REDUCING COGNITIVE DISSONANCE: CREATING HOLISTIC STUDENT SUPPORT IN THE ONLINE
CLASSROOM A TRAINING SEMINAR FOR COMMUNITY COLLEGE FACULTY

by

Tammy A. Douglas

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Has been approved

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APPROVED:

Sandra J Balkema, PhD
Committee Chair

Brian Horvitz, PhD
Committee Member

Deborah Thalner, PhD
Committee Member

Dissertation Committee

ACCEPTED:

Sandra J Balkema, PhD, Dissertation Director
Community College Leadership Program

ABSTRACT

The open access nature and mission of the community college draws in millions of students annually. Students seeking a high-quality affordable option for a higher education are finding community college a viable option as a pathway to skills, careers, and a foundation for further credentials and degrees.

Along with myriad choices, accessibility, and access comes flexibility in degree and course offerings. Students are increasingly choosing alternative delivery options such as online and hybrid modalities to fit around their already busy lives. Even with recent enrollment declines, the online modality has remained viable, however, as amplified by the recent COVID-19 pandemic impacts, many students struggle with success in online learning.

The developed faculty training seminar provides faculty with a professional development resource for gaining the necessary skills to teach online and provide holistic support options for online students.

KEY WORDS: online student support, integrated holistic support, community colleges

DEDICATION

This dissertation is dedicated to the community college faculty and students who unknowingly inspire me every day, who continually fuel my curiosity to learn and, in turn, allow me to support others.

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TABLE OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

Page

CHAPTER ONE: INTRODUCTION TO THE PRODUCT

INTRODUCTION

The open access nature and mission of the community college draws in millions of students annually. According to the Community College Research Center (CCRC) and the Institute of Education Sciences' National Center for Education Statistics (NCES), 7.7 million students were enrolled at community colleges in the 2019-2020 academic year, making up approximately 35 percent of all undergraduate students. NCES further estimates that in fall 2020, approximately 4.8 million students were enrolled at community colleges (Community College Research Center [CCRC], 2022; National Center for Education Statistics [NCES], 2021).

Students seeking a high-quality affordable option for higher education are finding community college a viable option as a pathway to skills, careers, and a foundation for further credentials and degrees. Along with myriad choices, accessibility, and access comes flexibility in degree and course offerings. Students are increasingly choosing alternative delivery options such as online and hybrid modalities to fit around their already busy lives. Nationally in fall 2018, 14 percent of community college students were enrolled in at least one exclusively online course. Within Michigan, 11.4 percent of community colleges students were studying exclusively online and 28.2 percent taking at least some online courses (American Association of Community Colleges [AACC], 2020; National Student Clearinghouse, 2020; French, 2020).

In 2006, the Higher Education Act (HEA) was revised, removing the restriction for colleges and universities from offering more than 50 percent of their courses online. In

response to student demand and the amended HEA, online courses and programs expanded. By 2016, 72 percent of public and 50 percent of private nonprofit schools offered fully online programs (Xu & Xu, 2019).

While overall enrollment in higher education has decreased nationwide, enrollment within distance education, specifically online courses and programs, has increased (Seaman et al., 2018). As of 2016, 31 percent of college students had taken at least one online course and 17 percent were enrolled in fully online programs (NCES, 2016). However, in fall 2017, two thirds of community college students were not enrolled in any distance education courses, 20 percent were enrolled in some, and only 13 percent were enrolled exclusively in distance education programs, indicating a preference for in-person learning or a lack of available course and program options (NCES, 2020).

The majority of students taking distance education classes also remains geographically localized with 52.8 percent of students taking at least one distance education course and also taking one or more on-campus courses. Of the students who only took distance education courses, 56.1 percent resided within the same state as the institution in which they were enrolled (Seaman et al., 2018).

According to the Online College Students 2019 Comprehensive Data on Demands and Preferences report, 71 percent of students attend school full time with 59 percent working full time and 18 percent working part time. The survey further reveals that 63 percent of students are choosing online courses due to current work/life responsibilities, indicating a need for flexibility in balancing multiple responsibilities (Clinefelter et al., 2019).

Of the students surveyed, the majority (63 percent) responded that they would attempt to attend a face-to-face class if online were not an option rather than not taking any class(es), indicating a strong preference for their field of study over modality (Clinefelter et al., 2019).

CONCERNS ABOUT ONLINE EDUCATION

Many students find convenience and flexibility to be key factors in selecting online courses, but few students consider online to be a superior learning experience (Clinefelter, et al., 2019; Noel-Levitz, 2006). Research also indicates that employers view online courses and programs to be inferior to classroom learning (Grossman & Johnson, 2017; Magda et al., 2020; Public Agenda, 2013; Roberto & Johnson, 2019;). While research and preference surveys indicate a student desire for online courses and programs to accommodate flexibility and life balance, the research also reveals concern with course quality, student success, and student completion, particularly in the absence of high-quality faculty professional development and comprehensive student supports (Banas & Velez-Solic, 2012; Boettcher & Conrad, 2016; Dick et al., 2005; Dirksen, 2012; Hart et al., 2018; Jaggars & Xu, 2010; McGuire, 2015; Nilson, 2010; Nilson & Goodson, 2018; Xu & Smith Jaggars, 2011).

Although students are increasingly enrolling in online courses and programs, much of the research shows lower rates of student success. Studies conducted in the areas of online learning and student outcomes indicate that 60 percent of community college students passed an online class while 70 percent passed an equivalent face-to-face class. Conversely, Means et al. (2010) found that learning outcomes for online students exceeded those of face-to-face students.

However, the research also revealed that students who took one or more online classes were more likely to transfer or earn an associate degree, indicating student progress toward degree completion (Johnson & Mejia, 2014; Shea & Bidjerano, 2013).

McCormick (as cited in Forum, Chronicle of Higher Education, 2010) stated, "The truth is that we know astonishingly little about the 'quality' of nearly all collegiate programs, whether face-to-face or online. In fact, we don't even have a generally accepted understanding of what quality means in this context" (October 31, 2020, para. 8). Additionally, in a recently published article in University Business, Todd Zipper, President of Wiley Services states "Unfortunately, so much about online learning has been shrouded in controversy, mired in politics, and driven by generations of thinking around what education should look like based on the traditional in-classroom model" (November 13, 2020, para. 2).

With the 2020 COVID-19 pandemic conditions, institutions across the nation were forced to close campuses; many making an abrupt shift to remote teaching and learning to finish out the semester. Initially, there was confusion regarding the differences between remote and online teaching and learning (Craig, 2020; Hodges et al., 2020; Malvik, 2020; Roe, 2020). Online learning experiences are carefully planned and designed. In contrast, remote teaching online is typically a reactive response to a crisis or disaster. While both often utilize the same technology, the pivot in expectations with respect to remote teaching is reactionary and unplanned (Blumenstyk, 2020; Craig, 2020; Hodges et al., 2020). Many students have never taken an online course and lack the basic technology skills as well as the student preparation and online learning skills, making the abrupt shift to remote teaching online challenging for all (Bettinger & Loeb, 2017; Heart Research Associates, 2015; Pearson Foundation, 2015).

The sudden pivot to fully online in spring of 2020 forced many faculty and students into a modality for which they were unprepared and unsupported. As circumstances around the COVID-19 pandemic quickly evolved, the abrupt emergency transition in higher education pushed faculty and students into the online modality, often without training, support, or equipment to adequately support this shift in teaching and learning. Many instructional designers, technology staff, educational technologists, and other support staff were overwhelmed as an unprecedented number of faculty scrambled to move content online, often doing so poorly (Barrett-Fox, 2020). Concerns over access, equity, compassion fatigue and burnout, quality, skills gaps, and technology are some of the more prevalent issues surfacing. While these barriers have always existed, the push to scale up remote teaching using technology rapidly revealed just how challenging these barriers are to teaching and learning, particularly to community college students and faculty members (Gierdowski et al., 2020; Marcus, 2020; McMurtie, 2020; Phillippe, 2020; Turk et al., 2020; West, 2020).

SUPPORTING ONLINE EDUCATION

Traditionally, higher education has focused on teaching and learning in the physical classroom; often basing institutional change and policies around this modality. However, student enrollment and recent COVID-19 pandemic conditions are pushing a broader definition of "classroom," one that encompasses broad and flexible modalities (Blumenstyk, 2020; Marcus, 2020).

A recent higher education survey by Educause (Grajek, 2020) revealed that institutions' top priorities preparing for the uncertainty of the fall 2020 semester are faculty support and student support. According to Grajek, 81 percent of institutions are increasing professional

development opportunities for faculty around instructional tools and 77 percent are increasing

partnership with instructional/learning designers. Additionally, 42 percent of institutions have

created professional development around equitable online teaching practices and humanizing

online learning.

The most recent CHLOE 5 (Changing Landscape of Online Learning) survey, states that

on average, institutions have nearly 51 percent of undergraduate students and 50 percent of

the faculty who have never experienced or taught an online course. The average surveyed

institution had to transition over 500 courses to remote during the 2020 spring semester as a

result of campus closures due to the COVID-19 pandemic. The responsibility for transitioning

these courses to remote teaching overwhelmingly fell upon the faculty who were teaching their

course(s) face-to-face. The majority of these faculty had little guidance and support from their

institution to complete the transition to remote teaching. Survey respondents (typically Chief

Online Officers) also indicated that the greatest challenges they perceived in the transition to

both short term remote and longer term online was a lack of preparedness on the part of the

faculty, students, and their institution (Garrett et al., 2020).

As noted by Banas and Velez-Solic (2012), the lack of training or the low quality of

training and professional development impacts student success with online learning.

McQuiggan's (2012) action research study revealed that not only do faculty need to develop

specialized skills for the online environment, but that these newly developed skills may also

improve their face-to-face teaching as well. Building off the need for appropriate faculty

development, Cicco (2013) asserts that teaching online also requires adequate and appropriate

faculty preparation with ongoing strategic planning and evaluation.

With the recent rapid growth in online learning and technology, Frankel et al. (2020) notes that although professional development specializing in online teaching is available, the pedagogical training has not kept pace resulting in a gap in knowledge pertaining to online teaching and learning.

Overall, teaching and learning research is trending toward a deeper interdisciplinary understanding of how we learn. The emergence of the combined efforts of research in the fields of social science studying the impact of education on social systems, educational research exploring pedagogical approaches and classroom structures, psychology studying behavior, and neuroscience examining learning processes on the brain are all helping to expand scholarship on overall learning quality (Brown et al., 2014; Chang et al., 2021; Darling-Hammond et al., 2020; Tan & Amiel, 2022; Willcox, et al., 2016).

STATEMENT OF PROBLEM

What most research studies and surveys have illustrated is that face-to-face learning and online learning are different; however, these studies have failed to place the modality comparison within the appropriate context. Face-to-face courses reside within the structures and support systems that developed along with the overall institution (Bailey et al., 2015; Cohen et al., 2014). Many institutions cluster these services into a centralized physical location such as a Center for Student Success with tutoring, testing, coaching, and writing assistance or a 'One Stop' area where students can access academic counseling, financial aid assistance, registration, and guidance for other needs (Bailey et al., 2015; Wyner, 2014). While these services may be grouped together, they may also still exist in an individual departmental structure with different leadership. Student support services are typically grouped within a

student affairs division which is often separated from the academic affairs division. Each

division potentially having different goals and objectives. While there have been a range of

high-impact practices (HIPs) that attempt to inform students about the availability of support

services (Bailey & Alfonso, 2005; Center for Community College Student Engagement [CCCSE],

2015; Hatch, 2016), these HIPs rely primarily upon students to know when they need these

interventions and services as well as how and where to seek them out (Britto & Rush, 2013;

Dickmeyer & Zhu, 2017; Parnes, et al., 2020; Stewart et al., 2013).

As institutions began developing academic courses and programs online, students

support services remained primarily in-person (Calhoun et al., 2017; Hinton, 2020; Rumble,

2000). Although these services were available to all students regardless of modality, Buck

(2016) and Bouchey et al. (2021) note that because many student support services were

provided in-person, student affairs personnel did not have consistent contact with online

students and may not have fully understood online students' expectations and perceptions.

With the pivot to remote learning during the COVID-19 pandemic college closures, many

students struggled to access needed support services (Hinton, 2020). The lack of in-person

options pushed many institutions to rethink how they offered student services and develop

innovative options to address the needs of remote and online learners. Although many services

are now available online, there remains a lack of integration into the academic course design

(D'Orio, 2019; Rotar, 2020, 2022).

While student support services remain an important aspect of online student success,

other factors researchers have attributed to online student success are the quality of the online

course design and the online teaching and learning knowledge and experience of the faculty member (Farrell & Brunton, 2020; Rotar, 2020, 2022).

Reviewing success in online courses using a traditional in-person structure will fail to show the strengths of the online modality. As the recent CHLOE surveys indicated, the demand to teach remote and online courses outpaced the available support for faculty. Many faculty were left without professional development, instructional design assistance, and meaningful technical support (Calkins, et al., 2021; Davis et al., 2022; Frankel et al., 2020; Garrett et al., 2021; Jacob et al., 2020; Leary et al., 2020; Legon et al., 2020).

It is in this spirit that the professional development for online faculty seminar "Holistic Student Support in the Online Classroom: Instructional Design for Online Faculty" was developed.

WHY A TRAINING PROGRAM?

Researchers identified several high-impact principles and strategies in recently released studies examining COVID-19 pandemic campus closures and the shift to online teaching and learning (Bao, 2020; Garrett, et al., 2020). While these high-impact practices are not new to online education, the recent push into the modality due to COVID-19 pandemic conditions has amplified the need, particularly for faculty and students who might not otherwise have considered online teaching and learning.

According to a case study by Bao (2020), five high-impact principles emerged:

- High relevance between online instructional design and student learning

- Effective delivery on online instructional information

- Adequate support provided by faculty and teaching assistants to students

9

- High-quality participation to improve the breadth and depth of student learning

- Contingency plan to deal with unexpected incidents of online education platforms

These principles also align with those identified within the Interregional Guidelines for the Evaluation of Distance Education (Council of Regional Accrediting Commissions [C-RAC] guidelines) and the proposed 21st Century Distance Education Guidelines used by higher education accreditation agencies nationwide. These principles also provide the foundation for policies within the State Authorization Reciprocity Agreement (SARA) which supports the ability for institutions to educate out-of-state students in the online environment (C-RAC, 2011; NC-SARA & NCHEMS, 2021).

Often, community college and higher education faculty are hired based upon their expertise in their field. While teaching and learning knowledge is favorable, it is not often required or stated in an institution's hiring requirements. Higher education accreditation agencies outline minimum faculty credentials based upon degrees, experience, and expertise in the subject matter area, equating such credentials to adequate teaching knowledge (Higher Learning Commission [HLC], 2020). While expertise within the subject matter is an important component of teaching, many faculty members are lacking pedagogical knowledge and further struggle with the application in various modalities. Research has shown that community college faculty who participate in some form of structured intentional scholarship related to teaching and learning increase pedagogical innovation, student engagement, and ultimately student retention (Bass, 1999; Bolliger & Wasilik, 2009; Burns, 2017; Dell et al., 2008; Douglas, 2008). Additional exploration into scholarship challenges faculty members to recognize and re-develop

their underlying assumptions about teaching and learning (Howell et al., 2004; Wiesenberg & Stacy, 2008).

KELLOGG COMMUNITY COLLEGE'S APPROACH

Kellogg Community College (KCC) utilizes a decentralized approach for the oversight and development of distance education. While student and faculty need and interest initiate new course development, each academic department chair or director is responsible for determining the program and course offerings as well as the modalities in which they will be offered. The institution's Academic Cabinet, comprised of administrators, faculty, instructional staff, and other stakeholders, ultimately reviews and approves new or substantially revised academic developments and offerings (Kellogg Community College, 2020).

While the initial development and modality is determined within the academic departments, KCC's Learning Technologies department is responsible for development, implementation, and support of a strategic vision for advancing learning technologies and emerging technologies as related to instructional, programmatic, and curricular design. The Director of Learning Technologies is responsible for researching, planning, coordinating, and implementing learning and emerging technologies to ensure effective use throughout the institution (Kellogg Community College, 2021). In lieu of a Center for Teaching and Learning or any centralized faculty support unit, the Director of Learning Technologies collaborates with faculty, academic leadership, and across divisions to develop and support innovative and emerging technologies in response to evolving teaching and learning practices. The Director of Learning Technologies is also tasked with creating and facilitating the required certification courses to prepare faculty to teach online and to recertify their online teaching skills on a

periodic basis (Kellogg Community College, 2021). Additionally, the director serves as the chair

of the Online Course Development Committee (OCDC) comprised of faculty, academic deans,

and the Vice President of Instruction. This committee is tasked, in part, with conducting quality

assurance and best practices reviews for all new online and hybrid course developments and

making recommendations to KCC's Academic Cabinet (Kellogg Community College, 2002, 2018,

2020).

