive strategies, metacognitive strategies, and resource management strategies (Broadbent & Poon, 2015). Several other theories deal with the various aspects of SRL which are directly connected to self-efficacy. Zhu et al. (2020) briefly review a number of theories and models in their study of online students' attitudes and intentions toward learning from a SRL perspective. From these various theories, they argue that student intention and motivation is influenced by diverse factors which include ease of use, usefulness of technology, intersectionality of level of difficulty and enjoyment, satisfaction, clear goals, feedback, feeling of presence, as well as the difference

between expectation and performance (Zhu et al., 2020). These factors are similar to those mentioned above in the section on self-efficacy.

Reported high rates of attrition in online students are a primary concern expressed by Stephen and Rockinson-Szapkiw (2021) who assert the need for institutions to create and implement interventions that prepare and support online learners to develop autonomy in the virtual learning environment. In the same vein as encouraging online student readiness as a strategy to increase online student success, Stephen and Rockinson-Szapkiw (2021) explore the influence of a high-impact First Semester Seminar (FSS) on three mechanisms of human agency related to student persistence and success - self-efficacy, self-directed learning, and self-regulated learning. The following scales were used to measure each mechanism respectively: Online Self-Regulated Learning Questionnaire (OSLQ) (Barnard-Brak et al., 2010), Self-Rating Scale of Self-Directed Learning (SRSSDL) (Williamson, 2007), and Online Learning Self-Efficacy Scale (OLSES) (Zimmerman & Kulikowich, 2016) (as cited by Stephen and Rockinson-Szapkiw (2021)). To increase effectiveness, the high-impact FSS courses reinforced skills related to self-efficacy, self-directed learning, and self-regulated learning through embedded activities (as stated by Stephen & Rockinson-Szapkiw, 2021, Description of the FSS section):

1) Self-regulation:

   students developed a study and classwork schedule, applied and evaluated the effectiveness of techniques for note-taking, reading, writing, and time management, sought consultation from support systems and resources, set goals, and evaluated their commitment to their goals.

2) Self-direction:

   student discussion on the competencies of successful online learners, assignments that required students to engage with various support systems across the university, synchronous and asynchronous peer-to-peer learning, completion of a learning

preference inventory, and an intelligence self-assessment, and computer and information literacy assignments.

3) Self-efficacy:

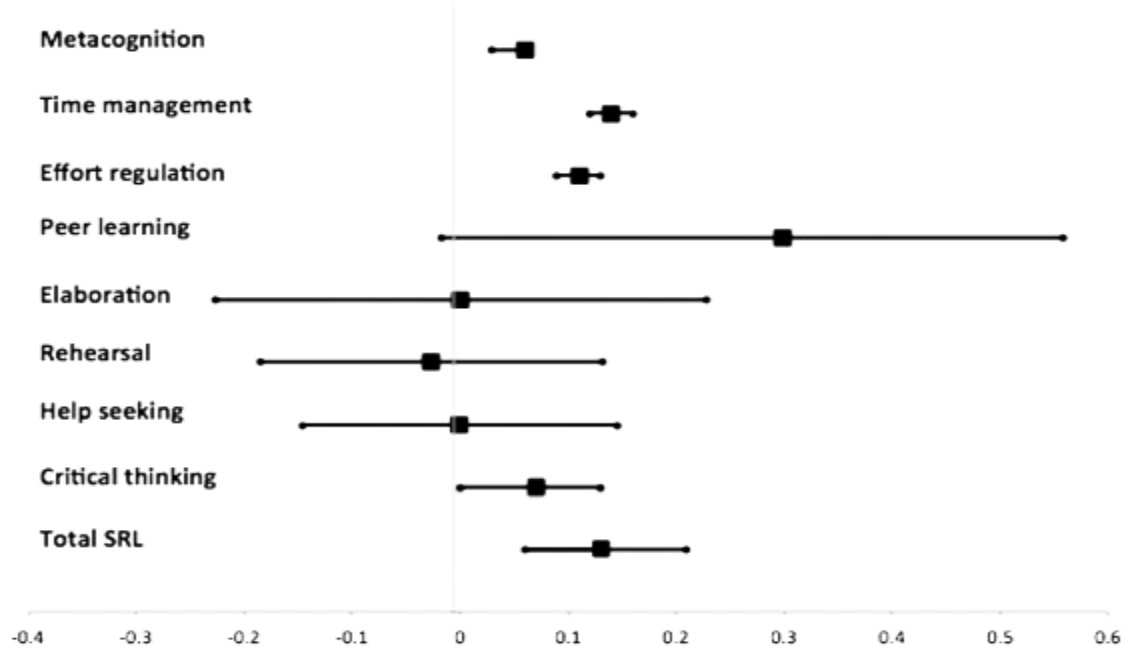
   students completed a hands-on orientation on the use of the LMS and utilized various synchronous and asynchronous communication tools to seek support from services across the university.

The study concluded that all three mechanisms of agency had strong, positive correlations between them and that two were significantly affected by the high-impact FSS course (Stephen & Rockinson-Szakpiw, 2021).

Broadbent and Poon (2015) also explore the connection between self-regulated learning strategies and academic achievement. Of the eight strategies studied, four were positively correlated to academic outcomes (time management, metacognition, effort regulation, and critical thinking); one had a moderate effect (peer learning), and three (rehearsal, elaboration, and organization) had the least effect (Broadbent & Poon, 2015) as shown in Figure 8 below.

Figure 8

Correlation between SRL Strategies and Academic Achievement



Note: This figure displays the correlation between self-regulated learning strategies and academic achievement. Adapted from "*Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review*," by J. Broadbent and W. L. Poon, 2015, The Internet and Higher Education, 27, 1–13 (https://doi.org/10.1016/j.iheduc.2015.04.007).

In terms of online student success, the results were similar; however, it was also found that the correlations were weaker implying that online SRL strategies may be less effective in the online learning environment despite the online courses being heavily dependent on student autonomy and active engagement (Broadbent & Poon, 2015). Yet, the results also imply that there may be other unexplored factors at play in online contexts.

The review of the literature suggests that there are many aspects to online student success. In the next section, the evidence is distilled from the literature to guide the development of the survey and focus group questions. The results from the project's original

findings will help the client understand existing practices and how to scale best practices across every college within the system. In a system's theory perspective, can VCCS utilize institutional, technical and personal dimension best practices already implemented within a few colleges and implement them to all colleges, thus instilling a culture of collective impact.

Findings from the Original Data

Our analysis involved an open-ended survey and focus group interviews of VCSS administrators, faculty, and staff. A total of 15 survey responses and seven focus group participant opinions were analyzed by five major themes seen in the data: factors for student success, resources currently available and needed, considerations for special student populations, fostering a sense of community, and faculty development ideas.

Factors for Student Success and Best Practices

The data from the survey question asking respondents their professional opinion on *what they believe are the most important factors for the success of online learners* are summarized in Table 4. The total mentions about factors for success of online learners are grouped into the total mentions based on the respondents' institutional role. As stated in the data collection and procedures section, the roles listed on the survey consisted of faculty and administrator, but another category allowed respondents to enter other university affiliations. Since some respondents served in dual roles, Table 4 combined the responses based on administrator, faculty and administrator, faculty, or staff.

Table 4

Most Important Factors for Success of Online Learners and the Number of Times Mentioned

	Role of Respondent				
	Administrator	Faculty & Administrator	Faculty	Staff	Total mentions
Quality Factors					
1. Quality of course design	2	3		1	6
2. Quality of teaching	1				1
Teaching Practices					
3. Clear expectations		1			1
4. Engaged faculty/Instructor Presence		3	1		4
5. Clear learning outcomes		1			1
Faculty Support/Development					
6. Just-in-time technical support, faculty support	2			1	3
Learning Environment					
7. Sense of belonging	1				1
8. Easy to access resources, materials, and support	1				1
9. Reliable (IT) computer/tablet and internet	1		1		2
10. Proper/Quiet study environment	1		1		2
11. Flexibility, Sensitivity			1	1	2
12. Connection to advising		1			1
Student Efficacy					
13. Time management skills		1	4		5
14. Communication skills			2		2
15. Determination, Motivation, Persistence			3		3
16. Social capital/ Student Engagement	1				1

The data show sixteen factors categorized into five groupings: quality of course, teaching practices, faculty support, the learning environment, and student efficacy. The top three factors that had the most mentions were quality of course design (6 occurrences), time management skills (5 occurrences), and faculty engagement and presence (4 occurrences).

The next survey question asked, "*what are the best practices for online learning?"*. This question may seem similar to the prior question related to factors of success for online learners; however, it is different because the question asks about specific actionable tasks that colleges can practice. Survey respondents elaborated on the importance of quality course design through specific teaching practices focused on "setting clear expectations, offering open virtual office hours, and embedding tutorials in the courses". New groupings emerged in this survey question. Quality assessment was suggested as a best practice, specifically the use of "Quality Matters standards for course assessment*"* as mentioned by a survey respondent. The other new grouping pertained to shared governance practices emphasized by survey respondents for a "robust faculty vetting process for course development".

The major takeaway from the analysis on the best practices survey question, is the overwhelming number of survey respondents who mentioned "faculty engagement and presence" as a best teaching practice. As shown in Table 5, faculty engagement and instructor presence received 12 mentions spread across all the respondent roles.

Table 5

Best Practices and the Number of Times Mentioned

	Role of Respondent				
	Administrator	Faculty & Administrator	Faculty	Staff	Total mentions
	Quality Factors				
1. Quality of course design	2		1		3
Quality Assessment					
2. Course design using Quality Matters standards		1			1
3. Authentic assessment	1	1			2
	Teaching Practices				
4. Clear expectations			1		1
5. Engaged faculty/Instructor Presence	3	3	4	2	12
6. Open virtual office hours		1			1
7. Tutorials embedded in courses	1				1
Faculty Support/Development					
8. Just-in-time technical support, faculty support				1	1
	Learning Environment				
9. Easy to access resources, materials, and support			1		1
10. Reliable (IT) computer/tablet and internet				1	1
11. Flexibility, Sensitivity	1	1	1	1	4
	Student Efficacy				
12. Social capital/ Student Engagement	2	2	2		6
	Shared Governance				
13. Faculty vetting process		1			1

The second highest occurrence for a best practice was student engagement. In summary, according to the participants, faculty engagement and student engagement are the most important best practices for online learning success. Some examples of survey responses that emphasized engagement are:

- “A course that is organized for intuitive navigation and faculty/student interactions.”

- “Faculty that check assignments daily, participate in discussions, leave comments on all assignments, and have at least two grade checkpoints (midterm and final).”
- “Instructors need to encourage students to meet online so that student questions or concerns can be immediately addressed.”

Resources Available and Needed for Online Learners

The participants were asked *What student success resources are currently available to online learners at your institution?* According to the survey responses, our analysis identified thirteen unique resources currently available to students with some specific resources for online learners. Table 6 lists the resources with the number of mentions from survey respondents.

Table 6

Resources Available at Institutions and the Number of Times Mentioned

Resource	Total Mentions
On-demand webinars, virtual tutoring	8
Success Coaches	5
Help Hub, or technical support	4
Library	2
Telehealth	2
Academic Resource Center	1
Dedicated academic counselors for online transfer agreements	1
Free loaner laptops	1
LMS training	1
Resources for ESL students	1
SDV Course	1
Virtual Student Union	1

Respondents mentioned that webinars and virtual tutoring, Success Coaches, and technical support is readily available to students; however, not necessarily at all colleges and not at a high-level of service excellence. For example, a respondent stated, “success coaching can be targeted to engage at-risk students or require coaching for students repeating courses or on academic probation”. They further explained that there is a desire to “increase the number of Success Coaches and also share a database of coaches to utilize them across colleges”.

Focus group participants elaborated on some of the above listed resources and the need for improvement in some services. For example, success coaches are available, however, there is a lag time on responding to students. Suddenly at the end of the semester a focus group participant said they received “like ten emails that the case is resolved which means the coaches waited till the end of the semester to respond”. A question worth exploring further is, why do Success Coaches wait until the end of the semester to process support tickets.

The reason for this low responsiveness could be lack of human capital. A focus group participant expressed concerns related to “limited human resources to monitor success for at-risk students”. It is great to have Success Coaches; however, participants stressed the difficulties related to “reaching out to the at-risk students, supporting students in the evening hours, specifically with the 24/7 support”. Another concern expressed by a focus group participant was the effect of low responsiveness on mental health issues. Especially with “all the stressors going on in the world today, students do not need to have a minor technical glitch be stressful”.

A few potential solutions were suggested by focus group participants, such as “chatbot with a live person” at the other end answering questions immediately, and “telehealth service” to be responsive to mental wellness. Another suggestion was one that addressed the lack of human resources by utilizing “the already existing library chat function for 24/7 support”. VCCS colleges do not have the financial luxury as does a “for-profit online university to offer 24/7 support and get a live person helping them at 2am”, said a focus group participant. A resource

that is already available is “embedded tutors in Canvas courses”. A focus group participant wished that this service could be scaled because of the benefit of having “a tutor just there instead of making students reach out to a virtual tutor”.

Special Populations

A survey question asked about special populations: *What online student populations require special considerations or unique support features at your institution?* Online learners who require special considerations for these support services are “adult learners who are juggling multiple responsibilities and students experiencing financial difficulties” as mentioned by a respondent. There was a response that raised an issue concerning “faculty not well equipped to understand these special needs and how to meet them”. A separate respondent mentioned “instructors should devote one-on-one time, have patience and empathy” when interacting with older students. Student with disabilities, students with young children, and students who are experiencing home insecurity were populations mentioned as those who require special considerations for online support services. Respondents mentioning sub-populations with high-need also were concerned about the lack of one-on-one faculty interactions and accessible technologies.

In summary, a collective wealth of resources are available to students, but not consistently across all of the colleges in VCCS. This speaks to the theoretical framework and the need to think as a system. The bigger concern is for students who need special considerations for online success. “These are complex issues with no simple answer” as mentioned by a survey respondent. Another disheartening answer given in the survey was that it “is nearly impossible to meet every student’s individualized considerations”. Another survey response pointed at the student’s lack of preparedness to be successful, stating “students don’t understand the commitment involved in online learning, they just are not prepared”.

Sense of Community

In the survey, only one respondent mentioned that a sense of belonging or community is an important factor to online success. However, multiple focus group participants were concerned that “online students do not feel connected to the institution, instructors, or their peers”. They said that a “sense of community is important for retention and completion, and yet is lacking in the online environment”. Furthermore, the focus group participants offered a way to create a sense of community through an “online platform, maybe such as Arizona State University has created a place for students to connect from thousands of miles away and still feel connected to the institution”. They said that these platforms “should not require a moderator, in fact students should not need moderating” because the platform should be inviting enough to attract students and keep them coming back on their own.