THE PURPOSE OF THIS DISSERTATION

This dissertation is designed to address the pedagogical knowledge skills gap identified

within the research and provide a support option for Kellogg Community College faculty. At the

time this dissertation was written, the majority of the faculty members at KCC chose to deliver

classes face-to-face (prior to the COVID-19 pandemic) with approximately 20 percent of

academic sections offered fully online.

During March 2020, the COVID-19 pandemic resulted in the closure of Michigan

institutions of higher education, forcing a rapid shift to remote learning in the short term and

reliance upon online learning for the following academic year. With only half of KCC's faculty

members certified to teach online and only 20 percent of courses developed and approved for

online delivery, the college needed to quickly provide widespread support for faculty members

with technology, online teaching and learning, student support, and ensure the integrity of the

academic offerings. All faculty members expecting to teach during the institutional closure

were required to adhere to institutional policy and contractual agreements by completing the

Online Teaching and Learning (OTL) certification or equivalent. Additionally, all courses that had

not previously been developed for the online modality were required to be submitted for

quality review through KCC's Online Course Development Committee and the institution's Academic Cabinet. While the college was able to uphold the policies, some leeway was granted with respect to course offering and instructor of record for the fall 2020 semester. Courses were offered for registration with the understanding that the course review process underway would be satisfactorily completed prior to the course start date. Faculty members were added as the instructor of record with the understanding that they must successfully complete the teaching and learning certification process by the start date of their section. The following spring 2021 semester transitioned the online development and teaching certification processes back to the original established policies and procedures; with new course development reviews required to be successfully completed prior to opening for student registration and faculty member certification successfully completed prior to being added as the instructor of record. If either or both requirement(s) was not upheld, the course was cancelled for the spring 2021 semester.

With the established KCC policies and procedures remaining in place for new online or hybrid course review and faculty member certification, over 65 courses were reviewed by the Online Course Development Committee and 127 faculty members were certified from March 2020 through May 2021.

While many KCC processes for students and student support were already digital, campus closures during the COVID-19 pandemic identified gaps in technology, support, and communication for students, faculty, and staff. The college's Student Services division revised and streamlined many processes to allow for fully online submission, approval, and documentation for students, faculty, and administrative staff. New technologies were

implemented to assist with student support for placement testing, proctored testing, new student orientation, online learner orientation, and tutoring. The Learning Technologies department functioned as a coordinating entity due to the decentralized oversight of distance education and overall support distributed across several institutional divisions. While many changes occurred within an accelerated timeframe to address the COVID-19 pandemic campus closure and eventual safe campus re-opening, the resulting flexibility and supports will remain in place long term.

GOALS OF THIS SEMINAR

Several guiding questions (GQ) were used when designing "Reducing Cognitive Dissonance: Creating Holistic Student Support in The Online Classroom":

- GQ1. What are the key differences between online and face-to-face teaching and learning?

- GQ2. What are the best practices for engaging and supporting online students?

- GQ3. How do course activities and course delivery impact student learning?

- GQ4. Which high-impact practices benefit online students most effectively?

- GQ5. In what ways do assessment and evaluation provide continuous improvement?

The guiding questions were developed into Participant Learning Objectives (PLOs) and further supported by Course Learning Outcomes (CLOs) (see Chapter 3, Tables 2 and 3). Assessment maps identify the ways in which the outcomes are measured (see Chapter 3, Tables 4 and 5).

ASSUMPTIONS OF THIS WORK

"Reducing Cognitive Dissonance: Creating Holistic Student Support in the Online Classroom" was written and designed specifically for faculty at Kellogg Community College. While the content speaks to overall best practices in teaching and learning with an emphasis on the online learning environment, some of the policies, procedures, and approaches may differ based upon institutional organization. The content of the seminar is structured to allow the instructional design content to be separated from the online teaching and learning content for institutions that may have a more centralized or structured approach to faculty development and overall course design.

GLOSSARY OF SPECIALIZED TERMS

Accreditation: Recognition from an agency recognized by the U.S. Department of Education (i.e., the Higher Learning Commission) that an education institution has obtained and maintains a certain level of education standards.

Andragogy: The method and practice of teaching adult learners.

Asynchronous Learning: Method of virtual teaching and learning that does not occur in real time.

Council for Regional Accrediting Commissions (C-RAC): The overarching entity that represents the seven organizations responsible for the accreditation of roughly 3,000 U.S. colleges and universities.

Distance Education: A form of education in which the main content includes a separation of student and faculty by means of asynchronous technology.

High-Impact Practices: Teaching and learning practices that have shown to be beneficial across a wide range of teaching and learning environments.

Higher Education Act (HEA): A U.S. law established in 1965 intended to strengthen the education resources of colleges and universities and to provide financial assistance to post-secondary students.

Higher Learning Commission (HLC): The accrediting body covering colleges and universities in a 19-state North Central region of the United States.

Hybrid: A combination of face-to-face meetings along with the use of synchronous and asynchronous technology to facilitate learning. The ratio of face-to-face to asynchronous technology use is typically defined within the institution.

Modality: A method of teaching and learning typically defined by the institution with a ratio of face-to-face, synchronous, asynchronous, and technology use.

Online: The use of technology to facilitate asynchronous learning. The institution typically defines a ratio of face-to-face, synchronous, asynchronous, and technology use to define modalities.

Pedagogy: The method and practice of teaching, particularly an academic subject or theoretical concept. Traditionally this term focused on all learners but more recently has been defined as a focus on the younger learner.

Remote Teaching and Learning: The act of quickly moving face-to-face elements of a course online temporarily. A shift to remote is typically reactionary and is not intended for long-term use.

State Authorization Reciprocity Agreement (SARA): An agreement among states that establishes national standards for the interstate offering of postsecondary distance-education courses and programs.

Synchronous Learning: Method of virtual teaching and learning that occurs in real time.

CONCLUSION

Often, in higher education, faculty have expertise in a subject area but are not required to have knowledge and experience in and with instructional design, andragogy/pedagogy, assessment, and other high-impact teaching practices. As the research indicates, the skills utilized in creating engaging learning experiences in the face-to-face classroom do differ than those in the online environment. The research also indicates that not only do student engagement, success, and retention increase with the use of high-impact practices and holistic student supports, but faculty innovation, creativity, and engagement also increase with the development of faculty skills and knowledge. "Reducing Cognitive Dissonance: Creating Holistic

Student Support in the Online Classroom" is intended to set the foundation for creating a

culture of scholarship of teaching and learning.

CHAPTER TWO: LITERATURE REVIEW

INTRODUCTION

When developing a holistic professional development guide for online faculty, it is

important to identify the audience, purpose, and stakeholders; considering not only the

intended direct audience (faculty preparing to teach online), but also the indirect audience –

the recipients of the knowledge and skills development (online students).

Consideration must also be given to the impact of the COVID-19 pandemic which caused

many faculty and students to quickly pivot to remote learning without the time, preparation, or

skills needed to create or participate an online learning environment.

It is necessary to examine the professional development needs and supports for faculty

as they develop their skills and prepare to design online learning spaces. Although much of the

research focuses on each of these aspects individually, very little research exists on ways to

create a scalable and sustainable holistic learning environment. However, by understanding

both the faculty and student online experiences and bringing together best practices in

teaching and learning, online learning, instructional design, professional development, and

student support, a holistic online learning environment can be created to facilitate high-quality,

engaging online teaching and learning.

ONLINE ENROLLMENT TRENDS

Longitudinal research by Juszkiewicz (2016) and the American Association of Community

Colleges (AACC) (2019) reveal a downward enrollment trend in community colleges beginning

in 2011. Continuing this research, the National Student Clearinghouse Research Center (2022) is showing nationwide enrollment data in higher education has been trending downward with more substantial drops impacting community colleges. Although community colleges are experiencing enrollment challenges, these reports also reveal that institutions offering distance education options are finding enrollment has remained steady or increased for the online modality.

The Community College Research Center (CCRC) (2022) and the Institute of Education Sciences' National Center for Education Statistics (NCES) (2021) report that almost 37 percent of public two-year college students enrolled in at least one distance education course in fall 2019. Of the 37 percent of students who enrolled in distance education, 15 percent were enrolled exclusively in distance education courses. These research studies show a trend indicating growth in student enrollment in distance education that will continue beyond the COVID-19 pandemic.

ONLINE TRANSFORMATION

Darby & Lane (2019) assert that online education is evolving to address student demand for accessibility and affordability. Means & Neisler (2020) and Garrett et al. (2021) have documented the increased pace of this transition as COVID-19 swept across the nation shuttering campuses and interrupting learning (State of Michigan, 2019; EducationWeek, 2020; UNESCO, 2022). Several researchers, including Olsen and Kenahan (2021); O'Keefe et al. (2021); Ozfidan et al. (2021); and Schanzenbach and Turner (2022) have examined the ways in which the face-paced online transition has left an indelible mark with positive sustainable

improvements to online teaching and learning as the world navigates through and beyond the COVID-19 pandemic.

Although more students are utilizing the online modality, Altindag et al., (2021), Kofeod (2021), and Bird et al. (2022) assert that the success and retention rates throughout the COVID-19 pandemic require further examination. Overall, Fischer et al. (2021) found students who successfully completed at least one online class were more likely to complete and obtain some type of credential.

Alpert et al. (2016), Bettinger et al. (2017), Hart et al. (2018), and Bird et al. (2022) all contributed to a large body of research that found students were not as successful in online classes when compared to other modalities when examining grades on course outcomes, course completion, final grades, persistence, and course repetition. Means et al. (2010) and Paul and Jefferson (2019) contributed to a contrasting body of research, however, that did not find a significant difference in student success by modality. While there were considerations for selection and modality choice, these studies did not consider or address student readiness, faculty skill development, or course design specific to online best practices.

While researching the California community college system, Johnson et al. (2015) found an individual model of online course development that significantly impacted student success in online and subsequent course work. The research by Johnson et al. is one of the rare large scale research studies that examined the individual development model to identify aspects that could be scalable and lead to increased student success.

Krieg and Henson (2016) further refine the online student success research by examining students taking course prerequisites online and finding grades in subsequent courses

to be slightly lower for students completing the prerequisite courses face-to-face. However,

Jaggars and Zu (2016) assert that students are as successful or more so in online classes if the

online instructor incorporates online instructional design best practices and utilizes online best

practices in teaching and learning.

STUDENT SUPPORTS

As community colleges have grown and evolved, various student support services have

been added. Grubb (2001) asserts that while support services may be organized and distributed

in a variety of ways, they are often uncoordinated, leaving the student to determine the

academic and non-academic supports that will best address their needs.

Rosenbaum, et al. (2006) further assert that colleges are focusing on the structure of

services while making a fundamental and incorrect assumption that students have the

knowledge, skills, and motivation to seek out assistance when needed. Building off this

research, Jenkins (2007) found that colleges that grouped student services in a more centralized

way and connected high-impact practices (HIPs) with student services, improved student

retention. Further exploring the decentralized student service model, Karp et al. (2008) state

that the ways in which institutions have added services tend to disadvantage students who

need them the most.

Cooper (2010), Crawley and Fetzner (2013), Goldrick-Rab et al. (2013), and Shaw et al.,

(2021) found that a coordinated "one stop" model provided a single place for the student to

inquire along with staffing to streamline and simplify the process.

While services are open to all students, Dickmeyer and Zhu (2013) assert that students

who already possess social and cultural resources that support help-seeking tend to utilize

these services. Dunn et al., (2014) and Parnes et al. (2020) found that while these support

services are open and available to all students, students who have not normalized help-seeking

and support tend to interpret their failure to succeed toward their academic goals as personal

failure rather than structural failure.

The same basic uncoordinated student support structures are often replicated in the

online learning environment. Stewart et al. (2013) suggested that as technology evolves,

students' expectations will expand, requiring greater support coverage. Peters et al. (2017)

advocated for a systematic, intentional, and purposeful design and delivery of effective online

student support services with additional supports to address the unique aspects of the online

learning environment.

Chang's (2005) research focused on minority community college students and identified

a positive correlation between a high level of faculty-student interaction and student retention.

Palloff and Pratt (2007) found these same student retention strategies were effective in the

online learning environment as well. Further extending the research on student retention,

Bickerstaff et al. (2021), Nakijima et al. (2012), and the Center for Community College Student

Engagement (2015) found that community college student retention improved based upon the

perceived caring by the faculty member for the student. Pacansky-Brock et al. (2020) has

furthered this research through a humanized online teaching approach influenced by culturally

responsive teaching and universal design. Most recently, Rotar (2022) proposed a framework

for embedding student support interventions to create a more personalized and holistic

approach to online student support.

High-Impact Practices

While a large body of quantitative and analytical data focused on student enrollment, completion, and retention characteristics, another large area of focus is identifying practices that result in high-impact practices (HIPs), scalable and sustainable student success, persistence, and retention.

The Association of American Colleges and Universities (AAC&U) along with Kuh (2008) have identified institutional HIPs that have shown promise regardless of modality. Using the HIPs research, Fink (2016) developed high-impact teaching practices (HITPs). Nilson and Goodson (2018), Linder and Hayes (2018), Darby and Lang (2019), and Gamrat et al. (2022) have further refined HIPs and HITPs for the online learning environment, illustrating positive impact by modality, specifically illustrating positive outcomes for online students.

FACULTY SUPPORT

According to Legon and Garrett (2017, 2018, 2019, 2020) and Garrett et al. (2021), higher education institutions have varying levels of faculty support ranging from high support options, such as well-staffed design teams, to minimal support relying on faculty to have or obtain the necessary skills and knowledge to design and develop their own online courses. These supports have greatly increased in recent years. Leary et al. (2020) revealed that faculty who utilize professional development and faculty support systems and resources regarding best practices in online instructional design experienced increased student success in their courses.

Baker (2004) examined educational and cognitive psychology specific to the online modality, asserting that, like the face-to-face learning process, communication immediacy is integral to student satisfaction in the online learning environment. Building upon successful student engagement, Tallent-Runnels et al. (2006), Gaytan and McEwen (2007), and Dykman and Davis (2008a, 2008b) found well-designed and structured online courses enhanced student engagement and increased student success. Pulling from this same body of research, Kentnor's (2015) historical documentation of the evolution of distance education found online development, teaching and learning, and assessment and evaluation have all been modeled after that which took place face-to-face. According to findings from several studies, including Lee and Busch (2005), Choi and Park (2006), and Barrett (2010), the lack of acknowledgement for necessary online skill development can cause a disconnect for students and faculty. Research by Twigg (2003, 2005), Kyei-Blankson and Keengwe (2011), Lloyd et al. (2012), and Spiceland et al. (2015) reveals the lack of faculty online skill development and support impacts student success. Taylor (2016) furthers the cognitive development perspective by suggesting more in-depth exploration into how systems of inequality impact cognitive development and thereby effecting student success.

Recent data and research from Collier et al. (2020), Garrett et al. (2021), Hodges et al. (2021) Pandit and Agrawal (2021), and Bird et al. (2022) continue to show that the challenges students experienced with the online modality are also experienced by faculty.

Professional Development

The recent focus of institutions, accreditation bodies, and best practices has shifted to include acknowledgement of the need for faculty support and professional development for online teaching and learning. Lee and Busch (2005), Choi and Park (2006), Barrett (2010), Magda (2019), Kellen and Kumar (2021), among others, have found that designing online courses and helping faculty transition to an online teaching environment requires faculty preparation, pedagogical knowledge, instructional design expertise pertaining to online learning, and technology skills. As noted by Choi and Park (2006), Lloyd et al. (2012), and Chametzky (2014), faculty must develop or possess these skills and abilities to create high-quality online learning experiences.

Although online growth has remained steady with modest increases over the past decade, the recent COVID-19 pandemic has created rapid growth within the online teaching and learning modality. Institutions quickly converted classes to remote then transitioned into online. Frankel et al. (2020), Garrett et al. (2021), and Kellen and Kumar (2021) note that this same growth has not been matched with increased pedagogical training or support for online faculty.

Historically, many institutions offer training for online technologies and some offer instructional design training. As Magda et al. (2015), Magda (2019), Legon and Garrett (2020), and Garrett et al., (2021) noted, these trainings are not necessarily required and do not always address pedagogical aspects of online learning or examine emerging technologies for active learning. Despite training opportunities, Dimeo (2017) and Magda (2019) found that full-time

faculty and adjuncts often do not participate in optional professional development centered around teaching and learning.

Designing High-Quality Online Experiences

Gunder et al. (2021), Fox et al. (2021), and Davis et al. (2022) assert that the foundation of high-quality digital learning experiences is equity, inclusivity, and accessibility that benefits all students. Building upon that foundation to create well-organized and thoughtfully designed courses relies upon instructional design principles and strategies to align learning outcomes with learning assignments, activities, and assessment practices.

CONCLUSION

The reviewed literature highlights the evolution of online learning and student support strategies from depersonalized decentralized services to a more accessible and targeted model to effectively address increasingly diverse student needs. Similarly, faculty support and professional development are in demand to meet the rapidly transitioning needs of online faculty. *Reducing Cognitive Dissonance: Creating Holistic Student Support in the Online Classroom* is an instructional design professional development course designed to provide faculty with strategies to teach online and to create a holistic student support structure within the online learning environment.

CHAPTER THREE: METHODOLOGY

INTRODUCTION

Community college and higher education faculty are often hired based upon their depth of knowledge and subject matter expertise. While teaching and learning knowledge and experience are favorable, they are not often required or stated in an institution's hiring requirements. Higher education accrediting agencies outline minimum faculty credentials based upon degrees, experience, and expertise in the subject matter area, equating such credentials to adequate teaching knowledge (Higher Learning Commission, 2020). While expertise within the subject matter is an important component of teaching, many faculty members are lacking pedagogical knowledge and further struggle with the application in various modalities. Research has shown that community college faculty who participate in some form of structured intentional scholarship related to teaching and learning increase pedagogical innovation, student engagement, and ultimately student retention (Bass, 2012; Dell et al., 2008; Bolliger & Wasilik, 2009; Douglas, 2008; Lorenzo, 2011; Burns, 2017).

In a recent literature review, Leary et al. (2020) found the recommendations from the research focused upon professional development programs, context of professional development, and the instructors' activity during professional development but also found that consistency with design and delivery were challenging. This was particularly apparent as the COVID-19 pandemic quickly moved to remote teaching and in following semesters, expanding online offerings. While many institutions obtained funding to support online learning, the

funding overwhelmingly expanded upon technology with very little addressing faculty support or professional development (Legon & Garrett, 2020; Garrett, 2021). To address this need, an Online Teaching and Learning seminar was created which is the product of this dissertation.

CREATING THE ONLINE TEACHING AND LEARNING (OTL) SEMINAR

This Online Teaching and Learning (OTL) seminar is designed to provide new and existing faculty with the philosophical background and instructional design methodologies as well as teaching and learning techniques and skills needed to facilitate online and hybrid courses. The OTL instructional design portion emphasizes the integration of holistic student supports. The lessons contained within the OTL seminar are designed to help faculty members identify and build new skills. In so doing, faculty will be able to teach and facilitate a course that will be based upon the most effective practices for online teaching and learning resulting in increased levels of student success and retention. Kellogg Community College faculty, the original audience for the OTL seminar, do not have coordinated support through a center for teaching and learning, thus, professional development and technology resources are disproportionately distributed by academic departments and often left for the faculty member to seek out. The OTL seminar was developed to provide KCC faculty a cohesive learning experience and ongoing dialog about online teaching and learning best practices and student support.

Although this OTL seminar was designed for KCC faculty, the data, demographics, and resources were sourced from peer-reviewed research and national data sets. This wider scope of data helps inform faculty on the trends and realities of higher education, which allows for a wider participatory audience. Course learning objectives and participant learning outcomes were developed based upon online teaching and learning and student support established best

practices and high-impact practices. The overall design is set up in a modular structure to facilitate revision and customization for a variety of institutions.

OTL LEARNING GOALS (LG)

As a result of the reviewed research, several guiding questions were developed to guide the structure of the OTL seminar. As written, the guiding questions became the intended purpose and the desired achievement of the OTL seminar, Learning Goals (LGs).

LGs provided structure for the creation of the course learning objectives (CLOs), which are the actions the instructor will take to guide participant learning. The CLOs then provided a foundation for the Participant Learning Outcomes (PLOs) and assessments. PLOs are the actions, knowledge, or skills participants will gain as a result of the CLOs (see Figure 1).

Figure 1: *Course structure*

Learning Goal (LG)
Overall purpose of the course

Course Learning Objective (CLO)
Actions instructor will take to reach the learning goal

Participant Learning Outcome (PLO)
What learners actually produce as a result of the CLOs
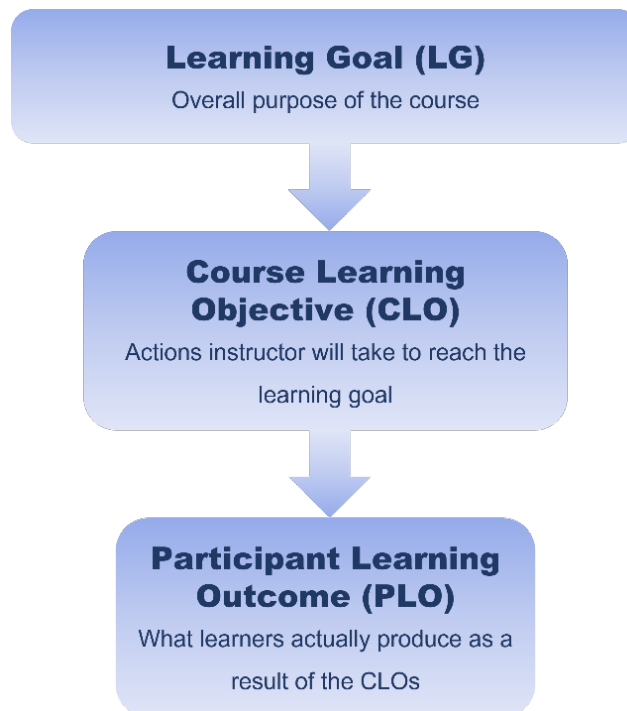
The learning goals for the OTL seminar are:

LG1.   What are the key differences between online and face-to-face teaching and learning?
LG2.   What are the best practices for engaging and supporting online students?
LG3.   How do course activities and course delivery impact student learning?
LG4.   Which high-impact practices benefit online students most effectively?
LG5.   In what ways do assessment and evaluation provide continuous improvement?

The course map (see Table 1) was developed to illustrate the connection the LGs, CLOs, and PLOs.

Table 1: *Learning Goals Map*

CLO	Participant Learning Objective (PLO)	LG1 — 1. Articulate characteristics of the online learning modality	LG2 — 2. Discuss best practices for online student engagement	LG2 — 3. Identify communication methods to engage and support students	LG2 — 4. Identify digital options for student supports	LG3 — 5. Demonstrate effective tools for assignment delivery	LG3 — 6. Develop effective online course organization, including clear directions and policies for students	LG4 — 7. Plan effective management of course materials, assignments, interactions, and supports	LG4 — 8. Identify components of a high-quality online class	LG5 — 9. Articulate the assessment process for newly developed online classes	LG5 — 10. Locate resources for the evaluation of online classes
1	A. Define what is meant by "online learning".	X									
1, 2	B. Identify and describe the advantages and disadvantages of online learning.	X	X								
1	C. Identify some of the differences between online and on-campus instruction.	X									
3, 4	D. Identify and justify strategies to facilitate students' success in online courses.			X	X						
2, 3, 4	E. Identify "introductions or ice-breaking" activities while creating a first-week activity.		X	X	X						
3, 4, 5, 6,	F. Match communication activities and tools to differing instructional goals.			X	X	X	X	X			
3	G. Identify the advantages and disadvantages of using various communication tools.			X							
3, 4	H. Choose and justify the use of a communication tool for an instructional objective.			X	X						
3, 4	I. Describe and create techniques for managing and moderating communicative interactions.			X	X						
6, 7	J. Develop a course plan.						X	X			
6, 7	K. Determine lecture strategy.						X	X			
6, 7, 8	L. Incorporate instructional design principles into the development of online content.						X	X	X		
8, 9	M. Identify opportunities for authentic assessment.								X	X	
9	N. Select aspects of authentic assessment that fit the assessment needs of your course.									X	
8, 9, 10	O. Assess online courses success and online instructor proficiency.								X	X	X
2, 4, 8	P. Establish an engaging and supportive learning environment		X		X				X		
4	Q. Identify non-cognitive student challenges				X						
4	R. Identify student at-risk markers				X						

The following guiding questions assisted in shaping the learning objectives and the course learning outcomes:

- GQ1. What are the key differences between online and face-to-face teaching and learning?

- GQ2. What are the best practices for engaging and supporting online students?

- GQ3. How do course activities and course delivery impact student learning?

- GQ4. Which high-impact practices benefit online students most effectively?

- GQ5. In what ways do assessment and evaluation provide continuous improvement?

OTL SEMINAR LEARNING OBJECTIVES (CLO)

Course Learning Objectives (CLOs) illustrate the plan for how the learning goals of the OTL seminar will be met. The CLO statements indicate what the instructor of the OTL seminar will provide to participants to facilitate learning. The CLOs have been written as measurable, observable, and specific statements clearly indicating what a participant should know and be able to do as a result of the learning. The CLOs are assessed throughout the course providing feedback to both the instructor and the participant on the learning process.

Upon successful completion of this course, the participant will be able to:

1. Articulate three unique characteristics of the online learning modality.

2. List at least five best practices for online student engagement.

3. Identify communication methods to engage and support students.

4. Identify digital options for student supports.

5. Demonstrate effective tools for assignment delivery.

6. Develop effective online course organization, including clear directions and policies for students.

7. Plan effective management of course materials, assignments, interactions, and supports.

8. Identify components of a high-quality online class.

9. Articulate the assessment process for newly developed online classes.

10. Locate resources for the evaluation of online classes.

A CLO course map (see Table 2) was developed to indicate where each CLO is addressed throughout the OTL seminar. The map illustrates weekly topics in which the CLOs are addressed and functions as a visual check to ensure the CLOs are all addressed in a balanced way throughout the OTL seminar.

Table 2: *Course Learning Objectives Map*

PLO	Course Learning Objectives (CLO)	Week 1						Week 2			Week 3				Week 4	Week 5
		Definitions	Modalities matter	Adv./Disadv.	Online comm	application of comm	role of instructor	Social presence	Introductions	Get to know students	Planning	Lectures	Instructional strategies	Layout	Best Practices add Assessment	Quality standards
A, B, C	1. Articulate characteristics of the online learning modality.	X	X	X												
B, E, P	2. Discuss best practices for online student engagement.				X	X	X	X		X	X					
D, E, F, G, H, I	3. Identify communication methods to engage and support students.				X	X	X	X		X	X		X			
D, E, F, H, I, P, Q, R	4. Identify digital options for student supports.												X			
F	5. Demonstrate effective tools for assignment delivery.											X	X	X	X	
J, K, L	6. Develop effective online course organization, including clear directions and policies for students.										X		X	X		
F, J, K, L	7. Plan effective management of course materials, assignments, interactions, and supports.										X	X	X	X		
L, M, O, P	8. Identify components of a high-quality online class.														X	X
M, N, O	9. Articulate the assessment process for newly developed online classes.														X	
O	10. Locate resources for the evaluation of online classes.															X

OTL PARTICIPANT LEARNING OUTCOMES (PLO)

Participant Learning Outcomes (PLO) are the measurable and observable actions the participants will actually perform to meet the CLOs of the OTL seminar. The PLOs describe the information, skills, behaviors, or perspectives participants will acquire throughout the seminar and are written in such as way as to be measurable.

The OTL seminar will teach participants how to:

- Define what is meant by "online learning."

- Identify and describe the advantages and disadvantages of online learning.

- Identify some of the differences between online and on-campus instruction.

- Identify and justify strategies to facilitate students' success in online courses.

- Develop? introductions or "ice-breaking" activities while creating a first-week activity.

- Match communication activities and tools to differing instructional goals.

- Identify the advantages and disadvantages of using various communication tools.

- Choose and justify the use of a communication tool for an instructional objective.

- Describe and create techniques for managing and moderating communicative interactions.

- Develop a course plan.

- Determine lecture strategy.

- Incorporate instructional design principles into the development of online content.

- Identify opportunities for authentic assessment.

- Select aspects of authentic assessment that fit the assessment needs of your course.

- Assess online courses success and online instructor proficiency.

- Establish an engaging and supportive learning environment.

- Identify non-cognitive student challenges.

- Identify markers and behaviors that may indicate at-risk students.

A PLO course map (see Table 3) illustrates the connections between the CLOs and the PLOs to ensure connectivity and balance throughout the OTL seminar.

Table 3: *Participant Learning Outcomes Map*

CLO	Participant Learning Outcomes (PLO)	1. Articulate characteristics of the online learning modality.	2. Discuss best practices for online student engagement.	3. Identify communication methods to engage and support students	4. Identify digital options for student supports	5. Demonstrate effective tools for assignment delivery	6. Develop effective online course organization, including clear directions and policies for students	7. Plan effective management of course materials, assignments, interactions, and supports	8. Identify components of a high-quality online class	9. Articulate the assessment process for newly developed online classes	10. Locate resources for the evaluation of online classes
1	A. Define what is meant by "online learning".	x									
1, 2	B. Identify and describe the advantages and disadvantages of online learning.	x	x								
1	C. Identify differences between online and on-campus instruction.	x									
2, 3, 4, 6, 7, 8, 9	D. Identify and justify strategies to facilitate students' success in online courses.		x	x	x		x	x	x	x	
2, 3, 4	E. Identify "introductions or ice-breaking" activities while creating a first-week activity.		x	x	x						
3, 4, 5, 6, 7, 8	F. Match communication activities and tools to differing instructional goals.			x	x	x	x	x	x		
3, 4, 5	G. Identify the advantages and disadvantages of using various communication tools.			x	x	x					
2, 3, 4, 5, 6, 7, 8	H. Choose and justify the use of a communication tool for an instructional objective.		x	x	x	x	x	x	x		
2, 3, 4, 6, 7, 8	I. Describe and create techniques for managing and moderating communicative interactions.		x	x	x		x	x	x		
1, 2, 3, 4, 5, 6, 7, 8	J. Develop a course plan.	x	x	x	x	x	x	x	x	x	x
5, 6, 7, 8	K. Determine lecture strategy.					x	x	x	x		
4, 5, 6, 7, 8	L. Incorporate instructional design principles into the development of online content.					x	x	x	x	x	
2, 4, 5, 6, 7, 8	M. Identify opportunities for authentic assessment.			x		x	x	x	x	x	
5, 6, 7, 8, 9	N. Select aspects of authentic assessment that fit the assessment needs of your course.						x	x	x	x	
8, 9, 10	O. Assess online courses success and online instructor proficiency.								x	x	x
1, 2, 3, 4, 5, 6, 7, 8, 9, 10	P. Establish an engaging and supportive learning environment	x	x	x	x	x	x	x	x	x	x
2, 3, 8, 10	Q. Identify non-cognitive student challenges		x	x					x		x
2, 3, 8, 10	R. Identify student at-risk markers		x	x					x		x

ASSESSMENTS

The assessment plan for the OTL seminar illustrates how the CLOs and PLOs are measured (assessed). Tables 4-5 provide the overall assessment plan for the OTL seminar as well as a map indicating the topics and content area in which the assessment resides. Table 4 maps the CLOs to the assessments within the weekly topics. Table 5 examines the assessments

within the weekly topics as they relate to the PLOs. Table 6 provides the details for the

assessment plan for the overall OTL seminar.