Several focus group interviewees highlighted the “Virtual Student Union as a way to bring the campus together for fun activities such as yoga class, book club that uses Canvas discussion boards” for the purpose of creating a sense of community. The Virtual Student Union should also be an “automatic integration into all Canvas courses or for some courses an opt-in by the student”.

Faculty Development

The survey question asking about the *available faculty development tools to improve online course design and delivery* highlighted two tools - mandatory training program, and Canvas tutorials. One survey respondent noted that they follow-up the training with a rigorous evaluation and coaching. Some survey respondents noted that “instructional designers or websites with videos and documents” could be used. One survey respondent noted that “instructional designers for adjuncts who provide support for course development and training should receive stipends”. This response highlights a burnout concern for the extra course development efforts without receiving compensation.

The next question pertained to understanding *what more faculty development tools are needed for instructors to effectively facilitate student learning*. Overall, the responses directly answered the question by discussing tools. The tools of choice were the use of discussion boards, and Canvas course development tools. Two survey respondents indicated that “more in-house opportunities should exist rather than outsourcing tools”. A survey respondent who expressed the most challenges with supporting underserved populations answered this question by indicating the need for sensitivity training and instructor patience.

Although the survey question about faculty development tools did not directly ask about ways to encourage faculty to use these tools, survey respondents offered many suggestions nonetheless. Some survey respondents offered suggestions on ways to influence faculty commitment. One institution suggested finding “better ways to authentically assess student learning outcomes without requiring proctored exams to make it easier on faculty rather than addressing why students cheat. Learning outcomes assessment, quality management for course design, and a peer review process for all online courses” were suggested as ways to emphasize commitment to online student success. Another respondent suggested holding faculty “accountable for poor course design and delivery”. Another respondent indicated that “professional development for faculty is needed to increase faculty engagement”. Some faculty engagement methods suggested were “a need for biweekly, or monthly lunch-and-learn that promotes tools, and to offer two virtual professional development conferences each year”.

During the focus group interviews, one participant shared that they had to do everything for an older faculty member who traditionally taught face-to-face courses. The switch to online was a difficult hurdle to overcome for this instructor. Therefore, the participant was assigned to this instructor to assist in setting up a Canvas course for the instructor. This participant set up everything from “uploading content into Canvas, posting announcements, hosting the Zoom class meetings, and even posting important information about multi-factor login requirements”. This instructor completely resisted Canvas and/or online.

Based on additional focus group responses, providing faculty development training after coming out of a two-year pandemic should be seriously considered as a burden on faculty. “Faculty are burnt-out and cannot handle one more thing”, said a focus group participant. Instead, a participant recommended providing “chunks of information that is easily digestible”. A focus group participant shared that “faculty training with certification combined with one-on-one orientation and mentoring works very well and has reduced the number of student complaints from 180 to 30 last year and this year there were only 20 complaints”. With these success rates they have proven that faculty delivery of course content matters. One suggestion from a focus group participant was to create a “virtual faculty union” similar to the virtual student union.

Student Success Web Portals

In addition to understanding the literature on supporting online student success, and beyond what VCCS employees shared via the survey and focus groups, VCCS is interested in knowing what other institutions do by way of providing support via the Internet. Therefore, as shown in Table 7, the project team reviewed various publicly available web portals maintained by community colleges and community college systems (See Appendix B).

Table 7

Student Success Web Portals

University of Illinois Urbana-Champaign	**Student Success Toolkit**
The University of Massachusetts Amherst	**Student Success Toolkit Series**
The University of Massachusetts Amherst	**Student Success**
Davidson College	**Academic Success Toolkit**
EAB	**Student Success Implementation Toolkit**
Colorado Community Colleges Online	**CCC Online Student Support Center**
UNE Online: University of New England	**Online Learning Student Support and Resources**
Northern VA Community College	**NOVA Online**
California Community Colleges	**California Virtual Campus**

The portals reviewed were located throughout the US and were both private and public institutions. The portals reviewed were designed and maintained to provide information and guidance to both prospective and current students. The information provided by these institutions and systems was focused on facilitating student success in online programs and consisted of various support mechanisms including, but not limited to, an orientation to online tools, frequently asked questions with associated answers, recommendations from subject matter experts, information technology hardware and software requirements, health and wellness, and personal readiness assessments.

The project team was limited to only reviewing publicly available web portals. Many institutions have student success portals or websites that are behind their institutional authentication system. The team therefore recognizes this review as being limited and not fully reflective of the resources available to students, faculty, and staff. Based on the review of these sites and portals, four common themes or categories of resources made available to online learners were discovered: college readiness, student support services, online student readiness, and online success initiatives.

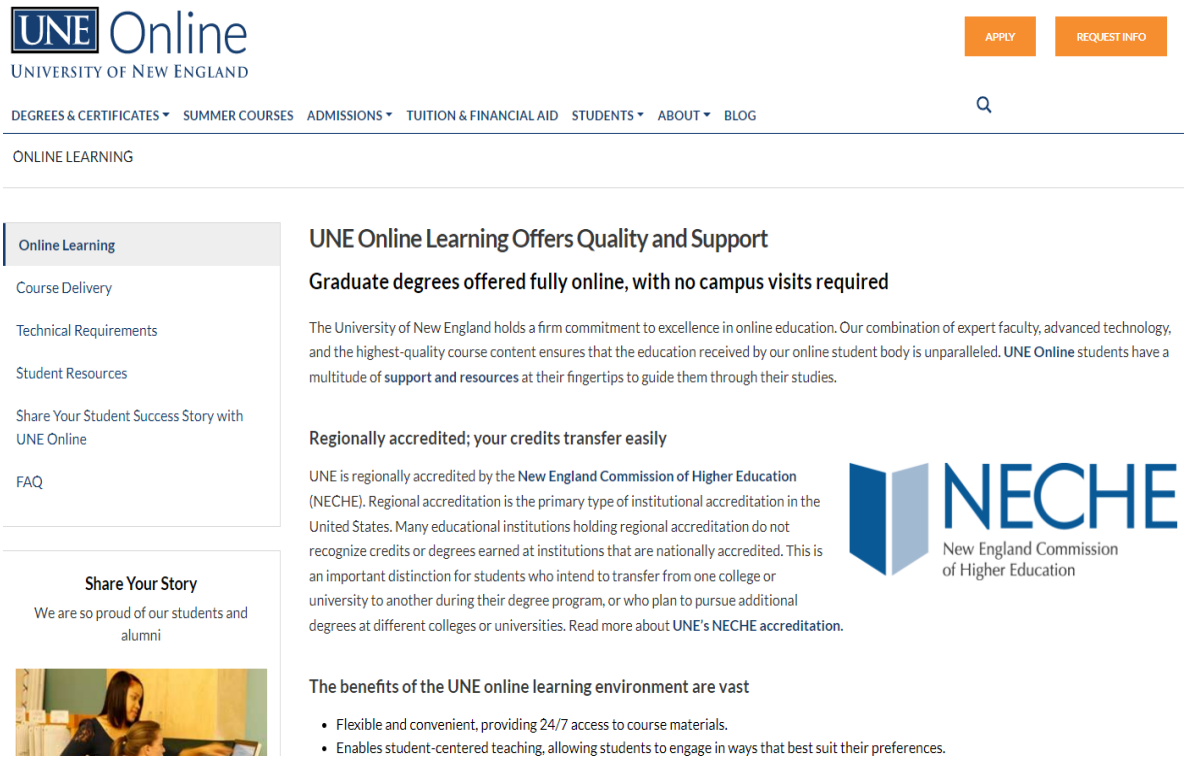
College Readiness

A key part of students' success is being prepared for the educational experience. Many community college students are nontraditional and/or returning to the classroom after a long absence. It is not always so clear that they are ready for higher education. Typically, college readiness assessments are geared toward academic testing to ensure proper placement within academic programs such as math, science, or language programs. However, assessments can also be utilized to assess one's readiness to participate in online education programs. These assessments are different in that they may examine a potential student’s technical competence with software programs and hardware applications which are relied upon in online educational programs.

The University of New England Online (University of New England, n.d.) offers a robust platform for online support which is centered on providing technical, academic, and administrative support to their students. As shown in Figure 9, the support is offered online through a series of portals and begins with potential students working with an enrollment counselor to ensure the program and format the prospective student is considering is a match with their interests, skills, and long-term career or educational goals.

Figure 9

UNE Online Portal Page



Note: The University of New England Online Portal Page is an example of an online student success platform. Adapted from Online learning, by University of New England and retrieved on April 5, 2022 (https://online.une.edu/online-learning/). In the public domain.

The VCCS developed its *CollegeAnywhereVA* online learning platform to support the varied educational needs of Virginians by offering online classes through its network of 23 community colleges (Virginia's Community Colleges, n.d.b). This platform supports searches for

the more than 10,000 online courses available across the network of community colleges in Virginia. To further aid students exploring online education, *CollegeAnywhereVA* provides a link to a short quiz provided by Thomas Nelson Community College (n.d.) which assesses whether or not online learning is appropriate given the answers provided related to motivation, time management and study habits, essential skills, learning style, computer skills, and access to technology.

Student Support Services

UNE-O (n.d.) students are all assigned Student Support Specialists upon enrollment. These Support Specialists offer guidance on a host of different topics ranging from technological support for hardware and software applications to course selection and planning. These specialists are all conveniently listed on the website along with their photos and contact information. Issues which go beyond the expertise of the support specialists are referred to other university officials to ensure student concerns and questions are adequately addressed.

Student support resources varied across institutions as did the availability of those resources. For example, the Colorado Community Colleges Online (n.d.) website offered telephonic assistance from student success staff Monday to Friday from 8:00 AM to 5:00 PM. For evenings and weekends, the site refers students to articles designed to assist students with frequently encountered problems or requests for assistance. Information technology assistance is provided 24 hours a day through a dedicated telephonic support center.

The California Community College System (CCCS, n.d.) provides a portal entitled *Preparing for Online Learning* which outlines a variety of resources available to both online students and those considering online learning. The resources available range from recommendations on information technology requirements to a review of online course expectations and dispelling myths about the online experience. Specifically, an overview is provided on the function and layout of their common course management system - Canvas. In this overview, users can watch video tutorials on various topics including how to update profiles,

communicate with peers and instructors, manage files, take online quizzes, submit assignments, and participate in discussions.

The CCCS (n.d.) provides how-to documents of best practices in attaining a positive online experience. One such best practice is the publication of CCCS' Online Health and Wellness Resources web portal which ensures students are supported beyond the virtual classroom and have included specific assistance to those experiencing financial and food insecurity along with mechanisms to engage mental health providers. This portal connects students to local resources based on the institution the student is attending. Resources are centered around the six dimensions of wellness: emotional, social, physical, academic, financial, and spiritual.

Online Student Readiness, Self-Efficacy, and Self-Regulated Learning

Self-efficacy and self-regulated learning are significant predictors of online student success. To help students with self-efficacy and self-regulated learning, the Northern Virginia Community College (NOVA, n.d.), offers online education through its NOVA Online platform. All incoming NOVA students are encouraged to participate in the new student orientation program known as *New2*NOVA (NOVA, n.d.). Online NOVA students are offered an additional section specific to learning online. The online orientation delves into what is online learning and the differences between online learning and on-campus or in-person learning. The online orientation goes further by exploring both the students and faculty roles in the online learning experience.

In addition to this online orientation, NOVA offers webinars designed to assist students with furthering their education online by providing key insights. Additionally, a practice online course is under development to allow prospective online students the opportunity to experience the format and structure of an online course before actually enrolling. This opportunity is a great way for prospective students to experience online learning before actually enrolling to ensure alignment with their preferences. NOVA's Student Success Planner provides students the

opportunity to plan their academic path. Additionally, NOVA provides online counselors who will review and discuss academic plans and goals (n.d.).

Online Student Success Initiatives

CCCS (n.d.) recognized the need for prospective students to have appropriate access to the technology needed to succeed in online learning environments. To assist prospective students in evaluating their technical readiness, the CCCS developed a computer readiness test. This test evaluates the user's computer to determine whether the student has the recommended operating system and browser along with the following software applications: Adobe PDF Reader, Flash/Shockwave, Oracle Java, Microsoft Silverlight, and Apple QuickTime (CCCS, n.d.a). Additionally, the CCCS provides a link to Speedtest.net to test the user's internet connection and speed to ensure appropriate connectivity to participate in online learning and communication platforms.

CCCS has initiated an Online Instructor Bootcamp (n.d.b) designed to assist instructors in their course development and delivery. Specifically, this bootcamp aims to teach instructors how to create engagement in their classrooms through the effective use of technology and creating content which connects with the learner. Best practices and tips were provided by experienced instructors with a wide variety of backgrounds in training and teaching. The bootcamp was available online and provided in an asynchronous format.

Chapter Synthesis

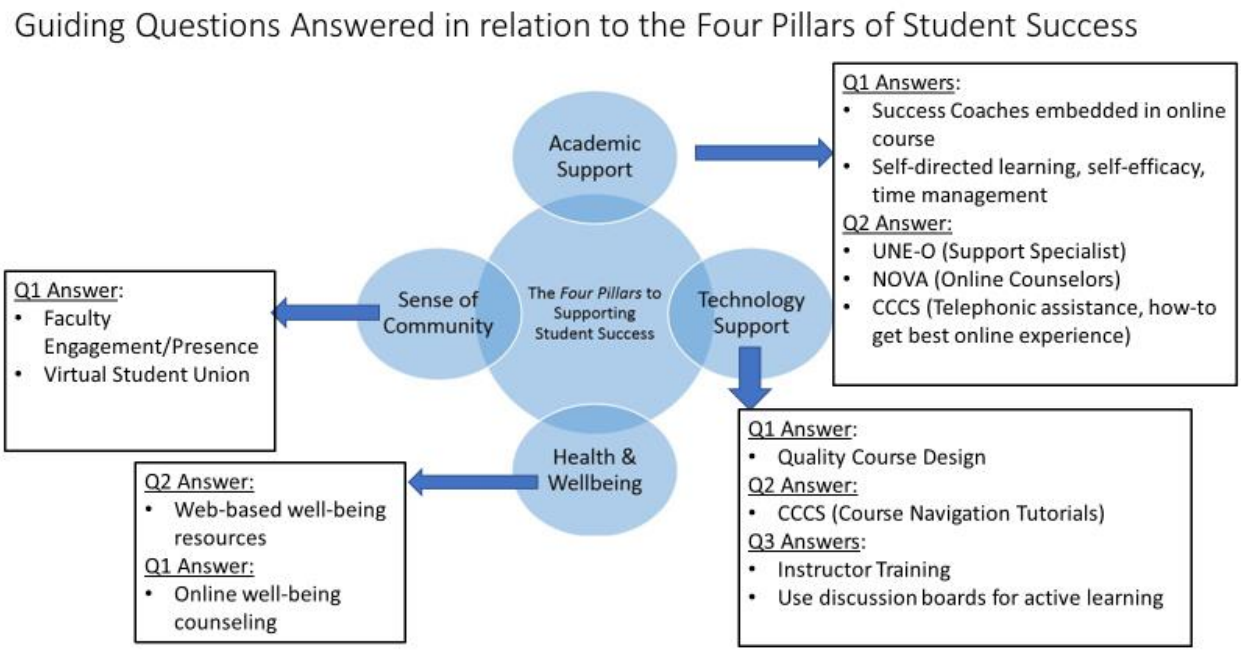
This chapter presented literature on best practices for online success, findings from our original data that relates to best practices, and descriptions of institutional web portals that display some of the best practices. In this final section, we synthesize these pieces of information to answer three out of the four guiding questions. These guiding questions were introduced in Chapters 1 and 2, but restated below.

1. What skills, strategies, and best practices are essential for student success in online learning programs that serve traditional and non-traditional student populations?
2. What are other community college systems doing to prepare students for success as online learners and what open resources exist that might be adopted or adapted by VCCS?
3. What components are necessary to make an online student services system accessible, easy to use, inviting, and effective?

The answers to the above guiding questions align well to Roddy et al. (2017) four pillars of student success. While the four pillars mentioned by Roddy et al. (2017) are largely about the institutional dimension of systems theory, Figure 10 below integrates findings relevant to the other dimensions and shows the relationship of each pillar to the answers we derived to the guiding questions of this project. In other words, systems theory emphasizes the nested nature of organizations and the dimensions are not mutually exclusive. Thus, Figure 10 offers an integrative, systems-level summary of how to support online students that is generated from the review of the literature and the analysis of original data. The answers to each question are elaborated in the following paragraphs.

Figure 10

Integrative, Systematic Model of Online Student Support



Note: This figure displays the guiding questions for the project in relation to the four pillars of the learning experience. The four pillars were adapted from "*Applying best practice online learning, teaching, and support to intensive online environments: An integrative review*," by C. Roddy, D. L. Amiet, J. Chung, C. Holt, L. Shaw, S. McKenzie, F. Garivaldis, J. M. Lodge, and M. E. Mundy, 2017, Frontiers in Education, 2 (https://doi.org/10.3389/feduc.2017.00059).

Question 1

In order to answer the first guiding question, an initial understanding of the needs of diverse student populations at VCCS colleges should be established. The needs of diverse populations can be understood by developing a readiness assessment instrument suggested by Khairuddin et al. (2020). After an initial understanding of the needs of online learners is determined, then VCCS can establish specific strategies to meet these needs.

This project did not have data on student needs directly from students to completely answer the first guiding question; however, data from the survey and focus groups indicate that

Success Coaches embedded in the online courses is an institutional support service that will help online students succeed by receiving the just-in-time assistance. The Success Coaches embedded in online courses is a specialized approach that addresses the challenges of adult learners who do not have the luxury of carving out time after class to reach out for assistance. Salim Muljana and Luo (2019) recommend best practices such as online course orientation (also suggested by Henson (2020)), tutoring services, and technological support which all can be triaged through the first point of contact being the Success Coach.

The individual skills that the online learner should possess is being self-directed, self-motivated and having time management skills so that they are able to participate in community building activities as well as commitment to the coursework. Time management skills also showed in the original data as the second most important best practice. As described by Yeh et al. (2019, p. 26), becoming “masters of their own learning processes” is an important skill for success. Institutions should incorporate training and awareness of these skills to ensure student success. Institutions also should place importance on sustaining the skills of self-efficacy throughout the student’s college career, because there are numerous factors that impede persistence (Zimmerman & Kulikowich, 2016).

Best practices for online student success do not always revolve around academic performance. Success Coaches are valuable in this regard; however, not necessarily for the overall health and well-being of the student. The original findings indicate that a Virtual Student Union that offers fun activities, book clubs, or yoga workshops can provide support for the whole student. A Virtual Student Union can also foster a sense of community. As noted by Pardino et al. (2018), students who are actively engaged with peers and faculty are more likely to succeed in their courses.

Successful strategies for online learning are partly dependent on the level of faculty engagement with the students. As shared in the findings, faculty engagement and presence were rated as the third most important factor for success. The findings from the original data

outlined a few best practices for faculty to consider as they interact with online learners: set clear expectations, offer open virtual office hours, embed tutorials in the course, intuitive navigation, faculty check-in daily, and faculty encourage students to ask questions. Institutions can consider these best practices as standards for a quality course design in the Quality Matters standards for all online courses.

Question 2

The second guiding question examines other national community colleges to understand their best practices for VCCS to potentially emulate. Similar to the first guiding question, we discuss readiness assessment first before offering examples of student support web portals. Based on the literature, assessment for online readiness is important for institutions to determine so that they understand what types of support services are needed and for which special student population. From the review of web portals, the University of New England Online begins the online student's journey with an enrollment counselor who assesses the student's career desires with the appropriate program. This is an important aspect for personalized support to both ensure the student is in the relevant program and could also determine the student's readiness for online learning. Thomas Nelson Community College assesses readiness based on answers to questions on motivation, time management and study habits, essential skills, learning style, computer skills, and access to technology.

The University of New England Online assigns student support specialists, most likely similar to Success Coaches, for every student enrolled. The student support specialists answer questions and concerns and if they are not able to answer the question then the student is routed to another area such as an Information Technology office. Similarly, NOVA also has online counselors to assist in academic planning and has an orientation program which highlights differences between online learning and on-campus classroom learning, and a test site for students to experience an online environment. From a technology support perspective, CCCS provides a course success tutorial in Canvas for students. This tutorial guides the

student to the best way to update profiles, communicate with peers and instructors, manage files, submit assignments, and other most often needed navigation and ease of use skills.

Question 3

The third guiding question leverages technology to enable the use of online student support services. As noted by Schrenk et al. (2021), a rise in OER has made virtual services possible as many of these resources are free and accessible on mobile devices. Technology support can also be interpreted as providing training for instructors because if instructors are trained to use online teaching technologies then the student experience is more impactful. Therefore, an answer to this question is to have a strategy for instructor training pertaining to the TPACK model outlined in the Roddy et al. (2017) article. Instructor training that brings together technology competency, pedagogy alignment to online learning, and content delivery for online success.

Another important aspect from the literature is to leverage the discussion boards for incorporating active learning and peer-to-peer engagement (Smith Budhai & Skipwith, 2017). To leverage the use of technology, instructors should be trained on ways to interact often and immediately to student's posts or questions. Instructor training was suggested by the original data findings to be mandatory accompanied by stipends.

Chapter IV: Implementation and Sustainability

In this chapter, the project team synthesize literatures to guide an implementation and sustainability plan for VCCS to ensure that the goal to provide support for online student learners is effective and continual. The literature below will view implementation and sustainability from a change management viewpoint providing insight on the complexities of organizing and implementing change from various perspectives (Ceulemans et al., 2015). The second part of this chapter includes analysis of data from the questionnaire and focus groups relevant to implementation and sustainability. The chapter then concludes with a summary that brings the literature and the original data together.

Consistent with systems theory, best practices alone will not solve the myriad of challenges institutions of higher learning face in the virtual learning environment. Specific to this project, the role of central entities within the community college system must be considered. The main goal of the project - improving online student success - is applied across all of VCCS which is composed of many colleges with different resources and needs. It is important to acknowledge that best practices research will not be new to some of the colleges - all of the colleges in the system are currently working to improve virtual instruction to meet the needs of their students. However, providing digestible best practice information in conjunction with a conversation of change management can help address how the VCCS system can facilitate and improve online student success within all of the colleges by capitalizing on the abundance of knowledge and resources already available within the system.

Review of the Literature on Sustainable Change

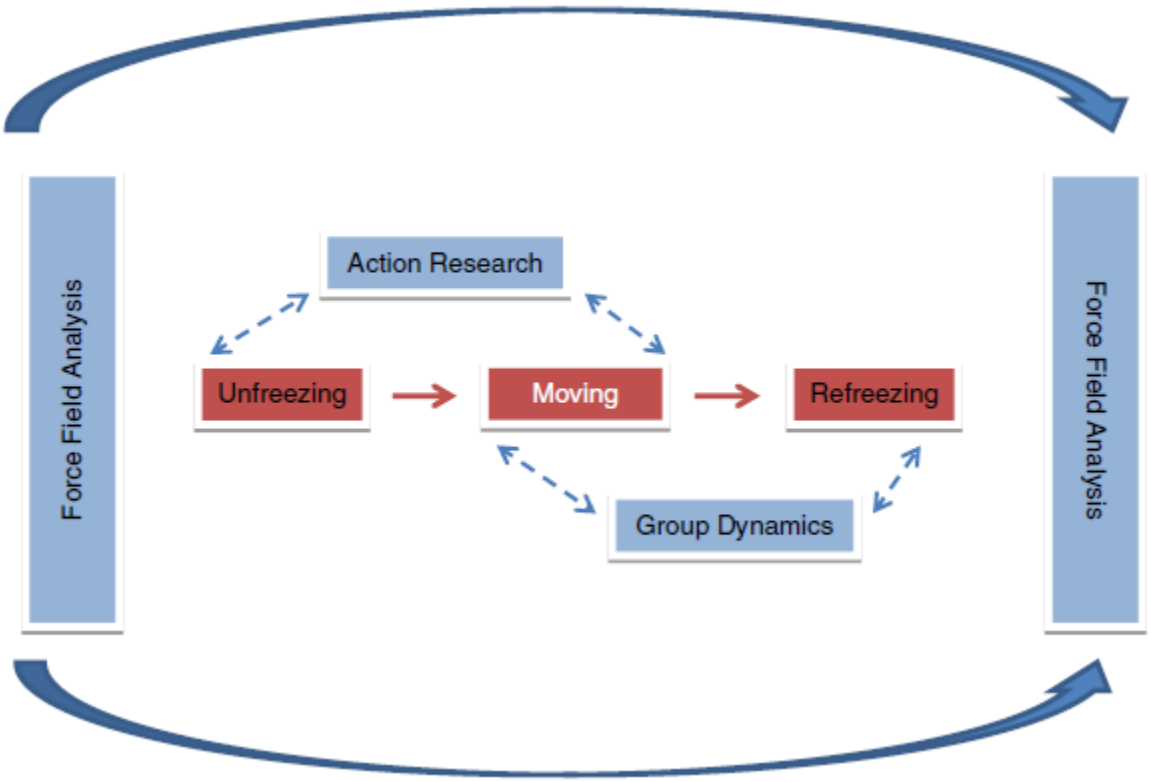
Planned Organizational Change Management

Implementation of change efforts or planned organizational change management (POCM) has been studied for decades with Lewin (1946a, 1946b, 1947, as cited in Rosenbaum et al., 2018) seen as the basis of modern research on the subject. In their article, Rosenbaum et al. (2018) explore the connections of major POCM research to Lewin’s base model to better

understand the development of different approaches to POCM in order to improve POCM research. This article serves as a good starting point to define planned organizational change management on a basic level and review the various approaches that are derived from Lewin's model. Figure 11 depicts Lewin's three-step model – unfreezing, moving to the next level, and freezing (Rosenbaum et al., 2018).

Figure 11

Lewin's Change Model of POCM



Note: The Lewin's Change Model of POCM displays the dynamics of planned organizational change management as cited and adapted from "*Planned organisational change management: Forward to the past? An exploratory literature review*," by D. Rosenbaum, E. More, and P. Steane, 2018, Journal of Organizational Change Management 31(2), 286–303, pg. 4 (https://doi.org/10.1108/JOCM-06-2015-0089).

As described by Rosenbaum (2018), *unfreezing* represents a recognition that in order to change from a current state to a future state there needs to be a desire to change. After which, the change is identified, implemented, and institutionalized in the *refreezing* step. Evidence-based action research should support the change management of *unfreezing* and implementation steps of *moving* to a desired state. Institutions should also ensure dynamics of group decision-making stays true to the goals for the change.

Lewin's three-step model has evolved into future POCM models by subsequent widely recognized research (Rosenbaum et al., 2018). More recent POCM research can be divided into four categories of concentration – type (context of phases including continuous and stepped), impetus (planned or emergent), origin (often top-down vs. bottom-up), and size/impact (concerned with identifying transformational an incremental elements) – which are not mutually exclusive on the change continuum (Rosenbaum et al., 2018). All of these elements should be considered when developing an organizational change management plan to fit the needs of an individual organization.

Emotions and Resistance to Change

In addition to these four elements, two other major considerations have emerged in POCM research: resistance to change and specifically the role individual emotions play in resistance to change. There has been a common assertion that resistance to change is a condition inherent in the failure of POCM which stems from Lewin's work that views resistance as a negative factor that requires intervention to overcome its effects on change management programs (Rosenbaum et al., 2018). From the attention to the various forms of resistance to change arose the second consideration – the role of individual emotions in change resistance.

It logically follows that the emotions of individuals are an important factor in resistance to organizational change. Ideally, any organizational change should consider the varied and diverse emotional response from all levels of stakeholders, including the staff and employees that will be carrying out essential functions in the change process. On a human level, change

inevitably produces different reactions in different people as it creates disturbances and forces people to reevaluate their current and future circumstances (Rosenbaum et al., 2018). For changes that require buy-in and cooperation of people – it is important to understand that in order to decide how to act, people subjectively interpret inputs of meaning, cause, and consequence to changes they experience, known as sensemaking, which influences openness or resistance to change (Steigenberger, 2015). As emotions are usually more powerful stimuli than cognitive thought, it is widely accepted that they influence decision making, information processing, and risk assessment, including within change management (Steigenberger, 2015).

In terms of planned organizational change management, individual emotions often must be lumped into group dynamics called collective sensemaking as each individual reaction to change cannot necessarily be accommodated. Collective sensemaking, which develops in dialogue and discourse leads to the process of collective sense giving which is the conscious effort to influence the sensemaking of others (Steigenberger, 2015). The four main emotions that leaders of planned organizational change should be aware of is fear (tendency to flee, hide, or avoid), anger (tendency to aggression and risk-taking), anxiety (triggers risk aversion and uncertainty), and hope (motivates action toward future state) which can occur simultaneously in individuals and groups (Steigenberger, 2015).

By understanding how the four main emotions in response to change influence people and groups to act and react, leaders can also use sense giving to manage resistance in the change implementation process as an alternative to implementation by formal power (Steigenberger, 2015). Active management of stakeholder emotions through active expectation management (Hubbard & Purcell, 2001; Monin et al., 2013, as cited in Steigenberger, 2015), transformational leadership (Hoffman et al., 2011, as cited in Steigenberger, 2015) and meaning making (Sonenshein & Dholakia, 2012, as cited in Steigenberger, 2015) can help unify diverse perspectives into a common interpretation of reality and effort toward a goal (Hubbard & Purcell, 2001, as cited in Steigenberger, 2015).