Table 4: *Course Learning Objectives (CLOs) Assessment Map*

Course Learning Objectives (CLO)	Week 1									Week 2							
	Discussion forum/Flipgrid compare/contrast modalities	Journal	Role differentiation	One minute paper	Communication strategy summary	Discussion forum	Embracing the unexpected	Journal	Article reflection	Discussion forum/Flipgrid	Are We Ready?	Discussion forum	Target population	One minute paper	Role of accreditation	Journal reflection	Program accreditation
1. Articulate characteristics of the online learning modality.	X		X	X		X	X		X								
2. Discuss best practices for online student engagement.				X		X	X		X								
3. Identify communication methods to engage and support students.				X		X	X										
4. Identify digital options for student supports.										X		X					
5. Demonstrate effective tools for assignment delivery.																	
6. Develop effective online course organization, including clear directions and policies for students.																	
7. Plan effective management of course materials, assignments, interactions, and supports.																	
8. Identify components of a high-quality online class.															X		X
9. Articulate the assessment process for newly developed online classes.																	
10. Locate resources for the evaluation of online classes.															X		X

Course Learning Objectives (CLO)	Week 3																	Week 4											Week 5				
	Quiz	Student Case File analysis	Discussion forum	Student interaction	Journal reflection	Student stories	MindMap	Develop course outcomes	Quiz	Observable behaviors	Discussion forum/Flipgrid Metacognition on student learning	Discussion the Sage at Myth	Discussion	AQDE doesn't work for me	Peruzzi	Learner Analysis	MindMap (expanded) Assessment map	Discussion forum/Flipgrid Authentic assessment	Padlet	Building social presence	Journal reflection Role of instructor	Discussion forum/Flipgrid Ice Breaker	Peruzzi	Collaborative association reflection	One minute paper review week 1 paper	Q360/Google doc Summative assessment	Discussion forum Reaction to rubrics	Journal reflection	Quality standards rubric	Discussion	KOC's processes and rubric	One minute paper	Stakeholder expectations
1. Articulate characteristics of the online learning modality.								X												X				X									
2. Discuss best practices for online student engagement.		X	X	X	X	X													X		X	X	X										
3. Identify communication methods to engage and support students.	X	X	X	X	X	X													X		X	X	X										
4. Identify digital options for student supports.	X				X		X				X								X	X	X	X	X			X							
5. Demonstrate effective tools for assignment delivery.					X		X				X								X	X	X	X	X			X							
6. Develop effective online course organization, including clear directions and policies for students.										X	X	X	X	X	X					X	X	X			X								
7. Plan effective management of course materials, assignments, interactions, and supports.										X	X	X	X	X	X	X				X	X	X			X								
8. Identify components of a high-quality online class.	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
9. Articulate the assessment process for newly developed online classes.			X	X							X				X	X					X	X				X							
10. Locate resources for the evaluation of online classes.											X	X			X	X						X				X		X	X	X			

Table 5: *Participant Learning Outcomes (PLOs) Assessment Map*

Participant Learning Outcomes (PLOs)

A. Define what is meant by "online learning"

B. Identify and describe the advantages and disadvantages of online learning.

C. Identify differences between online and on-campus instruction.

D. Identify and justify strategies to facilitate students' success in online courses.

E. Identify "introductions or ice-breaking" activities while creating a first-week activity.

F. Match communication activities and tools to differing instructional goals.

G. Identify the advantages and disadvantages of using various communication tools.

H. Choose and justify the use of a communication tool for an instructional objective.

I. Describe and create techniques for managing and moderating communicative interactions.

J. Develop a course plan.

K. Determine lecture strategy.

L. Incorporate instructional design principles into the development of online content.

M. Identify opportunities for authentic assessment.

N. Select aspects of authentic assessment that fit the assessment needs of your course.

O. Assess online courses success and online instructor proficiency.

P. Establish an engaging and supportive learning environment

Q. Identify non-cognitive student challenges

R. Identify student at risk markers

Table 6: *Course Topic and Module: Assessment Map*

Week	Topic	Tool	Assessment	Participant Learning Outcome	Course Learning Objectives
Week 1	Introduction			**A, B, C, D, E, G, P**	**1, 2, 3**
Week 1	Introduction	Discussion Forum	Compare/contrast at least two learning modalities, articulating three unique characteristics of each	A, B, C	1
Week 1	Introduction	Flipgrid	Reflection on two differentiation		1
Week 1	Introduction	Journal	Summarize communication strategies	B, D, P	1, 2, 3
Week 1	Introduction	One Minute paper	Embracing the unexpected	D, F, P	1, 2, 3
Week 1	Introduction	Discussion on forum	Article reflection	A, D, G	1, 2, 3
Week 1	Introduction	Journal		C, D, P	1, 2, 3
Week 2	Community College Structure			**B, C, D, O, P, Q, R**	**1, 2, 4, 8, 10**
Week 2	Community College Structure	Discussion on Forum	Are We Ready?	B, C, D, P	1, 2, 4
Week 2	Community College Structure	Discussion on Forum	KCC's Target Population	D, P, Q, R	4
Week 2	Community College Structure	One Minute paper	Role of Accreditation	O, P	8, 10
Week 2	Community College Structure	Journal reflection	Program accreditation and programs that are without external oversite	O, P	8, 10
Week 3	Instructional Design			**D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R**	**1, 2, 3, 4, 5, 6, 7, 8, 9, 10**
Week 3	Instructional Design	Quiz	Student case file analysis	D, P, Q, R	3, 4
Week 3	Instructional Design	Discussion on Forum	Student Interactions	D, E, F, G, H, I, P	2, 3, 8
Week 3	Instructional Design	Journal reflection	Student Stories	D, P, Q, R	2, 3, 8
Week 3	Instructional Design	MindMap	Develop Course outcomes	D, J, K, L, M, N, O, P, Q, R	2, 3, 4, 5, 8, 9
Week 3	Instructional Design	Quiz	Observable behaviors	D, P, Q, R	2, 3, 8
Week 3	Instructional Design	Discussion on Forum / Flipgrid	Metacognition and student learning	D, P, Q, R	1, 2, 3, 4, 5, 7, 8
Week 3	Instructional Design	Discussion on forum	Thoughts on "The Biggest Myth in Education"	D, P, Q, R	6, 7, 8
Week 3	Instructional Design	Discussion on forum	ADDIE - this doesn't work for me	J, K, L	4, 5, 6, 7, 8, 9
Week 3	Instructional Design	Perusal	Learner Analysis	D, J, K, L, P, Q, R	6, 7, 8
Week 3	Instructional Design	Expanded MindMap	Assessment map (expanded from course outcomes)	D, J, K, L, M, N, O, P, Q, R	6, 7, 8, 9, 10
Week 3	Instructional Design	Discussion on Forum / Flipgrid	Authentic assessment - initial thoughts	D, J, K, L, M, N, O, P, Q, R	6, 7, 8, 9, 10
Week 4	Best Practices			**B, C, D, F, G, H, I, J, K, L, M, N, O, P**	**1, 2, 3, 4, 5, 6, 7, 8, 9, 10**
Week 4	Best Practices	Padlet	Ways you could be social presence in your current teaching	F, G, H, I	2, 3, 4, 5, 8
Week 4	Best Practices	Journal reflection	Role of the Instructor: Your perceptions on modality impact	B, C, D, H, P	1, 4, 5, 7, 8
Week 4	Best Practices	Discussion on Forum / Flipgrid	Design an ice breaker activity	E, F, H, P	2, 3, 4, 5, 6, 7, 8
Week 4	Best Practices	Perusal	Reflection on readings with collaborative annotation	D, I, J, K, L, M	2, 3, 4, 5, 6, 7, 8
Week 4	Best Practices	One Minute paper	Revisit Week 1's One Minute Paper - what revisions would you make based on what you've learned	D, G, I	1, 2, 3, 4, 5, 6, 7, 8
Week 4	Best Practices	O365 document/Google Doc (collaborative tool)	Summative assessment: Continuous Improvement Plan	D, F, J, M, N, P	8, 9, 10
Week 4	Best Practices	Discussion on forum	Reaction to rubrics	M, N, O, P	4, 5, 6, 7, 8, 9
Week 5	Quality Standards			**L, N, M, O, P**	**10**
Week 5	Quality Standards	Journal reflection	Reflection on quality standards rubric	L, M, N, O, P	10
Week 5	Quality Standards	Discussion	KCC's processes and rubric	L, M, N, O, P	10
Week 5	Quality Standards	One Minute paper	Compare/contrast stakeholder expectations with KCC's processes	L, M, N, O, P	10

CRITICAL COMPONENTS OF THE ONLINE TEACHING AND LEARNING (OTL) SEMINAR

Emerging K-12 educational research examining the pivot to remote learning, then transitioning to online learning throughout the COVID-19 pandemic school closures is revealing a large percentage of students struggling and declining academically as well as a deepening divide pertaining to educational opportunities and a widening equity gap (U.S. Department of Education, 2021; Pier et al., 2021; Soria et al., 2020). Students coming from K-12 districts throughout the KCC service area and surrounding counties have experienced 18 months in unstable learning environments due to illness, class cancellations, technology challenges, equity issues, and state mandated school closures. Some districts chose to remain fully online for the duration while other districts offered hybrid or fully in-person learning experiences when the state mandates were lifted. With incoming students potentially less prepared than previous years, research is suggesting additional supports will be needed and necessary (CCRC, 2020; Michigan Department of Education, 2021; Sanchez, 2022).

While many support practices are available as a resource for students, they often require the student to self-identify and seek out the supports they need. Research has shown that community college students tend to have lower levels of help seeking behavior and often struggle to determine when and which supports are needed (Parnes et al., 2020; Dunn et al., 2014). Even though students may be provided with a wide range of support options through mechanisms such as a required new student orientation or academic advising, data indicate low levels of use. These data further indicate a gap between student awareness of services and actual application at the time of need (Chyr et al., 2017; Dickmeyer & Zhu, 2013). Of the best

practices research identified, those that have higher rates of success, sustainability, and scalability are those that are integrated into the student experience (Won et al., 2021; Lorenzo, 2011; CCSSE 2014; Jenkins & Bailey, 2017; AACC, 2019).

The OTL seminar assists faculty with a critical analysis to identify the supports beneficial to students and strategies for presenting the supports within the integrated context of the learning environment. The holistic integrated strategy helps faculty and students connect supports at a time most effective for student learning and in a manner that normalizes help seeking behaviors (Qayyum, 2018).

HIGH-IMPACT PRACTICES

Reviews of the research, federal, state, and local data as well as student survey feedback revealed several high-impact areas; areas that have demonstrated positive shifts in student engagement, success, retention, and completion. Research from Center for Community College Student Engagement (2014, 2020) and from the Community College Research Center (2011, 2013) identified high-impact practices for student support integration for online learners. Taking these practices in to consideration, the OTL seminar presents ways in which these high-impact practices may be integrated into and throughout the design of an online course. While some high-impact practices may occur on a broader scale prior to course registration, there are aspects that may be referenced and integrated into the individual course design to reinforce learning and support.

High-Impact Institutional Practices

The following high-impact practices are addressed throughout the OTL seminar:

- Alerts and interventions

- Tutoring

- Supplemental instruction

- Mandatory online orientation

- Accessible and available technical support

- Incentives for faculty participation in professional development

- Engaging faculty in topics related to student learning

- Service learning; Community-based learning

- Internships

Examples of these institutional HIPs are found within the content of the OTL seminar as well as through the actions of the instructor of the OTL seminar; both providing through experiential examples and modeling of these practices.

Table 7: *Institutional High-Impact Practices*

INSTITUTIONAL HIPS	ADDRESSED IN OTL	ADDRESSED INSTITUTIONALLY
Alerts and interventions	Grade book: use of threshold grades/color codes	
Tutoring	Integrated into course assignments; links to tutoring options in assignment instructions; links to tutoring available within LMS/course home page	
Supplemental instruction	Lesson tool branching; pre-requisite courses	
Mandatory online orientation	Pre-requisite; embed items throughout course	KCCS-C100 (Online Learner Orientation) prerequisite on all courses for all students
Accessible and available technical support	Help desk, contingency plan, FAQs; Contact information in syllabus, Header on course home page; within assignment instructions	

INSTITUTIONAL HIPS	ADDRESSED IN OTL	ADDRESSED INSTITUTIONALLY
Incentives for faculty participation in professional development	Note any related PD/micro credential	contractional agreements; micro credentials
Engaging faculty in topics related to student learning	Note any ongoing research and/or 'Learn More'	SoTL; learning communities
Service learning; Community-based learning	If course has Service Learning Endorsement, the work is embedded within the course work. Touch upon as examples in course	institutional graduation requirement
Internships	May touch upon as examples in course	Departmental; Program-specific requirement

As an example of the institutional HIP "Alerts and interventions," the OTL seminar grade book is set up such that a minimum acceptable grade is identified. If a participant earns a grade lower than the set threshold, the grade report for both the instructor and the participant will deliver an alert. This allows the instructor to address any potential issues or interventions with the participant and, in turn, the participant has immediate notification of action needed.

Another institutional HIP KCC utilizes is a mandatory online learning technologies orientation for all students (regardless of modality). Thus, to mirror this institutional requirement, OTL seminar participants will need to successfully complete the Online Learner Orientation (KCCS-C100) prior to registering for the OTL seminar. Completing the KCCS-C100 course will allow participants (faculty) to experience the prerequisite from the student perspective, providing information, support, and expectations for college-level learning.

Additional examples of institutional HIPs embedded within the OTL seminar are "Accessible and available technical support" through a dedicated conduit within the LMS providing access to KCC's Help Desk, "Incentives for faculty participation in professional

development" via continuing education credits and stipends, and "Engaging faculty in topics related to student learning" as the OTL seminar fulfills faculty contractually obligated professional development activities.

High-Impact Instructional Practices and Evidence-Based Strategies

High-Impact Instructional Practices (HIIPs) are those practices that research has shown to have a higher-than-average impact on student learning. Common measures of effect size are used to determine the impact of a particular strategy.

An Evidence-Based Strategy (EBS) is an approach to teaching that has a proven impact on student learning. The strength of evidence is based on the quality of the supporting research, the type of supporting research, and the number of supporting studies.

The following HIIPs and EBSs are addressed within the OTL seminar:

- Collaborative leadership
- Active learning
- Collaborative assignments and projects; small groups
- Integrated research opportunities
- Writing across the curriculum
- Learning goals and outcomes
- Structured lessons; scaffolding
- Intentional learning-centered course design
- Explicit teaching practices
- Worked examples, application opportunities
- Accessibility
- Supplemental instruction

- Multiple exposures; authentic experiences

- Experiential learning

- Prompt feedback; ePortfolios

- Metacognitive strategies; meta learning

- Differentiated teaching methods

- Student-student; faculty-student engagement opportunities

Examples of HIIPs within the OTL seminar are found through the use of "Learning goals and outcomes." The OTL seminar not only utilizes mapped learning goals, course level outcomes, and participant objectives, but the content within Week 3: Instructional Design guides participants through the process of creating their own learning goals and outcomes with a mapping project assessment.

The OTL seminar includes content addressing "active learning," "structured lesson; scaffolding," "differentiated teaching methods," and metacognitive strategies; meta learning" throughout the course with activities and assessments to assist in the development of these practices within the participant's own course structure.

Table 8: *High-Impact Instructional Practices (HIIPs)*

HIIPS EBBS	EXAMPLES IN SEMINAR
Collaborative leadership	Participant discussion forums address ways to present content, activities, assessments based upon participant feedback; critique course plans based upon college framework (explore what works, what does not)
Active learning	Participants are actively engaged with the course material through discussions, problem solving, case studies, role plays activities centered around writing, talking, problem solving, or reflecting. Activities/assignments utilize participant's specific subject matter and content.

HIIPs EBBs	EXAMPLES IN SEMINAR
Collaborative assignments and projects; small groups	Opportunities to create paired working groups - one with similar discipline; one with different discipline to critique initial course map, delivery, and implementation plans
Integrated research opportunities	Within the analysis phase, participants will explore national data, local data, and programmatic student characteristics. Participant will research enrollment possibilities and influences on students both at a national level and a local (KCC) level.
Writing across the curriculum	Writing is offered throughout the course with access for assistance embedded. Requirement to submit writing to the CSS for review/feedback.
Learning goals and outcomes	Present in the syllabus and welcome video; structured objectives in each week
Structured lessons; scaffolding	ADDIE process with activities for each step scaffolding to the next with a final project result
Intentional learning-centered course design	Backwards design model to develop goals and outcomes; assessment designed to address/measure outcomes
Explicit teaching practices	Learning goals and outcomes in syllabus and discussed in welcome video; each week lists objectives which are then checked through comprehension assessments within the lesson tool. Branching within the lesson is used for those not able to pass comprehension checks with feedback reports available to the instructor.
Worked examples, application opportunities	Samples for course mapping based on different subjects (accredited program mapping, transfer maps, etc.). Overall course plans with implementation strategies presented. Students develop their own maps and plans throughout the course.
Accessibility	All materials are accessible (videos captioned, documents structured based upon WCAG 2.1 AA); differentiated formats; Online course development process addresses accessibility
Supplemental instruction	Synchronous group sessions scheduled thorough the course; Link to Zoom room available for student-to-student meetings; additional and alternative content paths (branching) within lesson tool

HIIPs EBBs	EXAMPLES IN SEMINAR
Multiple exposures; authentic experiences	All activities are designed for the participants to use their own course content for online course design and development. The course activities scaffold throughout the course and provide multiple opportunities to revisit and revise.
Experiential learning	Participants will use the theories and knowledge and apply them to activities which are based upon the participant's own course materials and subject matter. Journals (private) and discussion forums (public) provide an opportunity to reflect on the activity process.
Prompt feedback; ePortfolios	Feedback times stated in each assignment and within syllabus; final project in course is a course outline plan for participant's subject matter
Metacognitive strategies; meta learning	Address learning how to learn/learning how to understand (investigating how people learn, know, think, and work to be able to apply this knowledge to other areas of life) as part of the actual course content then through activities, participants explore from their personal perspective
Differentiated teaching methods	Differentiated content delivery as noted in accessibility; additional resources for additional or alternative learning options; instructor of expanded related materials to use if needed.
Student-student; faculty-student engagement opportunities	Discussion forums; group work; synchronous meetings; journals/assignments (private feedback)

ASSUMPTIONS BEHIND THE STRUCTURE OF THE OTL SEMINAR

The assumptions about the majority of the faculty participating in the OTL seminar are

that they are community college faculty hired primarily for their subject matter expertise and

knowledge within their field. These faculty are hired based upon the higher education

accreditation agency requirement for faculty credentials, not necessarily for their expertise,

experience, or knowledge of pedagogy or curriculum. While faculty are skilled in the area of

teaching and learning, they often do not possess the underlying pedagogical education or knowledge. The OTL seminar was designed to help bridge the pedagogical and curricular gap.

As noted previously, because Kellogg Community College does not currently have a centralized support area for faculty (i.e., a center for teaching and learning or dedicated faculty support personnel), this OTL seminar was originally designed and intended as a foundational tool to help faculty build and strengthen skills and knowledge within teaching and learning and foster a culture of scholarship in teaching and learning (Ginsberg et al., 2017; Franks & Payakachat, 2020).