Management of Change Initiatives

Hornstein (2015) encourages looking at projects as organizational change initiatives, emphasizing the need to integrate organizational change methodologies with social/psychological perspectives in project implementation. As this project is concerned with the sustainable implementation of best practices that seeks to change the way students receive and use services in order to increase student success, it is useful to explore the connections between project management and organizational change, particularly in a framework that acknowledges a very human component. Project success has been traditionally understood as technical, activity-oriented, and control-oriented in the focus on project execution and delivery; however, there has been an increased awareness that people are just as important as processes and systems (Hornstein, 2015). Just as the previous section emphasized the power that human emotion has in change initiatives, particularly in reference to resistance to change, the human factor is just as important in the execution of procedures and processes.

The implementation of a project or organizational change requires leaders to not only break down the plan into comprehensive parts, but also assign responsibility and relay expectations. In a control-centered change, expectations and rules are given and expected to be carried out accordingly. However, as leaders are becoming more aware of alternate leadership styles in order to improve success, different approaches to role creation have emerged. There is an increased push to move away from the control agenda and explore the benefits of stepping outside of prescribed roles, applying the skills of individuals to specific needs, encouraging engagement, input, and involvement from the bottom-up, as well as creating designated positions to organizational change management (Hornstein, 2015). Overall, there is a growing consensus that planned organizational change projects must address both the technical/procedural aspects and the social/psychological aspects of the desired change (Hornstein, 2015).

Leadership Skills for Change

Leadership is crucial to the success of organizational changes and is not necessarily dependent on technical knowledge of the procedures and processes that will be implemented. Leadership through change is more concerned with how to facilitate teamwork toward a particular goal. Leaders through change need to be able to motivate, garner commitment, give direction, create a purpose, inform the way, destination, and meaning of tasks/actions, and balance the individual with the collective to promote team engagement toward a common purpose (Gonçalves & Campos, 2018).

Gonçalves and Campos (2018) provide a KAASE model of competencies that leaders need to be effective: K – Knowledge (technical learning acquired through life, formal education, and other sources of learning), A – Ability (know-how and capacity to carry out a certain task), A – Attitude (our behaviors in daily life), S – Sense (ability to identify a sense of purpose or why to an event or action), and E – Energy (capacity to inspire and promote enthusiasm within a team). With this model in mind, eight essential competencies for change leaders are described including the assumption of any technical knowledge required for the task:

- sensitivity to human factors and astuteness to unveil them; empathetic attitude;
- capacity to facilitate, inspire, and encourage team effort;
- focus on results, goals and productivity;
- ability to plan and negotiate – strategic vision;
- ability to manage conflicts, crises, and opportunities;
- creativity, inquisitiveness, boldness, and a willingness to break paradigms;
- effectiveness as a communicator; a good listener; and
- transparency, credibility, and integrity (Gonçalves & Campos, 2018).

After the previous discussion of the importance of understanding how the project team contextualized a planned organizational change, individual emotions in resistance to change, emerging ideas in moving past traditional control-centered methods of project management and

organizational change, and essential competencies of leaders of change, it is possible to begin contemplating strategic steps to plan creation and implementation. Once type, impetus, origin, and size/impact of the change can be agreed upon and defined, it is possible to begin to identify and strategically mitigate resistance to the proposed changes, which will most likely require field research and surveys to create a solid understanding of the fears, concerns, needs, and hopes of all stakeholders. In order to successfully manage the response to the change, and practice adaptability as the plans evolve to accommodate various needs or roadblocks, leadership versed in organizational change and dedicated to team success is crucial.

Change Management and VCCS

The current project designed to improve student success across the VCCS system is a change initiative that involves various levels of support within a complex system. From the initial phases of project consideration, several concerns needed to be addressed in the interests of sustainability. One of the primary change management concerns is the number of community colleges affected by the implementation of a common plan for online student success. With 23 colleges spread across 40 campuses, there are a large number of individual organizations that need to buy into and cooperate with the proposed plan. It can be assumed that differing organizations will have different perspectives, concerns, strengths, and weaknesses in relation to the implementation of a common student success plan. Although most will likely agree that it will benefit students, successful implementation is going to require intentional collaboration and strategies to address needs at various levels.

There are tools available to leaders that will encourage collaboration and buy in for change. One such tool is the Organizational Culture Assessment Instrument (OCAI) (Bremer, n.d.; Cameron & Quinn, 2006). This tool is typically used to understand current organizational culture to better facilitate a move toward a desired organizational culture - in this context, one that is adaptable to change. However, the principle can arguably be applied in many ways. The instrument consists of a series of questions that individuals fill out anonymously that categorize

the current organizational culture. There is a second series of questions that then identify the overall desired culture based on participant responses. It could be helpful to similarly poll stakeholders across the VCCS organization about their current and desired state of online learning and student success in order to have a more complete understanding of the present environment to smooth the move toward a future that serves everyone. Cooperation among stakeholders is more likely when decision making is inclusive rather than mandated by outside or higher-level sources (Hornstein, 2015).

Collaboration within VCCS

Collaboration is embedded into an organization's culture. To serve everyone, institutions like VCCS must consider opportunities for collaboration across institutions to strengthen learning by increasing system support through the sharing of knowledge amongst faculty from different institutions (Caniglia et al., 2017). This option to collaborate can allow institutions the opportunity to share resources to reach goals. Since VCCS has a goal of increasing support for online student success, collaborating across institutions amongst faculty and administrators will allow the sharing of strategies and resources that will strengthen the ability of VCCS to provide support and resources to colleges that may not have adequate support services for online learners. The sharing of resources or strategies across several institutions will allow the college system to ensure an equitable distribution of resources.

In addition, such collaboration will allow VCCS to create an environment where faculty consider program quality and offerings as an entity, and not from an individual standpoint (Newell & Bain, 2018). This stance in viewing programming from a system-wide standpoint will allow VCCS to develop a space where faculty can support, share resources, in a spirit of collaboration to increase online student success, especially for smaller colleges who are key stakeholders in the advancement of online learning at VCCS.

In the next section, findings are shared regarding data collection from institutional stakeholders that display inequities in the sharing of resources. In addition, the data point to

other considerations for VCCS as they manage change towards a system-wide approach to supporting online student success.

Findings Related to Sustainable Change from the Original Data

Survey respondents were asked *who oversees online learning*; and their responses generated varied answers such as Deans of the academic units, central units overseeing asynchronous learning only, administrative Dean of Distance Learning, Coordinator of Distance Learning, or Director of Student Support. Regardless of who or what their position title is, “the communication lines are clear between faculty and the person in charge of online” as mentioned by a survey respondent. Although internal communication and collaboration exists within a college, the data show a strong need for system-wide collaboration as outlined in the following sections.

Institutional Collaboration

A survey question asked whether they *believe collaboration among VCCS institutions would benefit your institution’s online program*, the responses were positive with 11 out of 15 respondents answering “Yes” to this question. One respondent did not answer this question. Three respondents answered “No” to the question on collaboration; however, after a deeper analysis of these negative responses we conclude that these institutions seem to have strong resources already and therefore collaboration will not benefit their own institution. During a focus group interview, collaboration was not supported for faculty development and training. Several participants said that “each college knows their faculty and understands the specific needs therefore standardizing faculty development is insane”.

Collaboration and sharing of human resources were suggested by focus group participants from larger VCCS institutions. They understand that “smaller colleges do not have instructional designers; therefore, can the larger colleges share these experts with their sister colleges”. A participant commented that the greatest impact of collaboration may not stem from VCCS or OVN, rather the most impact would be gained at the “individual college levels so that

the larger better resourced college can help smaller colleges". Some participants were confused as to "why the individual colleges do not share and why there is not transparency of projects so that duplication of effort is reduced". Focus group participants were disappointed that there is too much "competitiveness between colleges" which could be an impediment to reaching the strategic plan's goals.

A focus group participant believed that "VCCS should offer centralized services such as Writing Centers, peer mentors, online tutors, or technology support". To be more efficient, certain common services should be centralized so that "college-specific services such as food insecurities and housing problems can be resourced effectively at the local levels", strongly stated by a participant.

Another often mentioned centrally coordinated service was related to course design. A focus group participant stated, "the amount of effort that it takes to design a course is usually underestimated and underappreciated by upper-level administrators - it takes a lot of time and effort and your heart and soul". Some VCCS colleges have only one course designer and other colleges have multiple, however still not enough to design a good quality course. Therefore, it was suggested that "course design could be a central VCCS resource". If there is anything that can be done "to spread instructional designers, Canvas designers throughout the system" would be beneficial. Another challenge to course design is the lack of standardization. Oftentimes, asynchronous courses are not standardized in Canvas. A focus group participant said, "this makes it difficult for students to navigate courses that look different". If VCCS can do anything to help centrally standardize course design it may enhance student success and relieve "faculty anxiety" when they are required to design a course due to the lack of resources.

Faculty Collaboration

The focus group participants elaborated on collaboration in a positive manner. They believe that designing a "Canvas template so that every college can use it to communicate online success resources would be beneficial from both an awareness perspective and

encouraging faculty-student engagement". A participant emphasized that "collaboration is not about me or us, but about helping students". If everyone can get past the concept of self-serving, "then in the end good things will happen".

VCCS and OVN can assist in faculty collaboration by setting up a "Canvas course specifically for faculty collaboration". It would be a space where faculty share best practices, and tips and tricks on the technology. However, a participant stressed that "faculty's active participation" and sharing tips and tricks is important.

Focus group participants suggested that VCCS and OVN create a curated platform for students to connect to peers and instructors. A platform that has "some curricular and co-curricular design elements to be specific enough so that it is meaningful for particular groups such as LGTBQ or Pregnant and Parenting groups''. Meaningful groups and curated discussion are worthwhile options for students "...instead of leaving a platform open" and hope that people partake.

Chapter Synthesis

This chapter presented literature and data on change management, leadership skills, and collaboration practices for VCCS. In this final section, we synthesize the literature review with the findings from original data related to the culture of collaboration within VCCS. The summary will answer the fourth and final guiding question:

4. How can educational leadership strategies encourage collaboration and buy-in from various stakeholders with diverse needs?

Before addressing this guiding question, it is important to understand the cultural acceptance of VCCS for engaging in collective change. Applying the first step in Lewin's three-step model described by Rosenbaum et al. (2018), the *unfreeze* seems to exist with data showing a positive attitude toward some big change that needs to occur. Implementing the best practices described in Chapter 3 requires a collaborative approach mostly garnered by the central VCCS office. A majority of respondents from the survey (11 out of 15 or 73%) believe

that colleges could benefit from collaboration regarding online student success. Furthermore, most believe that VCCS should provide a platform for faculty and staff to engage in sharing best practices and technology tips in the Canvas tool. There seems to be a positive attitude toward collaboration.

Even with the positivity towards collaboration, the data shares a glimpse of emotional resistance to change. Colleges perceive faculty development and training as a local-level responsibility rather than a centralized service. If VCCS decides to pursue centralized faculty development and training, then group dynamics may have to be managed during the *moving* step in Lewin's model. Resistance to centralizing faculty development and training was expressed fairly emotionally and could reflect views of other colleges within the system who were not part of the data.

Aside from faculty development and training, it is clear from the data that certain student support services should be centralized for a couple of main reasons. First, the lack of human resources in smaller colleges. Second, there is a need for standardizing course design. Larger institutions who took part in the data exhibited collective sense giving as they were concerned about smaller colleges not able to implement recommended best practices for online student success. Larger institutions' value for collective success means all students succeeded in the system shows a systems theory approach. VCCS can benefit from larger institutions leading a coordinated effort supported by the central office.

A project that has a team of change agents who are committed to inclusive practices by bringing in smaller colleges as active participants in the change showcases a KAASE component from Gonçalves and Campos (2018) - capacity to facilitate, inspire, and encourage team effort. Another KAASE component seen in the data - focus on results, goals and productivity - was expressed through respondents understanding change management reduces the competitive nature existing among colleges because the outcome of a change initiative is about all students succeeding online and not about individual college accolades.

In summary, a positive attitude exists within VCCS for collaborative change initiatives. It would be wise for VCCS to pay attention to change management strategies related to buy-in and cooperation of people as VCCS is large with diverse perspectives. The plan for a governance committee with representatives from each college can play an important role in sensemaking of particular initiatives and relay it back to their college in a way that is influential and garners support for the initiative.

Chapter V: Recommendations and Conclusion

Everything should be made as simple as possible, but not simpler.

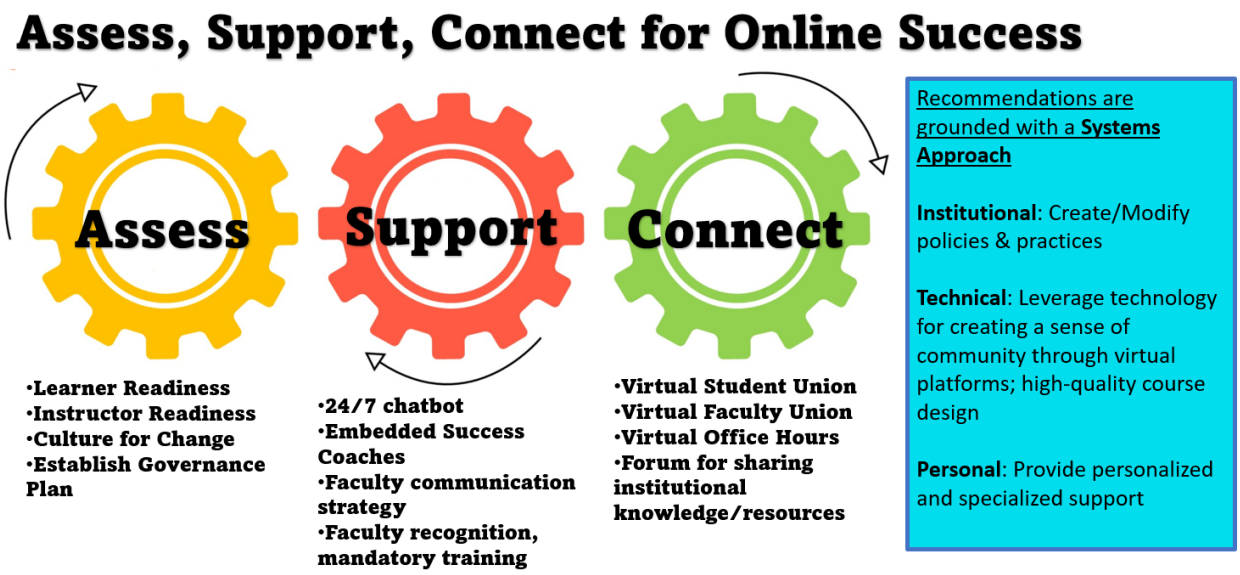
- Albert Einstein (Forbes, 2022)

This chapter attempts to collate the information from this project within the context of a complex interconnected system of colleges and an ever-changing online teaching and learning setting. The complex environment of online learning and the fairly quick implementation of a hybrid setting has forced higher education institutions to take a step back and think about a sustainable implementation for a new way of teaching and learning. Unraveling the complexity of a large organization and external forces such as the quick switch due to COVID-19 is a challenging endeavor to simplify into a few recommendations. These recommendations are offered from the perspective of a sustainable implementation plan that outlines clear steps and moves VCCS toward long-term success. A quick reference guide of these recommendations in clear stepwise action items is in Appendix A.

Based on the literature review, exploration of institutional web portals, and original data from this project, an actionable implementation plan that is grounded by the systems theory framework and its three dimensions adapted to this project. Furthermore, the implementation plan outlines three important concepts revealed to the project team upon synthesizing the literature and collected data: importance of assessment of online readiness, supporting the whole student through academic and health/well-being services, and connecting students, faculty, and administrators to instill a collective approach to online success. The combination of the systems theory and the three important components is depicted in Figure 12. The figure intentionally uses gears as a metaphor to suggest that all three areas work together as part of a whole system of student support.

Figure 12

Systems Theory, Assess, Support, and Connect for Online Learning Success



The *Assess* component strengthens an implementation plan by continually assessing the readiness of learners and the institution's preparedness for adapting to the needs of diverse learners. The *Support* component is dependent on the knowledge learned from the assessment results that can inform the most needed academic and well-being student support as well as any culture and climate change initiatives for faculty and staff to successfully deliver the student supports. The *Connect* component is geared toward implementing the plan with intentional collaboration at the forefront of each step. The following sections provide greater detail on Assess, Support, and Connect.

Recommendation 1a: Assess Culture for Change

Recommendation 1a, assessing organizational culture readiness for change, is the crucial first step to implementing any change initiative. It will only be through intentional and honest self-assessment that an organization will be able to identify strengths and areas of growth that will produce meaningful and effective change efforts. It is recommended that an institutional practice to assess the organizational culture for accepting a change initiative such

as this one for improving online learning student outcomes and experiences can be done by using the OCAI culture assessment tool delivered to administrators, faculty, and staff who support online learning at each of the 23 colleges in the VCCS. The OCAI (See Appendix G) will assist in understanding the current mindset of key stakeholders on where the organization is now and the desired future state of online learning at VCCS. The cultural shift required to achieve a future state can inform the level of effort needed to fill the gap. For example, does VCCS need greater individuality or central resources for change to be successful? Do the individual colleges value flexibility and discretion vs. stability and control or internal vs external focus as per Cameron and Quinn's (2006) four quadrant analysis.

A second method to assess the readiness for change is to understand the resistance level for change so that organizations limit the debilitating effects of resistance (Rosenbaum et al., 2018). It is also recommended that VCCS assess the readiness of change agents at the colleges. Assessment of these types can be determined from surveys to administrators and faculty who interact with online teaching or online students. Leadership development activities and motivational exercises can be targeted based on the results of the survey.

Recommendation 1b: Assess Student Readiness

Encompassing the institutional dimension, VCCS could conduct a central readiness assessment for online learners. It is recommended that VCCS use some of the Khairuddin et al. (2020) measures of readiness to gauge the availability of technology, level of proficiency in use of technology, and self-confidence and intrinsic skills needed for self-directed learning. It is also recommended that VCCS incorporate items from Joosten and Cusatis (2020) socialization measures of readiness to interact with student peers and instructors. Appendix F outlines a few question items from Khairuddin et al. (2020) and Joosten and Cusatis (2020) instruments as a guide to develop VCCS's readiness assessment tools.

Self-efficacy is equally important to assess students' readiness for online learning success. Therefore, we recommend incorporating Trespalacios et al. (2021) five dimensions of

online learning self-efficacy in the VCCS's readiness assessment: 1) ability to complete an online course, 2) ability to interact socially with classmates, 3) ability to navigate tools in Course Management System (CMS), 4) ability to interact with instructors online, 5) ability to interact academically with peers.

The literature outlined several critical factors for effective online teaching; however, it is recommended for VCCS that a workload investment be made for preparing instructors to design quality courses and teaching practices are specialized for online courses and not simply duplicated with the same practices as those used for face-to-face courses. Workload investment must be given to staff and instructional designers for supporting faculty course development and training programs. All workload investments should be appropriately recognized and rewarded to both motivate and continue to sustain the growth of online learning at VCCS.

Recommendation 1c: Establish Governance

Based on the outcomes of the assessment of online learner readiness, VCCS colleges will require an action plan to address the readiness gaps. This action plan could consist of Henson's (2020) suggestion of a readiness course that online students partake in either as a requirement or strongly encouraged. Decisions on how to proceed and which actions to implement should be made in a coordinated manner. It is recommended that a coordinated plan be done via a governance structure that consists of representatives from each of the VCCS colleges. The governance structure which could be in the form of a committee facilitated by VCCS central office, would be responsible for steering initiatives in an equitable manner. Smaller colleges would have a voice and larger colleges can share practices that work well. For example, if a decided action item is to embed Success Coaches in all or some online courses, then through approval of a governance committee, this could become a standardized process and equitable resources distributed among all colleges.

Recommendation 2a: Support for the Online Learner

Along the lines of a personal dimension, supporting students' diverse needs is critical for the success of all students. Each student's individualized set of support structures are addressed by supporting their technology needs and health and well-being needs. For VCCS to support the success of online learners, it is recommended that VCCS implement Roddy et al.'s (2017) two pillars of student success to support the whole student - online friendly academic support and health/well-being intentional services. These services should be delivered centrally by VCCS instead of individually and differently by each college. The reason for this is to ensure consistent and quality services for every online student in every VCCS college.

The support services that are most needed, as mentioned by the findings, are a 24/7 chatbot function and Success Coaches embedded in online courses. The 24/7 chatbot, which may already exist as a Libraries function, accommodates the adult learner's competing priorities to allow receiving support after regular work hours. Success Coaches who are always available in the online course are convenient for students instead of carving out time after class to reach out to a Success Coach. Both of these academic support recommendations are centered around support available at the time it is needed.

The interface for an online friendly academic support platform can be modeled from a few reviewed institutional websites. California's Community College System offers a robust platform within their *Preparing for Online Learning* portal which includes comprehensive guidance on a variety of topics relevant to both current students and those considering pursuing their educational goals online. Within the VCCS, the Northern Virginia Community College implemented an innovative orientation program geared toward online learners housed within their *New2NOVA* website. Both websites are clear and easy to navigate to specific topics of interest.

Recommendation 2b: Support Faculty

This recommendation considers support for faculty from a personal dimension and with change management concepts. Faculty receiving one more work commitment on an already over and above array of commitments is overwhelming and can cause resistance to change. Therefore, it is recommended that the content of change management communications be thoughtful and recognize existing stress provoking emotions. The communication strategies should also invoke sense giving wherein the messages convey a clear outcome and the role of the faculty as influencers of the outcome. Faculty have the same motivations as administrators on ensuring student success therefore, the communications are recommended to engage faculty in a participatory yet influential role in the change while understanding the external factors of stress.

This recommendation takes into account the human aspect to a change initiative, and to compensate in some way for faculty time commitment. It is recommended that faculty be awarded both in honorific and monetary awards for their participation in course development training programs. A monetary award would provide faculty with an incentive for completing the training. Being aware of budgetary restraints, another option for compensation is to provide additional professional development funding to faculty who complete training. Professional development will provide funding for faculty to purchase materials or to increase their knowledge by attending a specialized organizational conference. Attending a conference would provide the opportunity for faculty to increase their network and knowledge by connecting with peers from other institutions.

In addition, to increase knowledge, faculty should undergo mandatory training courses. The course will prepare faculty to provide support, build a strong infrastructure, navigate technology, identify ways to engage students, and address students' needs (Hamann et al., 2020). The course would ensure that faculty can be prepared to assess their personal readiness in teaching online, and be prepared to help students navigate the experience. Such a course

would provide tools to increase the instructor's ability to effectively deliver the course providing strategies to motivate and support learners (Gray et al., 2016). This course would aid as a foundational course for faculty, and in the future faculty would have the opportunity to enroll in quality design courses, and all courses would count toward the monetary award incentive.

Recommendation 3: Create a Sense of Community

Technology is the key to virtual learning and forming connections in an online environment. In the technical dimension, it is recommended that VCCS help with the formation of virtual communities amongst faculty and students utilizing already existing LMS platforms that will allow the sharing of resources and forming of social and academic relationships. These communities will allow online faculty to share resources with one another, and collectively support each other across the VCCS system. While the student community will allow students the opportunity to connect with their peers, find support groups, chat with faculty or administrators, and form a connection to the college.

To create this connection, the project team recommends using Canvas to create virtual communities for students and faculty to engage, connect and collaborate in the following ways:

1. Connect students to their peers. - Virtual Student Union that delivers fun activities, yoga classes for the overall well-being and feeling of connectedness to the institution. These virtual communities could be led by student organizations or Student Affairs to provide virtual activities for online learners. Research shows that students in online communities thrive better in environments that allow them to connect with students and faculty members (Dhawan, 2020; Parkes et al., 2015; Salim Muljana & Luo, 2019). Any lack of community creates barriers for students in online environments (Dhawan, 2020; Song et al., 2004). Providing an opportunity for online learners to connect with student organizations and to the campus community will increase the ability of a student to feel connected to the college.

2. Connect faculty-to-faculty through a Virtual Faculty Union wherein faculty share best practices, technology tips, and tricks. This virtual space would allow faculty to share strategies and practices, and to support each other as online instructors. In institutions that do not have an instructional designer, a Virtual Faculty Union would provide opportunities for instructional designers from other institutions to share tips with faculty needing support with developing an online course. The virtual union would create a collaborative system of support and the sharing of resources for online faculty across VCCS.
3. Connect students-to-faculty through a standard VCCS policy for virtual office hours as a requirement for all online courses. Standard office hours would allow students the opportunity to touch base with faculty to ask questions or receive support. Faculty connecting with students creates a sense of community and breaks down the psychological barrier of students and professors, and is effective in increasing student participation (Song et al., 2004; Martin & Bolliger, 2018). Students are more apt to participate, connect, and be successful in a course if the faculty member is a supportive teacher.

The sense of community among students and faculty in the respective virtual communities will in return provide students with support to be prepared for success, and faculty with the tools to support student success in online learning.

Conclusion

The importance of this project's recommendations directly relates to the call for action in VCCS's strategic plan - *Opportunity 2027*. Implementing flexible hybrid course delivery models, quality-certified online courses to move students quickly through their programs (Virginia's Community Colleges, 2021) is a key tactical strategy; however, our project recommendations elevate this strategy to a higher level of ensuring success of the overall online policy infrastructure. The success of an overall online policy infrastructure is dependent on

implementing these recommendations with a system's theory approach involving three dimensions: institutional, technical, and personal. Furthermore, this project recommends a path to achieve excellence for online teaching and learning through a focus on collective impact as the system of colleges implement best practices to assess, support, and connect faculty, students, and staff.

The best practices implemented from an institutional dimension will result in policies and standards to sustain the quality of course delivery for all VCCS colleges and therefore result in an equitable online experience for all instructors and learners. From a technical dimension, it is recommended for VCCS to leverage technology to create spaces for community building, 24/7 student support, online comprehension training, etc. The personal dimension ties all best practices to be delivered in a personalized and specialized manner so that diverse learners are supported academically and personally as a whole student.

The capstone project team members have practical experience with higher education strategic initiatives whether it is from the planning stages or actual execution of the strategies. Either way, it must be recognized that bringing together units from across the system who serve different student needs can be challenging when attempting to implement consistent practices. For example, the best practice on quality course design can require many different quality measures depending on the course modality and content. However, the project team is confident that there will be a set of quality standards that should be implemented across all VCCS colleges so that all graduates of VCCS have the same high-quality online experience.

Future research and studies should attempt to understand the emotional aspects to change initiatives discussed in Chapter 4. A survey and focus group interviews can be utilized to understand the fears, concerns, needs, and hopes of all stakeholders. The results of the study can be used to inform the leadership development plan for successfully implementing a change initiative. The leadership development plan is important for leaders at all levels to be well versed in organizational change.

A second future research suggestion is to incorporate the student voice into the triangulation process of bringing together the literature and web portals. The VCCS student's ability to interact with online services is dependent on their own preparedness for online courses and the instructor's presence in understanding the gaps and remedying it by directing the student to support services. Incorporating the student voice into the findings is important to refine the recommendations from our project.

In closing, the project team, who themselves are enrolled in a fully online program, understand self-efficacy and self-regulated learning is important for successful completion of the coursework. Being disciplined and committed to many hours of self-directed learning has been a way of life for the project team. The project team also realizes that being good communicators through writing and willing to "speak up" if problems arise are also necessary for success. Mastering all of these online readiness skills was crucial to the team's collective success. As with any teamwork experience, it is important it is to build a community of supportive peers, instructors, and staff to guide us to the finish line. The combination of online readiness skills, student and instructor engagement, and a sense of community contributed to a rewarding experience within our educational program. The project team will remain friends and colleagues with each other and have institutional commitment to VCU, due to this positive online learning experience. Therefore, the project team sincerely wishes VCCS a successful implementation of these recommendations because it matters - every VCCS online student should have an excellent and life-long memorable college experience.

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Appendix A

Implementation Guide - Quick Reference

May 2022

An Implementation Quick Reference Guide

Presented to:
Virginia Community College System

Presented by:
Lucy Hudson
Daniel Lindstrom
Monal Patel
Rosa Ponton

An Implementation Quick Reference Guide

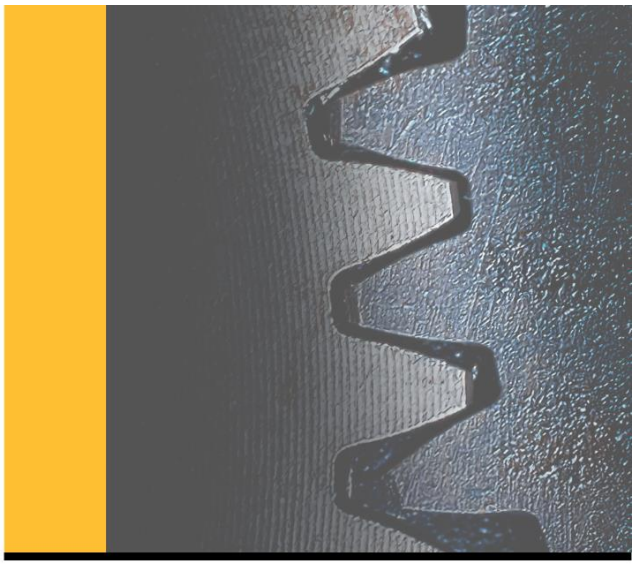


Table of Contents

IIMPLEMENTATION GUIDE

What is Collaborative Systems Change for Online Learning for VCCS?

The Collaborative Systems Change for Online Learning for VCCS is a plan to implement recommendations to enhance support for online learners based on best practices gathered from extensive research.