Kellogg Community College new full-time tenure track faculty have several requirements they must fulfill as part of their tenure journey per the faculty bargaining unit agreement. One such requirement is to obtain knowledge, training, or education in the area of instructional design as well as certification in online teaching and learning. This OTL seminar has been developed to specifically address both tenure track requirements through a single course offering.

This OTL seminar is structured as a cohort-based multi-week fully online course with optional synchronous sessions. The modality was intentionally chosen to provide faculty with flexibility around institutional and teaching schedules. The cohort-based model is utilized to introduce new full-time tenure track faculty to each other outside of the constraints of their academic departments.

Another benefit of the OTL seminar design is to provide faculty with an online student experience. The structure of the course models that which it advises: an engaging teaching and learning process. While not every high-impact practice will be effective in the format presented,

faculty will be provided with opportunities to reflect on their experiences as online students and critically analyze the core components to explore ways in which high-impact practices can be customized and integrated into their course design.

LIMITATIONS / DELIMITATIONS OF THE PRODUCT

This OTL seminar is designed to provide a foundational introduction to instructional design for online education utilizing a specific design model. While many of the practices discussed can apply to any modality, this course focuses specifically on teaching and learning in the online environment.

The OTL seminar is designed as a multi-week course to fit within the academic semester and schedule for KCC faculty. The modular design allows other institutions to customize the pacing of the content to best fit their institutional structure. The PLO, CLO, and assessment map documentation provide the links between content, learning, and measures thereby allowing for further customization to best suit institutional demographics, skills gaps, and learning.

To align with best practices at KCC, the section capacity is set to 24 participants to allow the facilitator to engage and interact meaningfully with participants on a frequent basis. KCC experienced scalability challenges with this design model during the beginning of the COVID-19 pandemic as the typical participant load increased from an average of 8 participants per semester to over 175 participants per semester, requiring multiple sections with only one available facilitator.

KCC's implementation of the OTL seminar exists within the institution's learning management system; however, the content is structured to allow easy transferability to other

learning management systems although the content may need to be restructured or altered to take advantage of another institution's unique LMS features.

The OTL seminar also suggests ways for integrating holistic student supports based upon the services currently available at KCC. The services discussed in the OTL do not provide an exhaustive list and are not meant to be prescriptive for all institutions, instead the list is intended to suggest ways that similar services at the host institution might be integrated within the course content to increase access, use, and availability to normalize support services for students and thereby positively impact student success.

THE GOALS AND IMPLEMENTATION OF "PRODUCT"/DESIGN

INSTRUCTIONAL GOALS

This OTL seminar is designed to provide new and existing faculty with the philosophical background, techniques, and skills to teach, facilitate, and design online and hybrid courses while providing holistic student supports. The lessons contained in this seminar are designed to help faculty members identify and build new skills and, in so doing, teach and facilitate a course that will be based upon the most effective practices for online teaching and learning resulting in increased levels of student success and retention.

This specific seminar was designed for Kellogg Community College faculty; however, the data, demographics, and resources may be revised and customized for any institution.

The seminar is designed with established learning objectives and course learning outcomes, and includes a design map illustrating the interconnected goals, objectives, outcomes, and assessments.

The following course layout is presented in a guide format with modularized content appropriate for structure within a learning management system (LMS). In the Kellogg Community College course design presented, each module represents one week. This facilitated course is designed to take 5-6 weeks to complete. While this is not an exhaustive course on instructional design, student support, or online teaching and learning, it provides the foundation from which faculty may begin building their holistic online teaching and learning skill set.

The course covers the following topics for online teaching and learning:

- Introduction to distance education (national, state, and local perspectives)
- Differences in modalities
- Course design structure
- Instructional design process
- Instructional best practices for online teaching and learning
- Quality standards
- Continuous improvement
- Glossary of terms

CONCLUSION

The following chapter contains the course content as presented within the learning management system formatted as a guide. Appendix A contains images of the course as it exists within Kellogg Community College's learning management system, Moodle. The guide contains unique pagination for the guide as well as continued pagination as part of the dissertation.

Reducing Cognitive Dissonance:

Creating Holistic Student Support

in the Online Classroom

A Training Seminar for Community College Faculty

Contents

iv

v

Welcome

Welcome to Kellogg Community College's online teaching and learning course series "Reducing Cognitive Dissonance: Creating Holistic Student Support in the Online Classroom." This initial course is part of a series addressing teaching and learning from the online perspective. As such, this course is designed to provide faculty with the philosophical background, techniques, and skills to teach and facilitate online and hybrid courses while providing holistic student supports. The lessons contained in this course are designed to help you to identify and build new skills and, in so doing, teach and facilitate a course that will be the most effective and valuable for your students.

Please watch the "Welcome Video" for an overview of the course requirements, technology, and a tour of the learning management system.

This fully online course is delivered over the span of five weeks. Each week's work will build upon the following week, scaffolding content to build skill in instructional design as well as improving your online teaching skills.

Week 1: The Community College

Introduction

In this first week, we will explore the introductory components of online learning, including the community college landscape, rationale for modality, and overall teaching and learning best practices. We will define online learning and explore its advantages and disadvantages. You will also read about and begin to reflect on best practices as they relate to online teaching and learning.

Week 1: Course Learning Outcomes
- Articulate characteristics of the online learning modality.

Week 1: Participant Learning Objectives
- Define what is meant by "online learning."
- Identify differences between online and on-campus instruction.
- Identify and describe the advantages and disadvantages of online learning.

The Community College Mission

The community college is a uniquely American institution. Initially founded as junior colleges designed to address the lower levels of higher education such as liberal and general education, thereby freeing universities to focus on the senior college endeavors such as research. Although growth was slow, the need for a trained industrial workforce along with societal perception of upward mobility as a product of higher education helped speed up the development of community colleges.

1

Community college growth and popularity accelerated, promoting a mission of accessibility, open door policy, and a focus on students and teaching. There are currently approximately 1,043 community college across the United States, enrolling 6.2 million students annually. According to the American Association of Community Colleges, 39% of undergraduate students and 36% of first-time incoming freshmen are enrolled in community colleges (AACC, 2022).

Community College Accountability Structure

External Standards and Accountabilities

Accreditation is an external review process assuring colleges, universities, and education programs meet rigorous standards for quality assurance and improvement. Through institutional self-evaluation, peer review and institutional response, accreditation evaluates formal educational activities as well as institutional operations essential to the effectiveness of a college.

Kellogg Community College is accredited by the Higher Learning Commission (HLC), a regional accreditor covering 19 states in the north central region of the United States. KCC has been fully accredited since 1972, with its most recent reaffirmation in 2012. In October 2021, an HLC peer review team will conduct an onsite visit as part of KCC's latest reaffirmation.

Why Is It Important?

Accreditation assures that KCC meets the highest national educational standards, and

- Affirms that KCC is providing quality educational experiences for KCC students.
- Allows KCC students to receive federal financial aid.
- Aids in meeting licensure and employment requirements.
- Aids in credit transfer to other institutions.
- Provides valuable feedback on how well KCC is meeting its goals for student learning.
- Creates an opportunity for KCC to assess, evaluate and improve its programs and services.

Additional Resources

KCC's accreditation process and timeline

KCC's institutional self-study reports

KCC Assurance Argument

Program Accountability

Several programs at KCC utilize external standards such as accreditation requirements or state certification standards. These standards must be linked to course outcomes/competencies are not specific enough to be learning objectives – they focus on inputs rather than outcomes. However, it is advisable to align program outcomes with external standards. This alignment provides evidence of the quality of programmatic inputs.

2

General Education Core Outcome (Bruin Standard)

If the course you are developing is a general education course, one or more of the five major general education requirements must be listed and linked to course outcomes/competencies.

Program Level Outcomes

If the course you are developing is part of a program, these program level competencies must be listed and linked to course outcomes/competencies.

Course Outcomes

As previously discussed, the program level outcomes are specific enough to explain how broad expectations are accomplished within a given program. Course outcomes describe, using measurable language, the skills, knowledge, and attitudes the instructor will be attempting to produce in learners in a specific course. We'll take a look at how to develop effective learning outcomes and assessments in a future topic area during Week 3.

Outcome Mapping

Course outcomes should be mapped to program level outcomes. This mapping process will illustrate the alignment of the course to the program. Some mapping processes include the degree to which competency in the outcomes is expected (i.e., developing, proficient, mastery). Ideally, an effective outcome map will list all outcomes (institutional, general education (if applicable), certification entity (if applicable), program, and course). Mapping clearly illustrates where connections exist with respect to student learning. During the assessment process, mapping identifies where skills, knowledge, and attitudes are addressed and may be reinforced, revised, or consolidated should the assessment data reveal the need over time.
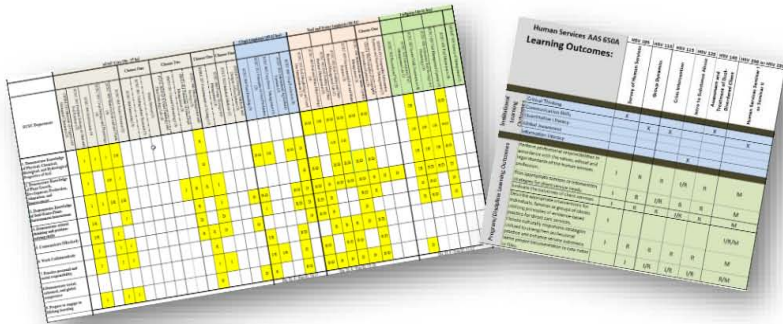
Assessments

Assessments are designed to measure learning objectives and ultimately, course outcomes – how do you know students learned? How much did they learn? Was there improvement? Consider each learning objective and ways mastery can be measured. This is where the precise measurable language comes in handy – what is it you want students to learn exactly? How do you know the learned? Are they proficient or have they reached mastery? We'll dive into assessment strategies a bit later in the course.

3

Learning Activities

Learning activities are used to allow students to practice what they have learned. Simply handing the student a lecture or reading will not make them proficient. Memorizing the content is not the same as becoming proficient in its use. The goal of the practice is to eventually get to proficiency and unconscious competence.

The Big Picture – Getting Started

Distance Education – A Larger View

Distance education has existed within higher education for many years, evolving into a mainstream modality for most institutions worldwide. While technology has pushed the transformation of online, hybrid, and even face-to-face classes, so too has our understanding of teaching and learning. While the worlds of face-to-face teaching and distance education modalities are quickly converging, in large part due to the use of educational technologies, there are still some unique aspects to consider as you prepare to teach online or hybrid courses. As we explore the various ways in which to engage students with the content, each other, and ourselves as faculty, we will also examine what makes the world of online learning unique.

Nationally, enrollment growth in online education has slowed but remains on the rise. According to the distance education survey by the Instructional Technology Council (ITC), online enrollment increased by 1% from 2015-2016 and another 8% from 2016-2017.

Within the state of Michigan, the Michigan Community College Association's Michigan Colleges Online distance education survey reports an increase in online enrollments of 5.5% from fall 2016 to fall 2017. Online enrollment at Kellogg Community College has remained very steady even with the severe enrollment declines over the past several years. While KCC has not experienced a dramatic increase in demand for online courses or a substantial increase in student registrations, institutional data shows that enrollment has remained consistent with over 1,400 unduplicated students enrolled in one or more distance education courses and 754 unduplicated students enrolled exclusively in online courses during fall 2017.

What we have heard from the Higher Learning Commission, Michigan's national accrediting agency, is an overall student demand for distance education, however, institutions must be intentional and responsible regarding the oversight of the quality, quantity, and strategy for distance education offerings. As you will learn later in this course, KCC's Learning Technologies department oversees many aspects of distance education including the coordination of the State Authorization Reciprocity Agreement (SARA), participation in Michigan Colleges Online (MCO), and certifies faculty for teaching online and hybrid courses. KCC also has a committee (Online Course Development Committee) dedicated to the oversight of course offerings and quality of the course development. The committee collaborated with the institution's Faculty Senate and Institutional Research to develop student feedback surveys specific to online students. Additional projects include a peer-reviewed continuous improvement process, best practices review rubric, and an option for faculty to have their teaching evaluation include online teaching in addition to face-to-face teaching.

4

To learn more about distance education from the state and national perspective, feel free to review:

- Instructional Technology Council (ITC) distance education survey
  NOTE: ITC is an affiliated council of the American Association of Community Colleges (AACC)
  - 2019 survey results
  - 2019 infographic
  - 2020 survey results
- Michigan Colleges Online (MCO) distance education survey
  - 2016 survey results
  - 2018 survey results
  - 2020 survey results
- Babson's Digital learning compass: Distance education enrollment report
  - 2017 report Grade increase: Tracking distance education in the United States
  - 2017 report
  - 2017 state almanac: Michigan
- Babson, Online Learning Consortium, and Pearson collaborative
  - Online report card: Tracking online education in the United States

Definitions of Online Learning

If you used any popular search engine to enter the keywords "definition online learning," your search would result in thousands of web sites proclaiming an *official* definition of online learning.

For example, the former Office of Technology Assessment of the U.S. Congress defined online learning as the "linking of a teacher and students in several geographic locations via technology that allows for interaction." The American Society for Training & Development defines online learning as "learning delivered by Web-based or Internet-based technologies." The Distance Education Resource Network defines online learning as an "instructional delivery that does not constrain the student to be physically present in the same location as the instructor." Michael Moore, director of the American Center for the Study of Distance Education, defines online learning as "planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special organizational and administrative arrangements."

You can see that the definition of online learning may initially seem straightforward, however there is (and most likely always will be) an ongoing debate as to what is involved in the process and concept of online learning.

Michael Moore provided, by far, the most detailed definition of online learning. However, for our purposes, we will adopt the following simplified definition of online learning:

> Online learning is instruction that occurs when the instructor and student are separated by distance or time, or both. A wide array of technology is used to link the instructor and student. Courses are offered via computer networking - including email, the Internet, and World Wide Web.

5

Teaching online means conducting a course partially or entirely through the Internet. What makes teaching online unique is that it uses the Internet, especially the World Wide Web, as the primary means of communication. Thus, when an instructor teaches online, she or he does not have to *be* in a specific location to carry out the instruction.

With the more recent impact of COVID-19 pandemic, a new term was developed to address the pivot from the face-to-face classroom to the online environment. Emergency Remote Teaching (ERT) is used to distinguish the rapid reactionary transition from face-to-face to online, whereas Online is used to describe teaching and learning that is designed for the modality.

Modalities Matter: How Teaching Online Will Be Different
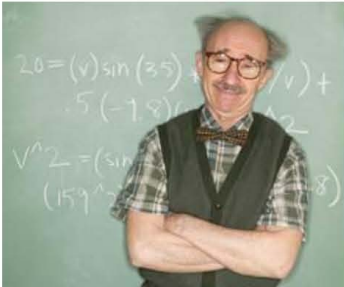
Let's take a look at teaching online and how it is different from teaching a comparable course in a traditional face-to-face classroom. As an online instructor, keeping these differences in mind can help you choose teaching strategies (which we will discuss at more length later) that will be the most productive for you and your students.

If you have never taught online or recently experienced the abrupt shift to remote teaching, you are probably wondering how online teaching will be different. You might even be skeptical of any learning environment outside of the classroom. You may imagine the classroom instructor as a persuasive speaker who relies on a collection of instructional aids and varied tasks to fully engage a class of eager learners. But regrettably, there are also classrooms staffed by instructors who neglect instructional aids and simply "talk-at" disinterested students.

First let's consider the differences in the actual learning environment itself.

A Learning Environment Defined

A learning environment is not defined by a physical gathering of instructor and students but instead by the nature of instructional interactions between them. Online learning design does not rely on a prevailing presence to direct learning. In other words, online instructors should not attempt to replicate themselves (via audio or video clips) in an effort to *present* themselves to students. Instead, sound learning theories are expressed through a deliberate selection of content, delivery, and instructional interactions.

View
"What's Best Learned Online, What Types of Students Benefit," a panel discussion with Shanna Smith Jaggars, Dan Butin, and Bror Saxberg (Vijay Kumar moderating)
https://youtu.be/z_hQUZEUyhs

6

What Does This Mean for You, The Instructor?

Two significant characteristics of online teaching become immediately apparent:

- your role as the **provider of instructional content** is de-emphasized.
- your role as the facilitator of instructional interactions – **facilitating and encouraging learning** – is emphasized.

Role As Provider of Instructional Content

- **Through classroom instruction:** The instructor often elaborates on ideas presented in a required text for the course. For example, text content might be reviewed, expounded upon, or supplemented through lecture or instructional aids.
- **Through online learning:** Core content is frequently delivered by selected web-based media in varying digital formats (e.g, text, graphic, audio/video, etc.). A good course design matches the content and instructional tasks to an appropriate delivery method. For example, a speech communications course might require video/audio components, whereas a course in tree identification might benefit from an interactive digital program which allows students to investigate the details a of tree or a virtual field lab.

The Instructor's Role As Facilitator

Because there is no single method or strategy for delivering an online course, there is no single explanation for how this delivery will impact your role in facilitating learning. Course content and design in online learning can incorporate other functions typically relegated to a classroom teacher. For instance, pop quizzes written and graded by the teacher, can become strategically placed self-test exercises in an online learning course. Please note that online learning will require more from you in your role as a facilitator of instructional interactions to compensate for the practical limitations of being physically separated from your students.

A Constant Across All Modes Of Delivery

One constant applies across all online learning delivery modes – your ability to immediately interpret and respond to students' instructional needs will be compromised, to some extent, by their physical absence. For instance, you cannot respond to expressions of confusion or boredom that you cannot see, and the absence of one student's participation is not nearly so apparent as the empty seat in an otherwise filled classroom. Even technologies like two-way interactive video conferencing cannot overcome the challenges inherent in communicating through an indirect media. For this reason, the online instructor must anticipate these limitations and plan teaching strategies that address them.

Reading List:

(My) Three Principles of Effective Online Pedagogy This is long with a lot of examples – don't expect to take it all in at once – the important aspect is to grasp the online learning philosophy stated in the paper. I recommend that you print it off and save it for future reference. You will refer to this again later in the class. (Please note: many of the activity links within this article are no longer functional).

7

Listed below are additional readings which focus on the role of an instructor in an online course and how to make your course more personal. A key concept in the second article focuses on communication and how often you communicate with your students. It is important that you maintain regular communication with your students using email, announcements, and feedback on assignments, tests, and projects.

Additional information (Optional):

- Tech & Learning: Digital Activities & Icebreakers for Gen Y
- 10 online icebreakers
- 68 Tips: eLearning Engagement and Interactivity
- "What Makes a Successful Online Facilitator?" from the Illinois Online Network
- Guidelines for Establishing Interactivity in Online Courses

Advantages and Disadvantages of Online Learning

"Education is going to be so big as to make email usage resemble 'rounding error' in terms of the Internet capacity it will consume." —John T. Chambers, CEO of Cisco Systems

The exponential growth of distance education programs has been the most dramatic change and shift in higher education in the history of formal education. Geographical boundaries are being erased by entire degree programs being offered online by colleges and universities across the country and world. More and more educational institutions are offering a combination of traditional face-to-face courses and online courses that are based on restructured or reinvented curricula. The result is courses that are often more interactive, stimulating, and pedagogically sound.

However, there are some educators who are still skeptical -- they are waiting for this *teaching with technology* fad to wane and eventually die out altogether. This is based primarily on the premise that excellent teaching has occurred for centuries *without* the aid of computers and the Web.

So why bother with all of these supposed technological shenanigans? Well, let's start with the *advantages*, because for both instructors and students there are some great advantages to teaching and learning online.

Advantages

For instructors, teaching online is attractive for a variety of reasons. Instructors will not have to lug heavy book bags full of papers to a classroom, stand at a lecture podium, scribble on a dusty chalkboard, grade papers in a small stuffy room while students complete exams, or wait in an office for students to show up for office hours.

Online learning offers some attractive features for students as well. Students can use the web to search for courses, certificates, and degrees that fit their specific needs. Once an appropriate course is found, students can enroll and register, shop for books, read articles, access instructional material, submit homework assignments, communicate, and collaborate with their instructors and fellow students, and receive their final grades all online.

8

The following are *some* of the more universal advantages of online learning:

Extend Beyond the Classroom

In addition to creating a flexible learning environment, online learning can virtually extend the walls of a classroom by creating communication and collaboration opportunities for students and instructors by increasing the availability of resources both in and outside of the classroom. Course web sites can serve as 24/7 content repositories, announcement boards, email listservs, threaded discussions, and shared space for collaboration projects.

Guest Speaker
In online learning environments you can have a fellow colleague present a "guest lecture" - even if that colleague lives across the state or across the ocean.

Community-Focused Learning Environments

The ability and opportunity to understand more complex concepts increases when individuals are part of a larger group that has the same level of understanding and learning goals. Many instructors and students are concerned about the possible *isolation* between all participants. However, it appears that because of the very anonymity and time that the online learning environment allows for individual reflection, the asynchronous learning environment can create a strong sense of community among participants. This especially can occur if the instructor designs the course around collaborative learning projects such as peer workshops and critiques, peer web-based presentations, and shared student leadership in facilitating asynchronous and synchronous discussions.

Increased Student Responsibility

Using learning theories based on such concepts as "construction of meaning through experience," online courses can create environments that facilitate self-directed and individualized learning opportunities for students. Active learning, as opposed to passive learning, has become a key and central component in the online classroom.

Interactivity With Content

The current and most frequently used learning paradigm in use today can be described as "information transfer," in which students simply receive the facts and information that the instructors wish to impart. This paradigm carries the negative implication of passivity in students, which for many suggests a real failure in our educational system. Increased applied-learning, high interactivity with content, individualized learning paths, and active student learning are the ultimate outcomes envisioned by many in education. The adoption of technology and use of the Internet and web in instruction can further the realization of this goal.

Non-Traditional Students

The demographic of student populations is ever changing and in recent history it is has changed dramatically. The Department of Education has reported an increase of 13 percent of part-time students and a eight percent increase of students over the age of 25 (non-traditional students). Many of these non-traditional students are often campus-commuters, jobholders, and parents. Online learning and its anywhere-anytime attribute has become their learning environment of choice. Even traditional students who are enrolled in face-to-face courses are registering for online courses for the same reasons non-traditional students do.

9

Students Who May Have Physical Challenges

The anywhere-anytime attribute increases the learning opportunities to populations of students that would otherwise be left out or unable to attend face-to-face courses. As communities work to make public spaces available to those with disabilities, educational institutions work to make education available to those who may experience challenges attending the physical classroom or navigate the campus spaces. Additionally, many students who may have a disability report that the experience of online courses is preferable to contending with the physical stress and exhaustion of attempting to travel to campus, as well as the sometimes less than positive interactions with other non-disabled students.

Disadvantages

As with most anything there are disadvantages and online learning has some distinct disadvantages for both instructors and students.

Computer Literacy

A major misstep in the increased development of online course offerings would be the idea that *all* instructors and students are appropriately suited and technically prepared for the online learning environment. Realistically a small portion of the instructor and student population is more than adequately computer and Internet literate. For example, students and instructors must be able to use a variety of Internet technologies and be comfortable navigating on the web, as well as be familiar with authoring web-based materials and using email. If students and instructors do not possess these technical skills, they will not succeed in an online program. Just as some students flourish in low-ratio instructor to student environments and others flourish in more isolated large lecture-hall environments - there will be some individuals who will not choose online learning given their learning needs and abilities.

Initially It Does Not Save Time

Mistakenly some students and instructors are under the impression that online learning will be easier and less time consuming. Nothing could be further from the truth. Many students report spending more time completing a course online when compared to a similar face-to-face course. For instructors who are starting with very little computer literacy and have never created web-based content or utilized Internet technologies in their instruction, the time to organize, prepare, and author material for an online course is most often double (if not triple) the time involved for a face-to-face course.

Equity and Accessibility in Technology

Before an online program can hope to succeed, it must have students who are able to access the online learning environment. Lack of access whether it be for economical or logistical reasons will exclude otherwise eligible students from the course. This is a significant issue in rural and lower socioeconomic neighborhoods. Internet access can pose a significant cost to the students. As we venture into the course design process, we'll look at various aspects of equity and accessibility in terms of holistic student support and engagement.

10

Limitations of Technology

User friendly and reliable technology is critical to a successful online program. However, even the most sophisticated technology is not 100% reliable. Unfortunately, it is not a question of if the equipment used in an online program will fail, but when. When everything is running smoothly, technology is intended to be low profile and is used as a tool in the learning process. However, breakdowns can occur at any point within the system, for example, the server which hosts the program could "go down" and cut all participants off from the class; personal computers can have numerous problems which could limit students' access; or the Internet connection could fail. In situations like these, the technology is neither seamless nor reliable and it can detract from the learning experience.

Outcome Alignment Across Modalities

KCC establishes learning outcomes for all courses approved through the institution's Academic Cabinet. All learning outcomes must remain consistent across all modalities, although the method of assessing the outcomes may vary.

The Higher Learning Commission (HLC) accrediting agency look for consistency in outcomes regardless of modality as part of their guidelines for the evaluation of distance education (developed by the Council of Regional Accrediting Commissions [C-RAC]). KCC's Online Course Development Committee has incorporated these guidelines into the course quality review rubric for all online course development.

Success rates for students examine outcomes between modalities and student success of course outcomes. Through KCC's Assessment Academy initiative, outcomes are periodically assessed, examined, and adjusted based upon student success data.

New Course Development

KCC rarely offers an online course(s) or program(s) without first establishing the course in the face-to-face modality. This tradition is in part, due to the heavy faculty preference for face-to-face teaching as well as the student development level and content that appears to be best suited for in-class delivery.

Occasionally, there is a need to develop a course or program in the online modality initially (e.g., Aviation courses for dual enrollment or the Medical Assistant (MA) and Magnetic Resonance Imaging (MRI) programs through the Michigan Community College Association Collaborative Programs agreement). In these specific cases, the programs that utilize these courses are individually accredited. The program accreditation dictates the required outcomes regardless of modality.

If a course or program is not overseen by a discipline-specific accrediting agency, the outcomes must be developed. KCC's policies and procedures dictate all course(s) and program(s) must be presented to the institution's Academic Cabinet for approval and as part of the application for approval, all courses and programs must have documented learning outcomes. These outcomes must be mapped to the program outcomes (courses that are not part of a program will not be approved as they are typically not eligible for financial aid).

11

As we progress through this course, we will look at how learning outcomes are developed and examine the ways in which they will be assessed. These are some of the foundational components of the instructional design process.

Activities for Week 1

Required activities:

- **Survey**: participant survey
  Participant name, discipline, experience, self-assessment of teaching, instructional design, subject matter expertise, hope to learn in course, biggest challenge/worry/concern.
- **Discussion forum**: introductions/community building
  Introduce yourself providing name, department, course(s)/programs in which you will be teaching, any personal information or interesting facts to share.
- **Discussion forum**: Are we ready?
  After reading this short book review of "Becoming a Student-Ready College: A New Culture of Leadership for Student Success," respond to the following: What does a 'college-ready' student look like? What does a 'student-ready' college look like? How are these different? In which category (college-ready or student-ready) would you characterize KCC students? Why?

Optional activities (choose 2 from the list):

- **One minute paper**: Role of Accreditation. What are the benefits and challenges of higher education accreditation? How does accreditation impact the institution from a program perspective?
- **Journal** (private reflection): Some programs at KCC have obtained specialized accreditation. What is your opinion (based on the readings so far) on the value of this accreditation? Thinking about programs that do not have accrediting bodies, how does this equate?
- **Discussion forum**: Embracing the Unexpected: Tool that Transform Teaching and Learning
  After reading Embrace the Unexpected: New Tools Transform Teaching and Learning, what are your thoughts on ways technology has or will transform your teaching? How might this transformation impact students? Do you see this as a benefit or a detriment (or both)? Why?
- **Journal** (private reflection): Tips for New Teachers at Community Colleges
  NOTE: These linked articles are from *The Chronicle of Higher Education* and may request that you sign up for a free account (if you are off campus).
  Read through Rob Jenkins' article Tips for New Teachers at Community Colleges and Henry Adams' Academic Bait-and-Switch. What are your thoughts? Concerns? Fears (if comfortable sharing – remember this activity is private)?

12

Assessments for Week 1

- **Discussion forum**: KCC's target population
  After thinking about the data of community college students as a whole and those of KCC students, do you believe it to be accurate at KCC (in other words, how does the data compare with your experience with students)? Are there any other traits that could influence the strategies and approaches to learning you might use?
- **Discussion Forum** OR **Flipgrid**: Compare/contrast at least two learning modalities, articulating three unique characteristics of each of your chosen modalities
- **Journal** (private reflection): How do you currently see your role as a professor in the classroom. How might that change with respect to the online learning environment?
- **One Minute Paper**: In a brief document, summarize how you might engage students through various communication methods in the online environment. Will your engagement and communication efforts differ from your face-to-face classroom? Will you use the same strategies? Why/Why not?
- **Challenge Question**: As we look at the longitudinal enrollment data and read through the predictions of the future, what are your thoughts on the sustainability of the community college? In what ways might we need to evolve?

13

Week 2: Instructional Design

"Good teachers never teach anything. What they do is create the conditions under which learning takes place."

- S.I. Hayakawa

Introduction

This week, we will dive into the world of instructional design. KCC uses a modified version of the ADDIE model for all new course design work. We will explore the systematic development of instruction using each step of the ADDIE process.

Week 2: Course Learning Outcomes

- Discuss best practices for online student engagement.
- Identify communication methods to engage and support students

Week 2: Participant Learning Objectives

- Develop a course plan.
- Determine lecture strategy.
- Incorporate instructional design principles into the development of online content.
- Identify and justify strategies to facilitate students' success in online courses.
- Select aspects of authentic assessment that fit the assessment needs of your course.

Getting Started: The Basics

At the core of any course is the actual content. But how do you best create content for online delivery?

A key challenge for online instructors is choosing high quality content from the wealth of resources available. Another challenge is designing assignments particularly suited to the online learning environment. This module provides examples of effective instructional design for online content, as well as common teaching practices involved in online teaching. For example, how do you motivate and engage students in an online course? How do you know if your students "attend" class?

Content from face-to-face instruction can be used if it is substantially converted to fit the online environment. There are many online resources and supplements to texts these days and, if you are designing an online class, check these out first.

- Course content should be organized in modules with clear deadlines for the assigned work in each part.
- Instructors should give simple and clear assignments, and not assign over-complicated tasks.
- Instructional material should be reduced and enhanced with open discussion that elicits comments and sharing of varying viewpoints.

14

- Online content should focus on the application of knowledge and foster critical thinking skills with opportunities for an interchange of ideas among students and as well as the instructor.
- Online content should have two important features, information, and application.
- The application must integrate educational experiences, generate discussion, draw a connection between the learned concepts and real-life experience, include ample time for the completion of the assigned work, and utilize a minimal amount of memorization.
- Online content should have clear achievable objectives using appropriate technologies.

The Instructional Design Process

Instructional design models provide a framework to follow throughout the process of creating instruction. There are many different models. While many are similar, they each take a slightly different approach to the design of instruction. Some models are more systematic or prescriptive than others. Some utilize step-by-step processes, while others are more open-ended. Though varied, each of the design models incorporates certain theories and principles that have been derived from research with the goal of assembling learning components into a relational, integrated learning experience. Instructional theories such as constructivism, behaviorism, cognitivism, and social learning help shape and define the outcome of instructional materials. Regardless of the theory, certain elements must be considered in the design process. The KCC model is a modified version developed by Dick and Carey (1992).

What is Performance Based Learning?

Working through the ADDIE framework involves decisions about performance. Specifying performance expectations is essential if learners are to reach their full potential and earn a degree or credential based on performance results.

Research supports the KCC belief that students demonstrate more learning at higher levels when learning outcomes are clearly understood by students. Throughout learning, students gain knowledge, skills, and work habits which they apply through practice in "real world' situations. This approach, called performance-based learning (PBL), emphasizes achievement of student learning outcomes. "[It] places students at the center of the learning process by enabling the demonstration of mastery based on high, clear, and commonly-shared expectations" (The Council of Chief State School Officers, 2011).

Backwards Design

Backwards Design is a planning framework developed by Grant Wiggins and Jay McTighe that provides a design approach placing the learning goals of the course at the beginning of the design process. Traditionally, faculty design "forward"; assembling learning activities and assessments of the activities, then attempt to bring the content together to connect with the learning goals. The backwards design planning framework is designing with the end in mind by starting with the learning goals, developing the assessment

15

of the learning goals, and then making the connects with the content. According to Wiggins, when you teach, you are more goal-focused and thereby more effective.

As you examine your learning goals, consider what you want students to do with the learning. Often our learning goals are simply content with a pronoun in front of it. For example, in this outcome: Students will learn about the process of Instructional Design, we know nothing about the expectation of the use of this information. As noted by Dr. Wiggins "You can't design backwards from content headings. You have to design backward from the outcomes you want with the use of content." We need to examine what we want students to do with the information; what meanings and transfer are we after? Once meaning goals are established, assessments can be designed and, finally, content assembled to support the students learning toward the learning/meaning goals.

Grant Wiggins: Understanding by Design, Part 1 [video; 00:10:52]
https://www.youtube.com/watch?v=4isSHf3SBuQ

Grant Wiggins: Understanding by Design, Part 2 [video; 00:14;22]
https://youtu.be/vgNODvvsgxM

Instructional Design

Instructional Design (also referred to as Instructional Systems Design) is the systematic approach to planning any learning experience using learning theory and instructional frameworks. Instructional design is based on cognitive psychology – the study of how people think and learn. KCC utilizes a common development process, the ADDIE model. This model includes **A**nalysis, **D**esign, **D**evelopment, **I**mplementation, and **E**valuation. The ADDIE model is a framework for development, but it can only work if we understand our students and how they learn.