Why is this important?

In higher education, change is evident and change is necessary for growth. Although change is necessary, leaders must be strategic and collaborate across systems to ensure that resources are equitably shared and the actions to implement change are instituted effectively.

The following guide will provide applicable steps to implement the best practices and recommendations provided by the Virginia Commonwealth University, Educational Leadership Capstone Project Team.

Let's Move Strategically!

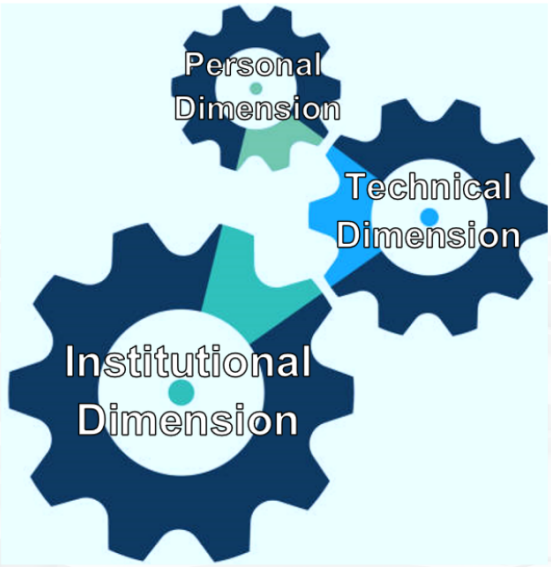
Theoretical Framework: Systems Theory

The foundations of systems thinking is knowing that a system is more than the sum of its parts, information is key to understanding the relationship between the parts, and feedback loops are causal connections to return the system to equilibrium (Gillies, 2010, p. 33).

Why Systems Theory?

The framework allowed for the recognition that many factors must be considered in understanding and evaluating student success within online environments.

Acknowledging these complexities is important as VCCS colleges and OVN partners work as a system to support online students. For this project, we identified three interconnected dimensions: Institutional, Technical, and Personal.



The institutional dimension may include policies, norms, and existing practices that are designed to help students succeed in all course modalities. The technical dimension pertains to the technical ability to teach and learn online and requires a certain level of competence in the use of various technologies. The personal dimension culminates in what essentially matters the most - the personal factors which may affect students and influence their ability to succeed in online learning environments.

Literature Review - Best Practices for Online Learning

To fully realize the potential of online learning, aspects of traditional learning need to be re-imagined rather than replicated.

Online student success is driven by a multitude of factors that connect and intersect within the three dimensions identified as part of this study's theoretical framework: institutional, technical, and personal. In the context of the literature review, the institutional dimension is concerned with four pillars of student success (academic support, technology support, health and well-being support, and sense of community (Roddy et al., 2017)) as well as assessing student readiness. Institutions are responsible for the systems, resources, support, and culture necessary for faculty and students to be successful online.

The technical dimension of online student success is focused on instructional design, course development, and the undeniable impact that instructors have on online student success. There are inherent differences in online learning that require faculty training and development to ensure certain competencies are met. The overall goal is to increase student engagement in online courses through intentional course design and delivery which would ideally include active and experiential learning.

The personal dimension focuses on the student, their role and responsibility as online learners, factors that impact their academic performance, and predictors of online success. Assessing online student readiness is reflected in this dimension as well, highlighting the importance of understanding student competencies before online instruction begins. This allows instructors to adequately plan for and support students as they build self-efficacy and self-regulation skills required to be successful in online learning environments.

Literature Review - Sustainable Change

Planned organizational change projects must address both the technical/procedural aspects and the social/psychological aspects of the desired change (Hornstein, 2015).

Consistent with systems theory, best practices alone will not solve the myriad of challenges institutions of higher learning face in the virtual learning environment. The main goal of the project - improving online student success - is applied across all of VCCS which is composed of many colleges with different resources and needs. However, providing digestible best practice information in conjunction with a conversation of change management can help address how the VCCS system can facilitate and improve online student success within all of the colleges by capitalizing on the abundance of knowledge and resources already available within the system.

In Lewin's three-step model of change, *unfreezing* represents a recognition that in order to change from a current state to a future state there needs to be a desire to change. Evidence-based action research should support the change management of *unfreezing* and implementation steps of *moving* to the desired state. After which, the change is identified, implemented, and institutionalized in the *refreezing* step. It is particularly important to emphasize the need for data and evidence to plan desired change.

Still, the emotions of individuals are an important factor in resistance to organizational change. Ideally, any organizational change should consider the varied and diverse emotional responses from all levels of stakeholders that will carry out essential functions in the change process. Successful implementation is going to require intentional collaboration and strategies to address needs at various levels. One tool is the Organizational Culture Assessment Instrument (OCAI) (Cameron & Quinn, 2006; Bremer, n.d.), which is used to understand the current organizational culture to better facilitate a move toward a desired organizational culture.

Viewing programming from a system-wide standpoint will allow VCCS to develop a space where faculty can support, and share resources, in a spirit of collaboration to increase online student success, especially for smaller colleges that are key stakeholders in the advancement of online learning at VCCS.

Findings from Original Data

15 Survey Respondents
7 Focus Group Participants

The data collection involved an open-ended survey and focus group interviews of VCSS administrators, faculty, and staff.

The analysis of responses from both the open-ended survey and focus group interviews was synthesized into the below thematic takeaways. These takeaways are based on the most often mentioned comments from the data and those that align with the literature.

Theme	Specific Practice	Major takeaways
Quality Factors	Quality of Course Design	Set clear expectations, Offer open virtual office hours, embed tutorials in the course, use Quality Matters standards for course assessment
Teaching Practices	Engaged Faculty/Instructor Presence	Organize course for intuitive navigation and faculty/student interactions, Faculty check assignment daily and participate in discussions, Encourage students to ask questions and address concerns immediately
Faculty Support/Development	Flexibility, Sensitivity, Training	Assist faculty in understanding special population needs, Devote more one-on-one time, Have patience and empathy, Virtual Faculty Union, Mandatory Training (chunks of digestible information), Canvas Tutorials

Findings from Original Data

Theme	Specific Practice	Major takeaways
Learning Environment	Success Coaches, Technical Support	Increase the number of success coaches embedded in the course, Share a database of success coaches, 24/7 chatbot, Virtual Student Union
Student Efficacy	Time Management Skills	Students are not prepared nor understand the commitment required
Shared Governance	Evaluation, Shared Services	Have a robust faculty vetting process for course development, Follow-up mandatory training with a rigorous evaluation and coaching, Centralized Student Support Services (Writing Centers, Peer Mentors, Online Tutors, Technology Support, Instructional Designers)

Resources Needed To Implement Collaborative Systems Change for Online Learning

The resources needed for creating Collaborative Systems Change for Online Learning across VCCS are:

- Staffing. The instructional designer on staff with VCCS, and the system could reach out to a local university and offer an internship or a class project opportunity to a student to assist with project implementation. Success coaches are needed to provide services to online learners.

- Technology: System-wide learning management systems, such as Canvas, Social Media, and Zoom.

- Costs: There would be a minimal cost for implementation, except if VCCS hires Success Coaches. An alternative to a success coach is to hire qualified work-study students as peer coaches in online courses.

Implementation Plan Quick Steps for Collaborative Systems Change for Online Learning Success

Step 1
Administer an assessment of the Organizational Culture for Change

Step 2
Assess the readiness gaps of online learners and instructors teaching online courses.

Step 3
Establish a Governance Plan

Step 4
Connect students, instructors, and administrators.

Step 5
Launch Personalized Student Support Services.

Step 6/7
Faculty Development

Step 1. Administer an assessment of the Organizational Culture for Change

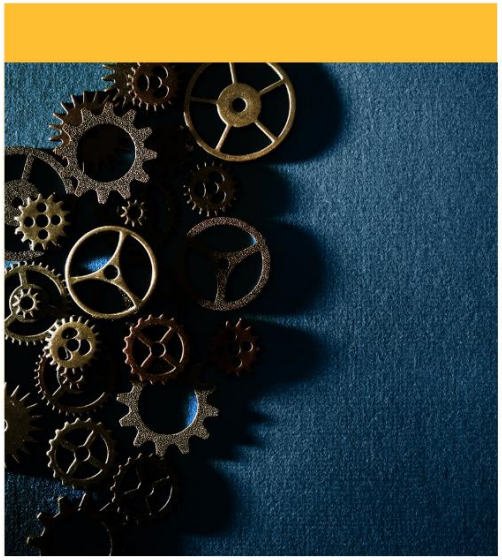
VCCS should assess the readiness of the organization to initiate change through an assessment such as the OCAI . The assessment should be administered to administrators, faculty, and staff who support online learning across VCCS. The assessment will allow VCCS to understand the mindset of key stakeholders for present and future change initiatives centered around online learning.

Step 2. Assess the readiness gaps of online learners and instructors teaching online courses.

VCCS should develop or implement a standardized assessment tool for online learners to assess readiness. The assessment will help VCCS gain an understanding of the learning gaps and provide support to students throughout their college journey.

Step 3. Establish a Governance Plan

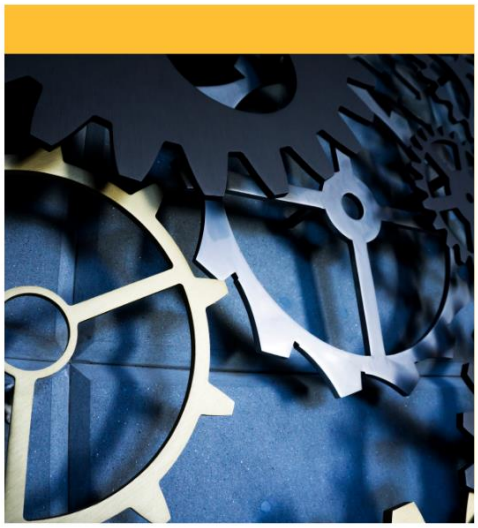
VCCS should establish a system-wide action plan that incorporates voices from each college and sets clear responsibilities and expectations based on the assessment results from Step 1 and 2. To do so, VCCS should request volunteers to serve on a system-wide governance committee that will guide and provide insight about online learning for their institution. This would allow all VCCS institutions to have representation on a systems level.



Step 4. Connect students, instructors, and administrators.

VCCS should establish virtual platforms, such as a Virtual Student Union or Virtual Faculty Union to connect faculty, staff, and students in peer communities. The peer communities will allow individuals to connect, share resources or information, and collaborate across the system, and in their respective institutions. The virtual peer groups can be established as groups on the Learning Management System, Canvas, or a Social Media Platform such as Facebook. The peer groups will allow faculty and staff to share resources and allow students to connect through virtual programs such as yoga and time management seminars, and form a sense of community.

Step 5. Launch Personalized Student Support Services.
Provide students with personalized support to assist them in being successful as online learners by embedding success coaches or peer coaches in online courses, and establishing a 24/7 chatbot function to assist learners after-hours. Develop a policy that faculty must host mandatory office hours.



Step 6: Humanistic aspect to faculty development
Since faculty are already overburdened, take into consideration the implementation of recognition, monetary awards, or professional development funding for faculty who complete mandatory training courses throughout the academic year.
Ensure that faculty communications are written with an appreciative voice and the collective impact message has a positive influence for change.

Step 7: Provide faculty with support and development
Develop a mandatory online teaching training course to provide faculty with the skillset to build an online course and effectively engage students in an online learning environment. Provide training throughout the year for faculty to receive tips on using Canvas, Zoom, or other technology that will enhance an online learning course.

Tools for Implementing Collaborative Systems Change for Online Learning

The table (on the next two pages) below provides a list of tools that are helpful in the seven steps of the Implementation guide.

Tool	Description	Resources
Organizational Culture Change Readiness Assessment	Assess the readiness of the organization to initiate change. Understand resistance for change	OCAI Instrument
Online Learner Readiness Assessment	Assess the readiness gaps of online learners at the time of enrollment.	Zimmerman and Kulikowich, (2016) Online Learning Self-Efficacy Scale (OLSES) to Measure Online Self-efficacy. Khairuddin et al. (2020), Online Distance Learning Readiness Instrument Joosten and Cusatis (2020), Strategies to Assess Online Readiness Barnard-Brak et al. (2010) Online Self-Regulated Learning Questionnaire (OSLQ) Williamson (2007), Self-Rating Scale of Self-Directed Learning (SRSSDL) Zimmerman Kulikowich (2016) Online Learning Self-Efficacy Scale (OLSES)

Tools for Implementing Collaborative Systems Change for Online Learning

Continuation of Tools Table

Tool	Description	Resources
A Governance Plan	Establish a system-wide action plan that incorporates voices from each college.	Hornstein (2015) provides an example to break down the action plan into comprehensive parts, assign responsibility; relay expectations. Goncalves & Campos (2018), KAASE Model of competencies that leaders need to be effective.
Support Services and Awards for Faculty	Provide faculty with incentives, training, and support for online teaching	Guskey's Five Critical Levels of Professional Development Evaluation
Support Services for Students	Provide personalized and holistic support for students.	Colorado Community Colleges Online UNE Online: University of New England Northern VA Community College California Community Colleges
Learning Management System or Social Media	Will be used to establish virtual platforms for connection and collaboration and sharing of resources.	Canvas, Facebook, Microsoft Teams

The VCU EDLP Capstone Team

Lucy Hudson

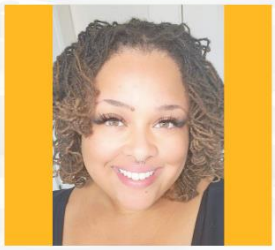
- More than 17 years experince at VCU
- Director of Academic Operations for VCU Psychology
- Focus is creating equitable, inclusive, caring communities.
- B.S. in Urban Studies and Planning, a B.A. in religious studies, and an M.Ed. in Adult Learning

Daniel Lindstrom

- FBI's Senior Official to the US Department of Homeland Security
- Adjunct Faculty at Marymount University
- Licensed attorney in Washington, DC, and Wisconsin.
- JD, MS in Business Management, MS National Security

Monal Patel

- 30 years in higher education guiding enterprise initiatives
- Launched university-wide data governance programs through collaborative leadership.
- Expertise in a wide range of institutional data.
- BS in Computer Science, MS Higher Education Leadership



Rosa Ponton

- Online Spanish Instructor for GSU and SUSLA
- Focus on leadership that intentionally recognizes and seeks to promote social justice, equity, and inclusion through a trauma informed lens
- BA English/ Spanish, MA Spanish, MA Creative Writing Poetry.