16
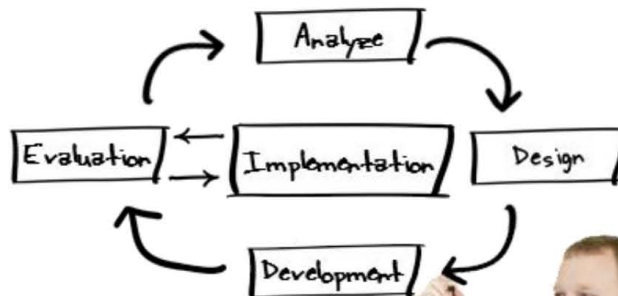
ADDIE Process Overview

The ADDIE model is a common instructional design process for developing effective learning environments. The ADDIE model depicted below shows a more recent version, moving from a linear to an iterative model. (Dick and Carey, 1992.) This newer model incorporates a summative approach to evaluate the validity of the learning throughout the process and a formative approach to obtain feedback from learners.

What Can the Instructional Design Process Do For You and Your Students?

- A systematic process of design provides the foundation upon which to build your course.
- Well-written measurable objectives map out what you are going to teach and how you will assess your students.
- Clear and evident design and layout is critical to guide students through the learning materials.
- Objectives act as an outline for students as they progress through the course.
- Chunking content into manageable pieces helps your students feel successful, motivates them to continue, and provides them with the scaffolding to succeed.
- Student-centered instructional design focuses on what the student does or demonstrates during the instructional process, rather than on what the instructor does. What becomes critical in this shift of focus is that learning objectives are clearly stated in terms of what behaviors the student will demonstrate. It is necessary for objectives to be measurable with the criteria for mastery specified so that each objective then can be assessed. The student receives feedback via assessments that can be either informal self-assessments for practice or formal tests that are graded.

OK wait! This is already too much!

Don't get overwhelmed as you read through the materials. The instructional design process is the foundation for all course design, not just for the online/hybrid modality. Please connect with your department Chair/Director for any existing materials. A syllabus containing outcomes and objectives is available for all KCC courses. Course outcomes will not change but you may have decided how you will best approach each outcome and the learning materials that will assist your students in achieving those outcomes. Some departments have shared assessments or common elements they want built into every course. Make sure to check in with the department Chair/Director (are you sensing a theme here?) for all available course resources.

KCC also has an Assessment Committee and has been undergoing an instructional division assessment initiative. What does this mean to you as you develop your online course learning materials? Know that there are assessments that have been connected to course outcomes. While these may only exist for the face-to-face version of the course, take a look at the work being done overall and consider ways in which this work may translate into the online world. Have no idea? Need ideas? Just want to blow off steam and/or brainstorm? Call or email Tammy Douglas (psssst, your current facilitator in this course) - she's happy to help!

17

What Does ADDIE Mean?

A common development process, the ADDIE model, includes analysis, design, development, implementation, and evaluation.
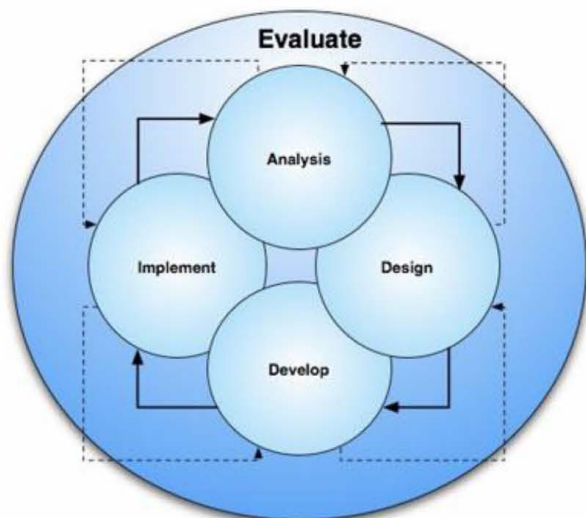
Analysis

The analysis phase is used to clarify the instructional goals and objectives for the learning environment. The learner's existing skills and knowledge are determined, and any gaps identified.

The analysis phase begins by asking basic questions about a course or program, such as:

- **Who** are my learners and what are their learning needs?
- **What** will my learners be able to do upon completion?
- **When** will I know they have achieved the outcomes?
- **How** will they go about getting there?

We build a profile of our students and the ways in which they construct knowledge.

Design

During the design phase, strategies for attaining the instructional goals are identified through a systematic process. Learning objectives, assessments, activities, content, and media selection are identified.

In the design phase, the overall course outcomes are developed. They are written in such a way that they can be measured. The learning objectives may be based existing publisher materials, original research, or other content. If the content already exists, we need to look for opportunities to improve the material and organize to fit our students. Examine the outcomes and the ways in which they can be assessed.

18

Development

Throughout the development phase, specific content items are created, and evaluation continues. These content items will assist learners in becoming proficient, achieving the learning goals.

In the development stage, the course objectives are broken down into lessons. Each lesson will have specific measurable objectives. Assessment methods are also considered at this stage. All content, whether it is multimedia, audio, gaming, collaborative, must support the lesson objectives.

Implementation

The implementation stage identifies the delivery methods for the learning environment. Any peripheral materials, such as textbooks, software, tools, etc. should be in place. During this stage, all the individual assets are created (multimedia presentations, video, audio, written documents, etc.). Any outside resources for learners and faculty should also be identified and available.

Evaluation

Both summative and formative evaluation takes place in the ADDIE model. Formative evaluation exists at each stage throughout the process. Summative evaluation is designed to obtain specific feedback from the learners.

The ADDIE model is a framework for development, but it can only work if we understand our students and how they learn.

Importance of Learning Blueprint Design

https://www.linkedin.com/pulse/importance-learning-blueprint-design-ryan-austin

The Blueprint Design process is used primarily in training development rather than course design, however, there are common elements between these development processes. The "blueprint" consists of:

- outlining and defining project requirements
- describing ideal performance or instruction to meet the project requirements
- identifying acceptable alternatives

Blueprint Design utilizes **F**ront-**E**nd **A**nalysis (FEA) to begin creating instruction. The FEA process examines the rationale, outcomes, and benefits of development through a series of twelve analyses. While all twelve analyses may not be required, this foundational research creates the foundation for structuring the learning design.

19

Digging Into the ADDIE Details

Analysis

"Failing to plan is planning to fail."
− Alan Lakein: American Time Management Expert, Author, Trainer
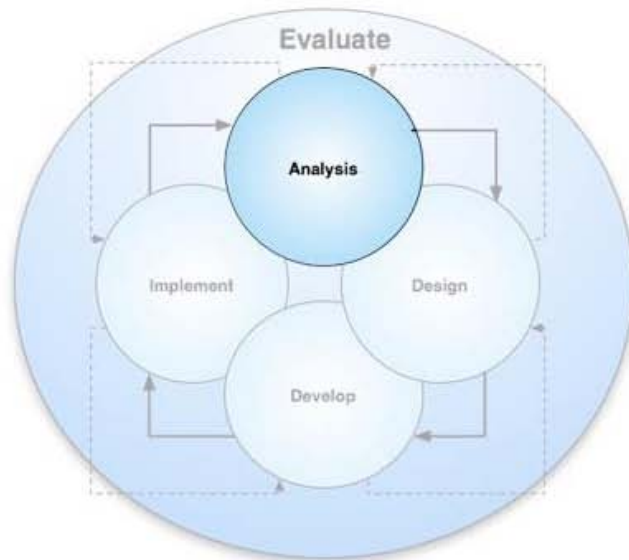
The first step in developing an online course is to conduct a thorough analysis − a careful study of the available resources and any requirements the college may have can save you time and prevent unnecessary frustration.

The "best" instruction is that which is effective (facilitates the learner acquiring the necessary knowledge and skills), efficient (the least possible amount of time necessary for the learners to achieve the competencies), and appealing (motivates and interests the learner, encourages them to remain engaged in the learning task).

The first step in the instructional design process is to determine what it is you want learners to do when they have completed the instruction. Generally, you do this by performing a needs assessment.

The needs assessment helps identify the goals for instruction by identifying the gap between the desired goals for the learner and the current status for the learner. This gap is referred to as a need (hence, the Needs Assessment).

20

Another perspective is to think of the needs assessment as a **learning** needs assessment by considering both formal and informal learning needs. In a formal learning environment, the instructor sets the learning outcomes. However, in an informal learning environment, the learner is setting the outcomes. Both formal and informal learning are intentional in that the learner is achieving the outcomes either by design of the instructor or by their own design.

Learning also occurs in incidental ways; ways that may not be intentionally designed but happen when the learner picks up on something within the environment (the clinical setting for example). As faculty, we often dismiss incidental learning as haphazard; however, this can often lead to discovery learning, an unplanned teachable moment.
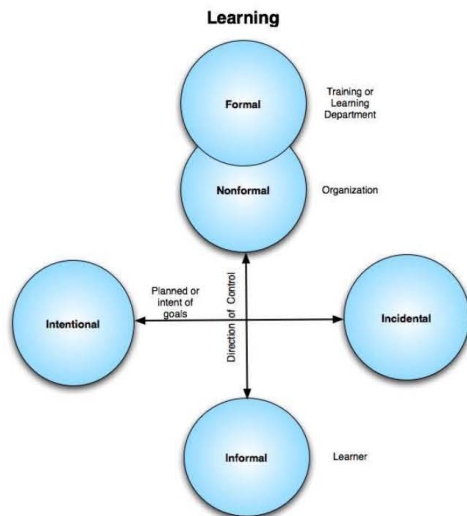
The analysis phase begins by asking basic questions about a course or program, such as:

- **Who** are my learners and what are their learning needs and motivations?
- **What** will my learners be able to do upon completion? How will they be changed as a result of the instruction?
- **When** will I know they have achieved the outcomes?
- **How** will they go about getting there?

We need to analyze the need for instruction, curriculum requirements as well as the limitations and resources available for instruction. We will also build a profile of our students and the ways in which they construct knowledge.

We will also analyze the instructional goals and learners' needs as well as their prior knowledge – identifying the gaps and determine how to close them.

21

Gaps can be:

- **Knowledge**: what information do students need to be successful? When will they need it? In which format?
- **Skills**: Do students need to practice to become proficient (allow them to fail and learn)? How? When?
- **Motivation**: What is the student attitude (intrinsic/extrinsic)? Is the class required? General Core or within degree program?
- **Environment**: What are the environmental factors that prevent success? What might be needed to assist?
- **Communication**: Are the goals, outcomes and expectations communicated clearly?

Who are Community College Students?

According to the American Association of Community Colleges (AACC), 39% of the undergraduate students in the United States are served by community colleges. While the enrollment into community college has grown (2003-2011), the proportion served (39%) has remained fairly consistent.

The AACC statistics show that the average age of the community college student nationally is 27 years old and almost two thirds attend part-time. Half of the students who receive a baccalaureate degree have attended a community college at some point in their studies.

A report published through research firm MDRC suggests that enrollment in community colleges is higher "…in part, because of their open admissions policies and relative low cost, community colleges enroll larger percentages of nontraditional, low-income, and minority students than four-year colleges and universities."

Students Speak [video]

View

"Students Speak" created by The University of Texas at Austin • Center for Community College Student Engagement

https://ensemble.kellogg.edu/Watch/studentspeak

Who are KCC Students?

After looking at the national data, what does it tell us about KCC students? Review the most current data on KCC students as part of the upcoming HLC accreditation reaffirmation. Additional data on KCC students and the campus overall is available in the 2019 Campus Climate Assessment and the KCC Annual Report.

What We Know….

KCC students, according to the National Center for Education Statistics IPEDS report, are:

- Predominately part-time
- Female
- White
- Degree/certificate seeking
- Over 65 percent applied for financial aid

More information is available in KCC's IPEDS report

22

According to the data published in the 2021 KCC At A Glance document, Voluntary Framework of Accountability (VFA) report, and KCC's overall Enrollment, Retention and Graduation Rates report, we also know:

- While the majority is still female (60.7%), the male population is increasing (currently 36.7%)
- Average age of the KCC student is 24.5
- Full time status is remaining somewhat steady
- Part time status has fluctuated
- Day-only/night-only status is declining, combined status (taking both day and night classes) increasing
- Although (pre-pandemic) online course development and offers overall have not expanded, enrollment has not declined (overall enrollment has rapidly declined at KCC and across the nation)
- Geographically, the majority of KCC students are residents within the tax district (regardless of course modality)
- Increase in graduation within 3 years (graduation within 5 years remain stable)

CCSSEE Data

According to the latest (2019) published Community College Survey of Student Engagement (CCSSEE) data KCC students:

- Tend not to seek/utilize supportive services
- Tend to seek out academic advising and/or financial aid advising most frequently
- Have friends and family that are fairly supportive of their education
- Rate their educational experience at KCC fairly high
- Are most likely to withdraw from class/college due to transfer, lack of finances, or work obligation
- Rate critical thinking and analysis and acquiring a broad general education as most valuable in their education

Access the CCSSE 2012 Survey Results
http://www.ccsse.org/survey/profile_reports/CCSSE2011_17055000_pubMeans_AllStu.pdf

What We Might Not Know….

There are many other ways to categorize and characterize our students – ways that are not easily measured but may be observed such as:

- Cognitive characteristics (language, prior knowledge related to subject, computer literacy; learning preference—independent, motivated, requires assistance, etc.)
- Work characteristics (job roles, work responsibilities, work schedule)
- Affective and social characteristics (interests, attitudes and biases, what makes them laugh, what they disdain)

Are there any other traits that could influence the strategies and approaches to learning you might use? (pssst…..hint: this just might appear as a question in an upcoming discussion forum….)

23

Addressing a Diverse Population

While the basic KCC student information is based on the overall population enrolled at KCC, the student population in each program, as well as in each class, will vary. Your class will include students that fit the overall population and also include several subsets.

Understanding who our students are will not only help us create materials that are engaging, but also help us to understand how our students construct knowledge.

How Do KCC StudentsLlearn?

According to the KCC Annual Report, 51% of students last year took developmental coursework. According to the KCC Instructional Division 2013 Annual Report, the trend with Compass scores indicates students are arriving at KCC less prepared than they were 10 years ago and may be a factor in declining course success.

What Can We Do Now?

As previously mentioned, students are not utilizing support services and need developmental level instruction. The Center for Student Success at KCC offers assistance with core coursework, such as, reading, English, math, science, and learning strategies, including assistance with paper writing in any course.

The Center for Student Success also offers tutoring from qualified peers or a professional (obtained a level of competency in the subject area). Tutoring is offered on a drop-in basis to individuals or as a group. Assistance for English language learners is also available.

You may also consider providing web resources in your courses:

- The Pocket Prof: https://www.kellogg.edu/upload/pdf/PocketProf.pdf
- General Studies Skills: https://www.kellogg.edu/wp-content/uploads/2013/10/AcademicSuccessGuide_fields.pdf
- Specific Topic Example: https://www.kellogg.edu/services/center-for-student-success/tutoring-services/english-writing-tips-tools/

Helping students find resources will not only provide them with tools for success, but it also helps students to take ownership of their learning.

The Student 2.0
The Voice of the Active Learner Education from a Digital Native's Perspective
https://youtu.be/2VyEKEWelwA

Jesse Stommel's article from *Hybrid Pedagogy: A Digital Journal of Teaching & Learning*
http://www.hybridpedagogy.com/Journal/files/Student2point0.html

What is 21st century education?
Note, this video is from 2012 – what is the state of these predictions come to pass?
https://youtu.be/Ax5cNlutAys

A view of 21st century learners
https://youtu.be/T1TDKJG-wS4

24

Instructional Analysis

An instructional analysis is a set of procedures that, when applied to an instructional goal, results in the identification of the relevant steps for performing a goal and the subordinate skills required for a student to achieve the goal (Dick and Carey, 2005)

In order to design instruction, the designer must have a clear idea of what the learner should learn as a result of the instruction.

Consider:

- Identifying learning goals
- Starting knowledge
- Identifying gaps
- Discovering experiences with the topic(s)
- Attitudes about the topic(s)
- How they see themselves using the content in context

To begin the process, we need to identify the existing gaps and determine how to close them.

A successful learning experience isn't just about the learner gaining knowledge, but also about the learner being able to apply that knowledge.

Identify the Gaps

Gaps can be:

- **Knowledge**: what information do students need to be successful? When will they need it? In which format?
- **Skills**: Do students need to practice to become proficient (allow them to fail and learn)? How? When?
- **Motivation**: What is the student attitude (intrinsic/extrinsic)? Is the class required? General Core or within degree program? What is the general attitude of your students?
- **Environment**: What are the environmental factors that prevent success? What might be needed to assist?
- **Communication**: Are the goals, outcomes and expectations communicated clearly?

While the gaps may identify a need for knowledge, you may discover your learners already possess the knowledge but need to develop the skills to apply and use the knowledge.

What About Learning Styles/Preferences?

Much of the research presented on specific learning preferences does not show any correlation between content delivery and increase in student success. However, also note that we all have preferred learning methods and styles. Some students prefer to read class materials, others listen, and still other students grasp concepts better through video or hands-on experiences. Consider preparing course materials in a variety of formats such as podcasts, multimedia presentations, images, etc.