Appendix B

Web Portal Examples

Institution Name	Name of Page	URL Link	Features on the Site
University of Illinois Urbana-Champaign	**Student Success Toolkit**	https://dgs.illinois.edu/student-success-programs/student-success-toolkit	The website lists strategies, tools, and links to information to student online learning. The website lists tips about: prioritizing, creating a schedule, a time management calculator, reviewing your syllabus, study skills, learning assessment and strategies, note taking, and creating an assignment action plan.
The University of Massachusetts Amherst	**Student Success Toolkit Series**	https://www.umass.edu/studentsuccess/successtoolkit	The website provides links to student success tools to help students with: developing a remote learning checklist, study skills, getting organized, and provides links to a seminar series on topics such as Your Path to Sophomore Success; Be an Active Learner; Time Management & Prioritization, and Preparing for Finals. The site provides links to videos and pdf files.
The University of Massachusetts Amherst	**Student Success**	https://www.umass.edu/studentsuccess/	The website has features to help a student navigate online learning by helping a student to plan, for now, during, and the future. There are functional tabs to items about goal setting, study strategies, connecting to the community and university resources, money management, paying bills, internship, seminars, etc.

Davidson College	**Academic Success Toolkit**	https://www.davidson.edu/offices-and-services/academic-access-disability-resources/academic-access/academic-success-toolkit	The website provides links to PDFs and sources to assist students with time management, organization, focus motivation, note taking, studying, test-taking, writing, and mindfulness.
EAB	**Student Success Implementation Toolkit**	https://eab.com/research/community-college/toolkit/student-success-implementation-toolkit/	This document is an implementation toolkit. It provides links to resources to implement a student success toolkit.
Colorado Community Colleges Online	**CCC Online Student Support Center**	https://www.ccconline.org/student-support-center/	The website provides information to help students get started as online learners with links and information about registration and online support. It provides links to student support such as academic calendars, course materials, and an online library.
UNE Online: University of New England	**Online Learning Student Support and Resources**	https://online.une.edu/online-learning/support/	The website has a Student Resources Quick List. This list allows students to access certain resources quickly without searching. The site includes links to writing, financial, and support services.
Northern VA Community College	**NOVA Online**	https://online.nvcc.edu/	The website provides students with a video introduction to online learning, an online learning orientation course, and links to resources. Students can browse course offerings, explore the steps to transfer to a four-year institution, chat with NOVA staff, and view webinars that provide information on success in online learning. The site also provides information for personalized

			support and after-hours technical support.
California Community Colleges	**Home Page**	https://www.cccco.edu/ https://cvc.edu/keeplearning/	The website provides students with links to explore careers, paying for college, and student support. The support services link provides links to specialized support for military veterans, undocumented immigrants, disabled, homeless, and foster youth. It also provides information to help students reach their career and educational goals.

Appendix C

Survey Questions

1. Which institution are you affiliated with?
2. How long have you been affiliated with the institution?
3. What is your role(s) at this institution?
4. What do you think are the most important factors for the success of online learners?
5. In your experience, what are best practices for online learning?
6. What student success resources are currently available to online learners at your institution?
7. What additional resources for online student success would you like to see and why?
8. What online student populations require special considerations or unique support features at your institution? What resources or accommodations are currently provided to them?
9. What additional resources are needed for online learners that require special considerations or unique support features?
10. Is there a person/team on campus who oversee online learning? What is their role? Are there clear lines of communication between faculty and this person/team?
11. What format or mode of delivery of online student success resources would best serve online learners at your institution?
12. Please describe any currently available faculty development tools to improve online course design and delivery?

13. What additional faculty development tools are needed for instructors to more effectively facilitate student learning
14. Do you believe that collaboration around online student success among VCCS institutions would benefit your institution's online program?

Appendix D

Focus Group Protocol

Opening Statement and Consent: Thank you for taking this time to speak with us about your experience teaching or supporting online learning. Our project focuses on understanding the best practices, skills, and strategies to support student success in an online learning environment.

In this focus group, we will be asking a few open-ended questions to build on our developing understanding of how VCCS and your institutions might better support online students. We have reviewed the responses to the questionnaire, and this focus group will allow us to get a more detailed understanding of your experiences and perspectives.

The focus group will take approximately 60 minutes. Your participation in this project is entirely voluntary, and you can choose to opt-out of the interview at any time or skip any questions. The information gathered will be kept confidential and stored in secured systems. The responses will only be reviewed by the members of our research team and dissertation committee. **No individual names or identifying information will be included in any information we choose to report from the data we receive today.**

To facilitate the data analysis process, we would like to record the Zoom session. Upon completion of the project, the audio recording will be destroyed. Do you consent to this study? Please indicate by a verbal Yes/No or Thumbs-up/Thumbs-down on your zoom window.

Before we dive in, please introduce yourselves and share:

- name
- your role at the college
- Years of service with the college
- your field of expertise

1. In the questionnaire, we asked "*What additional resources for online student success would you like to see and why*?" We would like to have you talk through the following responses and discuss whether or not they can or should be offered by your institution, centrally (OVN, VCCS), or not at all:

- 24/7 assistance for troubleshooting when their hardware doesn't work
- More success coaches to identify and engage at-risk students.
- Peer mentors
- More hours of tutoring and technical support to help students late into the night or early morning beyond the regular 9-5.
- A virtual student union, dedicated social media sites, and other online spaces where students can engage with each other and develop a sense of community

2. If a toolkit of resources was created that includes some of the things we have discussed, how might it best be made available to students? Website? Canvas? App? And, is the best approach to create a standalone toolkit or something that can be embedded throughout individual courses?

3. Another major theme from the questionnaire was faculty development and training to improve course design and delivery. We would like to get more specific feedback on the following responses:

- Need for authentic assessment of student outcomes
- Sensitivity training/ Patience (in reference to students)
- Required course development training/Canvas/LMS training
- Need for instructional designers
- Quality management of online course design and delivery strategies

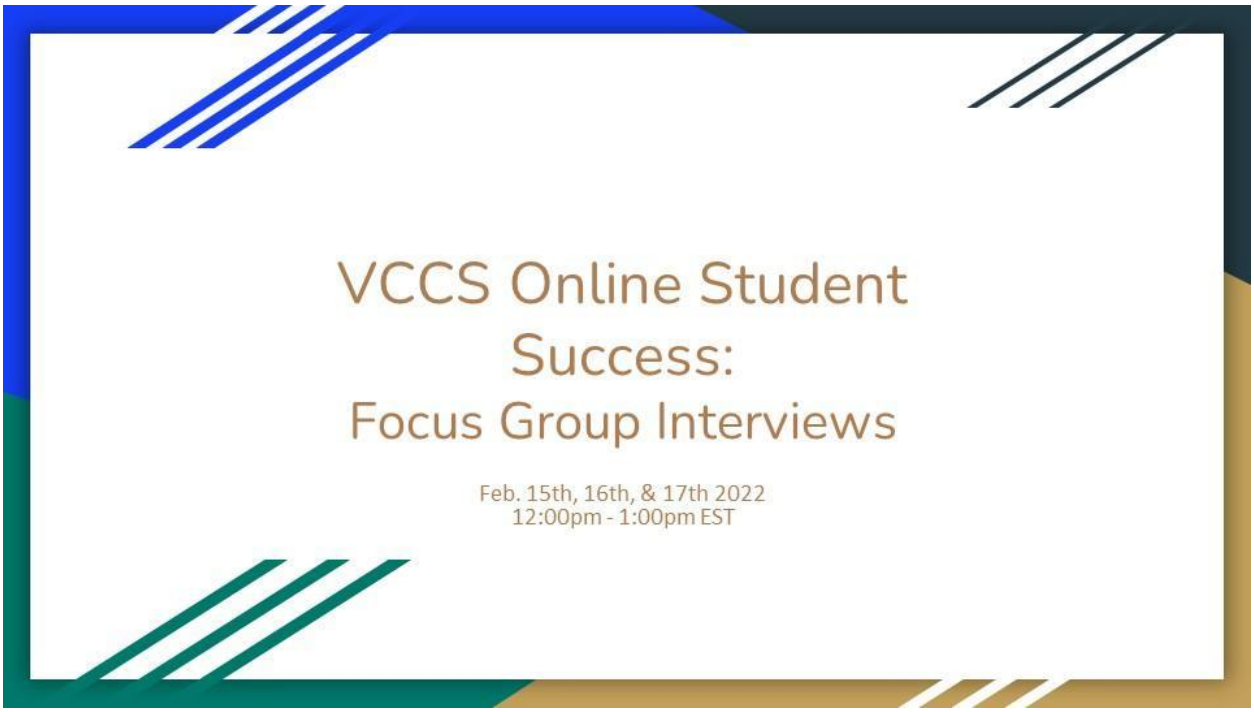
4. Do you believe that collaboration around online student success among VCCS institutions would benefit your institution's online program?

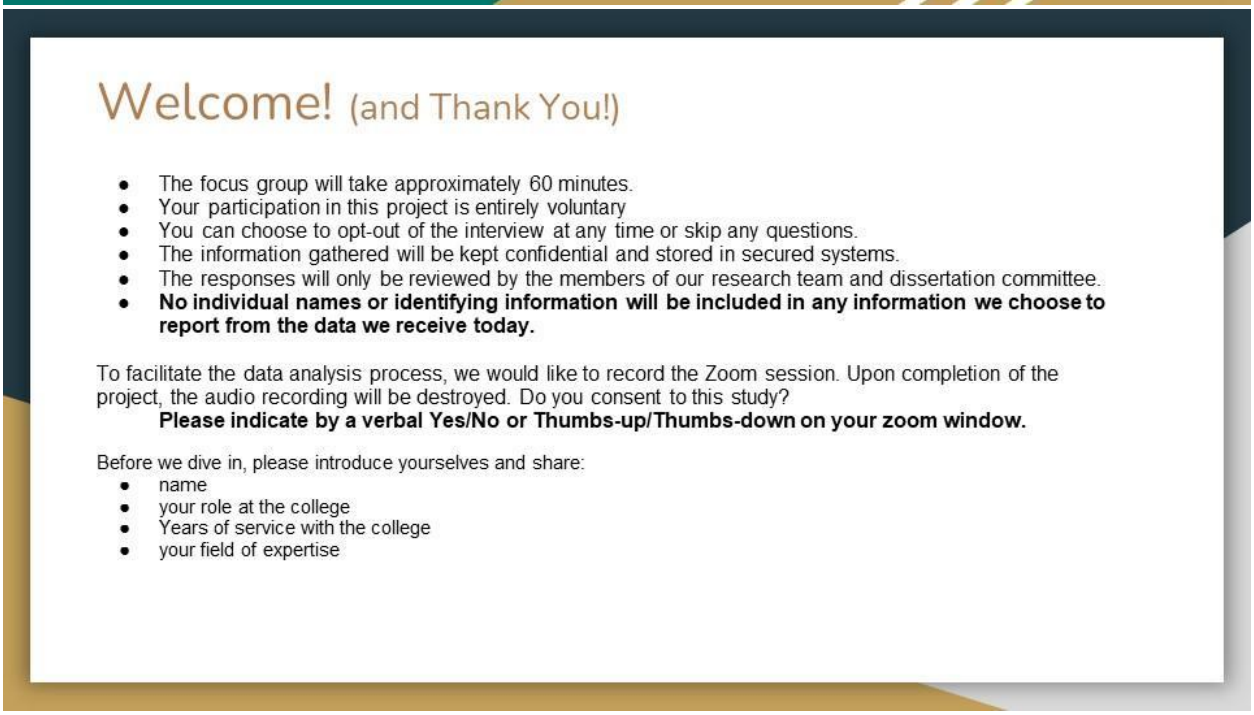
- How would your institution benefit from this collaboration? (technology, resources, IT infrastructure, program design, training, etc.)
- Are there potential challenges to these types of collaboration?
- How could the OVN support this type of collaboration?

5. Is there anything else you would like to share with us about how VCCS can best support online learners?

Appendix E

Focus Group Guide





Q1:

In the questionnaire, we asked "*What additional resources for online student success would you like to see and why*?" We would like to have you talk through the following responses and discuss whether or not they can or should be offered by your institution, centrally (OVN, VCCS), or not at all:

- 24/7 assistance for troubleshooting when their hardware doesn't work
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- A virtual student union, dedicated social media sites, and other online spaces where students can engage with each other and develop a sense of community

Q2:

If a toolkit of resources was created that includes some of the things we have discussed, how might it best be made available to students? Website? Canvas? App? And, is the best approach to create a standalone toolkit or something that can be embedded throughout individual courses?

Q3:

Another major theme from the questionnaire was faculty development and training to improve course design and delivery. We would like to get more specific feedback on the following responses:

- Need for authentic assessment of student outcomes
- Sensitivity training/ Patience (in reference to students)
- Required course development training/Canvas/LMS training
- Need for instructional designers
- Quality management of online course design and delivery strategies

Q4:

Do you believe that collaboration around online student success among VCCS institutions would benefit your institution's online program?

- How would your institution benefit from this collaboration? (technology, resources, IT infrastructure, program design, training, etc.)
- Are there potential challenges to these types of collaboration?
- How could the OVN support this type of collaboration?

Q5:

Is there anything else you would like to share with us about how VCCS can best support online learners?

Thank you for your time, attention, and participation.

Appendix F

Online Learning Readiness Assessment

Sample readiness assessment items (adapted from Khairuddin et al. (2020); Joosten and Cusatis (2020))

Category	Sample Item
Available Technology	Software is readily available
	Access to a computer is sufficient
	Speed of internet access is satisfactory
	Stability of internet is satisfactory
Use of Technology	I use the internet often
	I use Microsoft Office tools often
	I am familiar with specific software applicable to my field or discipline
Self Confidence, Self-directed learning	I know what online learning requires from me
	I have the skills to use technology
	I can troubleshoot technology problems on my own
	I am able to manage my own time to prioritize learning

Socialization	I can work in a group during online activities
	I can collaborate with my peers in an online class
	I enjoy interacting with the instructor via online modalities

Appendix G

Information About the Organizational Culture Assessment Instrument (OCAI)

Organizational Culture
Assessment Instrument

Theory and Tool

plus the OCAI online products and services

Contents

Why work with Culture?

Why do organizations invest in organizational culture? Culture influences organizational performance, innovation, agility, engagement, recruitment and retention, and competitiveness.

Kotter and Heskett found that effective culture can account for 20-30 percent of the differential in corporate performance when compared with "culturally unremarkable" competitors.

Professor Kim Cameron showed that a positive climate, positive relationships, communication, and positive meaning lead to "positive deviance" or high performance.

Christine Porath and Christine Pearson did a study with 14,000 respondents and found that incivility demoralizes people. The estimated loss of productivity per year per employee is $ 14,000 on average. Bill Sutton (Stanford University) has suggested that productivity could decrease by 40% when workers experience bullying.

Summarized: a toxic culture decreases productivity with 40%, incivility as part of culture damages productivity with $14,000 per employee per year, while an effective culture increases productivity with 20%, and a positive culture boosts results by 30-40%

> **"I want to pass on my personal thanks for your speedy and highly professional analysis of my surveys."**
>
> *—Dr. Brian Armstrong, Co-Director of Unscheduled & Acute Care, Belfast Health & Social Care Trust*

Culture is also often the reason why 70 percent of all mergers, acquisitions and organizational change projects fail.

Thus, culture is not as "soft" as prejudice would have it. It produces hard results.

The Organizational Culture Assessment Instrument (OCAI, © Kim Cameron) is a validated tool for assessing organizational culture, developed by Robert Quinn and Kim Cameron at the University of Michigan. As people are often not aware of the culture, the OCAI helps people and organizations notice their current culture and see what they would change.

The OCAI survey is based on the Competing Values Framework: one of the most used and useful frameworks; by over 10,000 companies in 30 years (ten Have, 2003).

It is well-researched and validated, but also compact with six aspects that reliably represent an organization's culture. It's a quick culture survey that can be done in 15-20 minutes online, in 19 different languages. Let's look at its theory first.

The Competing Values Framework

The Competing Values Framework (CVF) emerged from research to identify the organizational effectiveness criteria (Quinn & Rohrbaugh, 1981). The criteria that were found to make a difference are the dimensions internal-external, and stability-flexibility.

An organization might have an internal orientation; focusing inward on development, collaboration, integration of activities, coordination. Or it might have an external orientation; looking at the market, what's possible with the latest technology, what competitors are doing, what customers want, and it could diversify activities as a result.

Both internal and external attention is needed to be successful in the long run - but depending on their environment an organization will have a dominant preference. An agile, volatile market calls for an external orientation whereas a stable environment allows an internal focus.

Note the "competing" nature of the values: you have to choose whether you look inside or outside - you cannot do both at the same time.

The second defining dimension is the focus on stability or flexibility — organizations that prefer to organize for stability value clear structures, planning, budgets, and reliability. They assume that reality can be known and controlled. Organizations that organize with flexibility assume the opposite: you can never predict and control everything. They prefer a flexible attitude and organization to adapt quickly to changing circumstances - focusing more on people and activities than on structure, procedures, and plans.

The "competing values" nature of stability and flexibility prevents you from doing both at the same time. Organizations can spend their money, attention, and time only once, so they tend to emphasize certain values. Quinn and Cameron found that flexible organizations are most effective, which sometimes leads to contradictory behavior. The "best" organizations use all four value sets when necessary.

A culture type works best in the activities domain that aligns with its values. In the health care sector, for instance, we often see Collaborate or Clan culture.

The OCAI helps to build employee engagement: people become aware of culture, see how they contribute to the culture and are invited to co-create the change in their team.
In this process of culture meetings, you'll build trust and solve objections and doubts together. This will enhance commitment. Working with information from all levels, you'll even improve the overall change plan.

The OCAI workshops lead to:

- Qualitative, customized insights and consensus of culture
- Information from all positions and perspectives, thus: better changes to implement
- Commitment to change (provided that you seriously work through objections)
- Engagement and ownership
- This Change approach helps to develop successful, sustainable change.

But is it feasible? Absolutely! You can organize workshops per team or organize open-enrollment workshops for anyone who's interested in the culture.

You can roll out from the top down, starting with the top executives, followed by all other teams. Everyone works to make culture operational and customizes their change plan for the team within the boundaries outlined by the top executives.

Or work with people who volunteer for the workshops, from all levels and departments. They create their personal change plan and become the ambassadors of change. You leverage the network nature of organizations with this Change approach.

You can read more about the one-day **OCAI Culture Workshop** here.

3. Recurring Change Circles/meetings to sustain the changes

People also need perseverance. OCAI teams or Change Circles offer mutual support while practicing new behaviors and interventions. After the first OCAI-workshop, people might convene every 2-4 weeks to keep the change going and adjust plans if needed.

Some teams use the first 30 minutes of regular meetings to check in on culture behaviors. What matters is that you keep working with culture. You'd better shape the culture - or it will shape you.

4. E-learning added to your onsite culture change process

Culture change requires collective learning. A critical mass of orga-

> **"The OCAI provided valuable insights, allowing us to have a comparative review of the various organizations that make up our corporation. The tool helped provide a better understanding of the different culture types at various locations, and supported our culture transformation by informing us of where we are today and where we want to be in the future. OCAI Online's team was helpful and responsive and we benefited from the online video calls, which supported our learning around culture and possible ways to proceed."**
>
> *—Joshua J. Troutwine, Director of Human Resources - Operations/Logistics, at Hillenbrand corporation, USA*

nization members must change how they think, what they value, and how they interact and act - or not enough will change in daily reality. Culture change does not happen on paper!

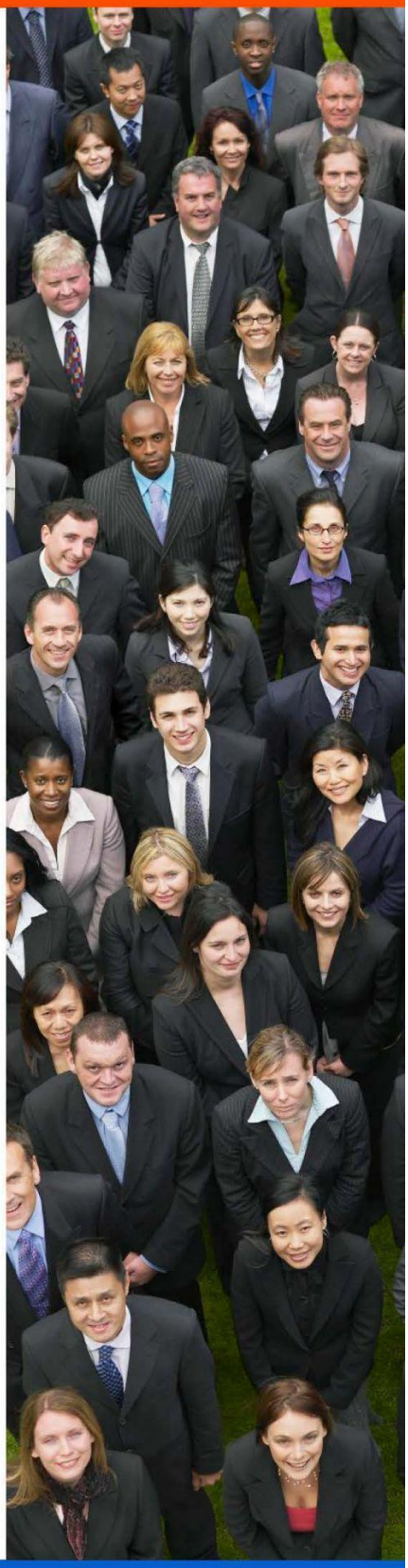
That's where the online Culture Academy can help. Based on easy-to-do positive "interaction interventions," leaders and team members alike learn how to develop the culture to be more positive and productive.

Each module explains more about culture and positive (self-) leadership, offers tools, and invites people to customize and apply them on the job.

People are enticed to take ownership and action, and to change "the way we do things around here." It's great for successful change, engagement, and leadership development. As research shows, when someone learns from, interacts with, and has an impact on the real world in real-time, higher retention of new learning occurs.

E-learning can blend in with your in-person workshops and culture focus groups. This helps busy professionals to develop an effective culture that will become the "new normal."

Check out the curriculum and see how the **Positive Culture Academy** for teams can leverage your organizational culture change process.



OCAI online products and services

OCAI online helps leaders, managers, Organization Development consultants, Change facilitators, and HR professionals to assess the culture and engage in organizational culture change.

We provide the OCAI tool online to check and change the culture. Our services include the online OCAI survey with do-it-yourself Work Kits, video training, books, workshops and consulting. Our partner consultants offer onsite facilitation in many locations. Our Positive Culture Academy adds e-learning to your onsite culture meetings to make the change process easier.

OCAI Assessment Products

OCAI One: Free

Available for students.

- Sign up for the English trial version to see how the validated OCAI works.
- Get your personal profile with a short explanation.
- Receive updates about culture via our mailing list.
- Try before you buy a Pro or Enterprise assessment.

OCAI Pro: One Price

For consultants, leaders, and associates.

- Assessment for teams or organizations with a collective culture profile for current and preferred culture.
- Download the results report and the OCAI Kits to work with the results.
- Fixed price, regardless of the number of participants.
- Set up and buy online within minutes.
- Available in 19 languages.
- No commercial offers and no mailing list subscription.

OCAI Enterprise: Price Varies

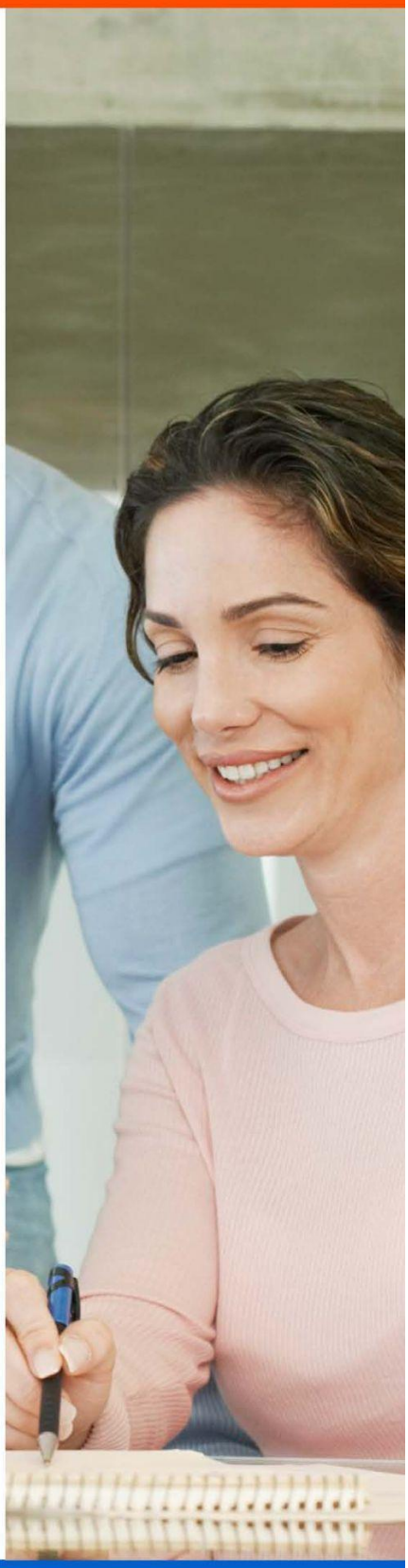
For consultants, leaders, and associates.

- Get the collective profile plus sub-profiles of your choice to compare departments, locations, levels, or other demographics.
- Receive the results report and the OCAI Kits to work with the results.
- Price is based on the number of sub-profiles, regardless of the number of participants.
- Set up, buy online and invite respondents by email.
- Available in 19 languages.
- No commercial offers and no mailing list subscription.

OCAI Training and Consulting

Online OCAI video training

For students, leaders, and consultants. How to work with the OCAI plus extras. For external consultants: you can become an OCAI affiliate upon completion.



Culture, Change & Leadership certification workshop
For leaders and consultants. In-depth workshop with open enrollment about facilitating culture change and positive leadership practices. For external consultants: you can become an OCAI partner when you attend this residential workshop.

We can also offer this workshop in-company, for your leaders or internal consultants and HR professionals.

OCAI Workshop based on your OCAI results
We can facilitate your workshop about your OCAI profile or train your professionals to facilitate the culture workshops in your organization.

Online or onsite consultancy
We can assist you with consultancy online or in-person. You can use our services or engage one of our partner consultants.

Positive Culture Academy: individual enrollment and In-company
Interactive e-learning about developing a positive, productive culture and leadership style with video lectures, assignments, video calls, and consulting.

Books

Organizational Culture Change, by Marcella Bremer

Unleash your organization's potential in circles of 10. The practical How-To book stuffed with real cases!

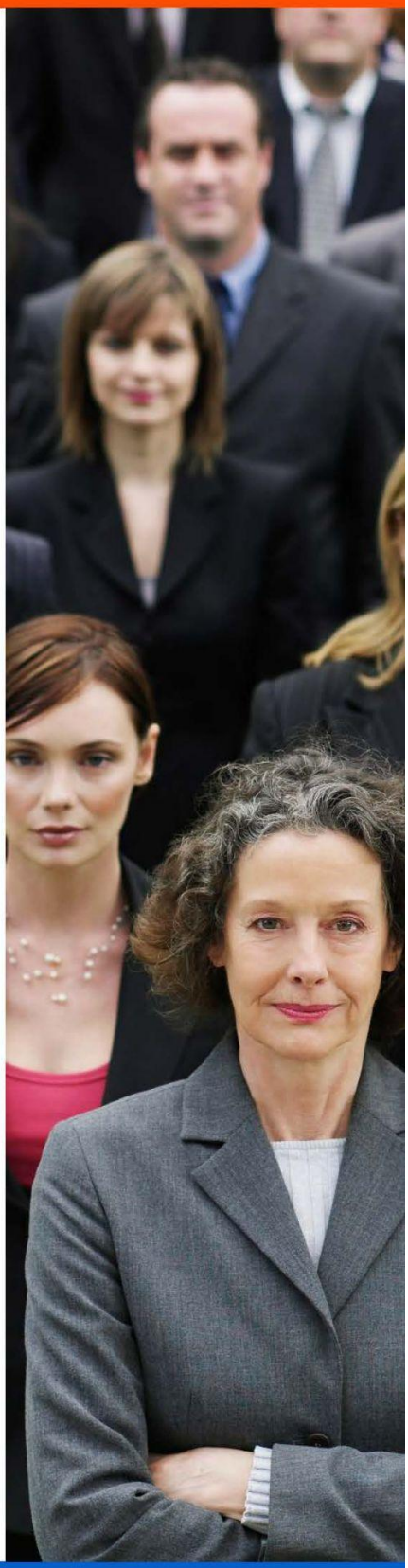
Developing a Positive Culture where People and Performance Thrive, by Marcella Bremer

This pragmatic and well-researched book focuses on how to develop a positive culture with Interaction Interventions or Change Circles.

About OCAI online

OCAI Online is founded by Marcel Lamers MSc. , and Marcella Bremer MScBA. We're consultants based in Europe and working worldwide. With the local OCAI-team and our partner consultants all over the world, we help you develop your workplace culture. The copyright of the OCAI belongs to professor Kim Cameron.

Over 100,000 respondents (update May 2019) from numerous organizations have worked with OCAI Online: using the free or paid OCAI surveys, the work kits, the video training, the book and/or our



consultancy.

Our clients are leaders or associates of organizations, consultants working with clients, and students. Our client organizations are located all over the world and vary in size from small startups to super large global corporations and every size in-between. Almost all industry sectors are covered which makes our database interesting for research.

What if you worked in a positive and productive workplace? You and your team would engage (more), innovate, contribute, and be at your best! Positive organizations are agile, more innovative, competitive, collaborative and productive.

Are you ready to develop your (client's) culture?

1. Start your OCAI Assessment online, and/or the training and consulting of your choice.
2. Yes, but - you have questions? Email us.