25

View
"The Biggest Myth in Education": Something to ponder (along with the research - which does support the claims in this video)

https://youtu.be/rhgwIhB58PA

Incorporating a variety of teaching approaches help students engage with the course materials in a way that facilitates their learning. Not everyone learns the same way. While you expected to cater to each and every individual learner, you can crate learning experiences that utilize a variety of approaches.

Consider asking your students to offer delivery suggestions and provide feedback on your current methods. This gives students input in how they learn as well as what they learn.

Determining Learning Styles/Preferences

There are many different intelligence/learning style measures, such as:

- Gardner's Multiple Intelligences: proposes that people have different types of intelligences (visual/special, bodily/kinesthetic, musical, interpersonal, intrapersonal, linguistic, logical/mathematic), rather than a single IQ score.
- VAK/VARK model: proposes that learners have preferred learning styles (visual, auditory, kinesthetic, and reading).
- Gregorc's Model: based on perceptions qualities (concrete and abstract) and two ordering abilities (random and sequential).
- Kolb's Learning Styles Inventory: in order for learning to be effective, all four approaches must be incorporated (converger, diverger, assimilator, and accommodator) when grasping experience (concrete experience and abstract conceptualization) and transforming experience (reflective observation and active experimentation).

VARK Learning Styles with Appropriate Media

VISUAL	AUDITORY	READ/WRITE	KINESTHETIC
diagrams	lecture	articles	video
mind maps	discussion	slides	role play
algorithms	audio recordings	handouts	simulations

26
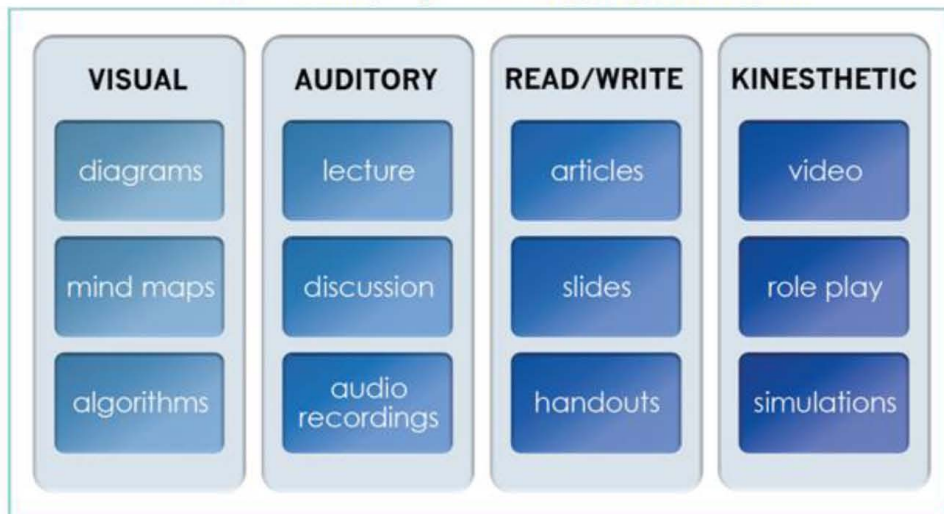
The research does not clearly indicate these models directly increase learning, primarily because there is no clear method to measure learning style and there is no clear way to tie learning experiences to styles.

However, there are some important ideas to gain from learning styles:

- Not everyone learns in the same way
- Vary the instructional approach to match the content
- Learners come to you with a variety of skills, talent and knowledge
- Using a variety of methods can keep content interesting
- Learner's individual differences in abilities, background, and learning styles should be taken into account in the design of instruction.

Consider Felder's and Soloman's perspective in their article "Learning Styles and Strategies" for another viewpoint.

Give It a Try

Use the VARK website to take a sample questionnaire to determine your learning preferences: http://www.vark-learn.com/english/page.asp?p=questionnaire

Were you surprised by your results?

Design

Do not ask yourself - "How am I going to teach this course" – instead, ask yourself – "What are my students going to learn?"

27
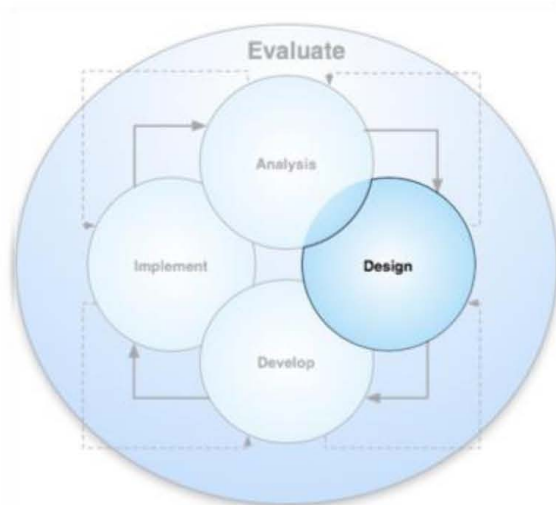
All instructors use some type of process for designing and developing instructional materials and/or courses. "Systematic" may not be the best word to describe some of our "planning" processes, however. When it comes to teaching online, the systematic nature of the process becomes critically important since the "by the seat of your pants" approach to course development is near impossible in an online environment.

One of the biggest differences when developing an online course versus a traditional face-to-face course is the timeline of the course preparation. In a traditional course, you as the instructor may prep the course for 3-4 weeks into the term and then as the course progresses continue prepping weeks 5 and so on. This approach is not at all advisable in an online course. If a course is not "ready to go" at the start of an online course - it is glaringly apparent to your online students.

In online courses, or even face-to-face courses enhanced with online components, the flow of the course must be built into the course design so that the student has a map to follow to achieve the learning goals and objectives.

During the design phase, the course outcomes and assessments are to be developed. Outcomes must be written using language stating how they will be measured (assessed). Within the course content, learning objectives for topics are developed and may be based on existing publisher materials, original research, or other content.

Clearly defined objectives form the foundation for selecting appropriate content, learning activities, and assessment measures. If objectives of the course are not clearly understood by both instructor and students, if the learning activities do not relate to the objectives and the content that you think is important, then your methods of assessment, which are supposed to indicate to both learner and instructor how effective the learning and teaching process has been, will be at best misleading, and, at worst, irrelevant or unfair.

At the end of the course, we want them to develop the higher thinking skills and techniques that will enable them to be lifelong learners.

Developing Outcomes

The design phase examines the learning outcomes (competencies) and breaks down each associated task required to reach those outcomes. Only material that is directly relevant to completing the task and reaching the learning outcome/competency should be included – eliminate the extraneous material. This will be covered in depth in the *Advanced Instructional Design* course.

28

There must be an alignment among competencies, learning activities, and assessments. The competencies are the driving force behind decisions about activities and assessments.

Creating Course Outcomes

A course outcome does not describe what the instructor will be doing, but instead the skills, knowledge, and attitudes that the instructor will be attempting to produce in learners.

A well-written outcome contains:

- Performance: the behavior the learner is expected to perform (not the influence the instructor puts forth)
- Conditions: the circumstances under which the learner is to perform (specific, observable situation)
- Criterion: the measure for success (measurable)

A well written outcome:

- Describes the core knowledge and skills that the student should obtain from the course
- Contains verbs that signify an observable behavior (e.g., "…the student will be able to define…")
- Avoids vague language such as "know," "understand," "comprehend." These behavioral terms are too difficult to define.

A well-designed outcome:

- Describes an intended result of the instruction
- Is stated in terms of behavior/performance
- Describes what the learner will be doing to demonstrate achievement
  - What should the learner be able to do (Performance)
  - Under what conditions does this need to be accomplished (Conditions)
  - How will the learner be evaluated/what constitutes acceptable performance (Criterion)
- Makes clear the intended learning outcome rather than what form the instruction will take.
- Describes the change in learner

Process for Creating Outcomes

1. Identify behavior
   "What is the learner doing when he/she is demonstrating that he/she has achieved the objective?"
2. Define behavior
   Make it measurable
3. State criteria
   How does learner know when they've succeeded

Learning outcomes focus on student performance. Action verbs that are specific, such as list, describe, report, compare, demonstrate, and analyze, should state the behaviors students will be expected to perform

29

Unacceptable
(open to much interpretation)

- Know
- Understand
- Enjoy
- Appreciate
- Grasp significance of
- Comprehend
- Believe

Acceptable
(more precise and measurable)

- Write
- Recite
- Identify
- Differentiate
- Solve
- Construct
- List
- Compare
- Contrast

Further categorized as:

- Cognitive: deals with knowledge of the subject matter and how it is demonstrated
  - Knowledge (most basic)
  - Comprehension
  - Application
  - Analysis
  - Synthesis
  - Evaluation (most complex)
- Psychomotor: physical skills related to instruction
- Affective: motivations, attitude, perception, and value
  - Receiving (most basic)
  - Responding
  - Valuing
  - Organization
  - Characterization (most complex)

30

How do you know that learning had occurred? What methods exist to measure the intended learning? Constructing assessments is a vital part of the design stage. Assessments must take into consideration goals, learner needs, and prior knowledge. The level of assessment must also be examined and linked to the outcomes on equal levels. For example, expecting students to memorize terminology, then using an application method assessment will not yield reasonable results.

Examples

Poorly Written	Well Written
Understand how to measure the association between a given risk factor and a disease.	Define and calculate measures of association between a given risk factor and a disease
Know basic strategies for assessing environmental health hazards.	List, describe, and compare the advantages and disadvantages of the basic strategies for assessing environmental health hazards.
Be able to understand mathematics.	Demonstrate solutions to math equations using quadratic formulas.
Develop an appreciation of music.	Articulate the difference between polyphonic and homophonic harmony.
Analyze the traditions and social customs that are validated or rejected by the characters in the text.	Consider the traditions and social customs that are validated or rejected by the characters in the text.
Understand the social, economic, and political position of blacks in the North prior to the Civil War.	Analyze the social, economic, and political position of blacks in the North prior to the Civil War.
Be familiarized with major brain disorders and psychological disturbances in the elderly.	Be able to distinguish between the major brain disorders and psychological disturbances in the elderly.

What is Assessment?

Assessment is an essential component of the overall learning experience, ensuring students are acquiring the necessary knowledge, skills, technical skills, and critical thinking abilities and capabilities.

Assessment includes all types of activities that are used to have learners demonstrate their level of mastery of new skills. Building assessment into the course design aligns the course activities with the outcomes. Assessment should include the evaluation of the learner's performance as well as the evaluation of the instruction to identify potential programmatic or curricular challenges. Information from the evaluation of the instruction should be used to revise the instruction to make it more efficient, effective, and appealing.

31

Learners should be assessed in terms of how they achieve the instructional objectives (criterion-based) rather than how they "stack up" against their fellow students. Using criterion-based assessment evaluates both the learner's progress and the instructional quality. This type of assessment indicates exactly how well the learner achieved each individual competency and exactly which components of the instruction worked well.

Assessment may take many forms and occur throughout the course. In the end, the assessment will measure the level to which the learner mastered the content (Did they achieve the course competencies? To what degree?).

Criterion-based assessments allow the learner to reflect on their own performance by applying established criteria to judge their own work. This, in turn, helps the learner become responsible for the quality of their own work.

So where do we begin? First, consider:

- The point and purpose of the assessment. Is this a preventative measure (formative assessment) or a final determination (summative assessment)?
- What is being assessed? Are you measuring a specific competency or more than one competency?
- Is there a single assessment format or will the assessment be offered in a variety of formats?
- Differentiating assessment image

So.....what are we addressing assessment before preparing the course content? The main reason is the assessment questions must be tied directly to the course competencies. The performance required in the competency must be linked directly to the performance required in the assessment.

32

Assessment options

There is a lot to consider as you develop your assessment options. When designing assessments, consider:

- The information (end result) that will prove the level of mastery of the competency
- How various assessment options achieve outcomes (more about this later)
- Am I assessing a process or product
- Alignment of assessment to activity
- Competency addressed with the assessment
- External standards/General Education requirements addressed (if applicable)
- Delivery method used for assessment
- Whether the assessment is high or low stakes
- The variety of high and low stakes options
- Frequency of assessment
- Timeliness of feedback
- Option for early success (low stakes) to 'hook' and motivate
- What data will this assessment provide (and in what ways can that data be used)

Assessment Strategies

Why should learning outcomes, instructional strategies, and assessments be aligned? What is the role of assessment in the process of learning?

Assessments ideally reveal how well students are learning what we want and need them to learn, while instruction ensures that they learn. In order for this to function properly, the learning outcomes, instructional strategies, and assessment must be aligned and reinforce each other.

Formative Assessments

Formative assessment techniques are lower stakes measures done throughout the learning process. The information gathered from these assessments can be used to identify areas in which students may be struggling or need more information. Formative assessments typically have a lower point value and occur throughout the semester.

Not all formative assessments approaches will work for every discipline or level of learning. Finding the approach that works best for your subject matter can not only provide information about where students are in the learning process, but also reinforce concepts and ideas to assist student learning. Angelo and Cross (1993) authored *Classroom Assessment Techniques: A Handbook for College Teachers* which provides a wonderful resource for a wide range of assessment techniques and ideas for the classroom, but they may also be implemented in the online learning environment as well.

33

Here are just a few of the most common formative assessment ideas:

- Course data
- Objective tests (MC, TF, Fill-n-blank)
- Essay
- Embedded questions/assignments (departmental/college)
- Classroom (one-minute paper, focus group, open writing)
- Individual projects/performance
- Written projects (lab reports, term papers, critique)
- Presentations (oral – in-person, audio, or video)
- Graphic representation (concept map, strategy depiction)
- Self-assessment
- Journal
- Personal reflection
- Self-critique
- Collaboration or group project
- Research team
- Simulations
- Interview/survey/observation
- Performance review
- Focus group
- Attitude measurement
- Observation anecdotal notes
- Exam evaluations
- Annotated readings (collaborative annotations)
- One sentence summary
- Muddiest point

Summative Assessment

Summative assessments are typically done at the end of the learning, such as the end of a module or semester. These assessments typically have a higher point value and measure the extent to which the student has met the desired outcome.

- Standardized tests
- Instructor created tests
- Capstone project
- Internship
- Portfolio
- Paper
- Presentation
- Case study

34

Accessible Assessments

Using technology to deliver assessments allows learners to use their own assistive technology; benefiting those who may have motor impairments, visual issues, or auditory challenges. Technology can also provide instant objective feedback for those with short term memory issues or those on the autistic spectrum (limiting personal interaction that could be challenging). Ensure the assessment evaluates the course learning outcomes and not the speed, manual dexterity, vision, hearing, or physical endurance of the learner.

Differently abled learners experience different barriers. An assessment that is structured well for a dyslexic learner may be completely inaccessible to a blind learner. Some barriers (such as poor question design) can be addressed quite quickly but others, such as accessibility issues in the quiz software or the LMS may require additional expertise and assistance. Please make sure to contact Learning Technologies or the Help Desk (269-965-4148) for more information and assistance.

Analyzing Quality

The quality analysis is focusing on the degree to which the assessment evidence supports the claim about the learners (those taking the assessment). Does the assessment show the student has met the outcome? Is the done in such a way that aligns with the intent of the outcome? For example, if the assessment is intended to measure student's ability to critically think and apply information in a given situation and the assessment is presented in a multiple-choice format, does this format really allow the student to show their critical thinking and application skills?

As we consider creating an assessment map for our course to show the connections between what students will learn (outcomes and objectives) and how we will measure (and to what degree) we will measure that learning, we need to make sure we're using the assessment on an appropriate level. Consider Bloom's taxonomy. We used Bloom's levels to consider the language for writing the outcomes and objectives, now we return to consider the levels again as we decide upon the most appropriate assessments.

Knowledge	Recalling facts or specific concepts
Comprehension	Demonstrating the lowest level of comprehension. The student can make sense of the information without making connections or relating to other concepts.
Application	Using abstract concepts such as theories, ideas, principles that must be recalled and applied to concrete ideas.
Analysis	Breaking down the relationship between ideas to show understanding of the connections.
Synthesis	Bring elements together to form a new structure that may not have existed or may not have been clear.
Evaluation	The student can make judgements about the value of the materials and methods.

35

Make sure to provide enough time to gather evidence from all students; don't base a complete revision on one student's results or a cohort's experience during a single semester. Make sure to gather evidence over time and from a wide variety of students.

Online Authentic Assessment

Authentic assessment requires students to use acquired knowledge in creative learning experiences that emulate realistic situations and scenarios. Student success is then measured to determine level of skills required in their subject matter (ideally their field of study emulating real-world scenarios or case study).

Authentic assessments require student to use a wide range of tasks that mimic the priorities and challenges found in the most effective instructional activities (e.g., providing an analysis of a current event, writing and revising written works, or collaborative projects). These should be scaffolded throughout a course allowing the instructor to provide feedback. Ideally, student then integrate the feedback into subsequent drafts. Authentic assessments require students to engage in situations, scenarios, case studies, or collaborations that can be complex, poorly structured, realistic, and messy. Not only do students arrive at an end product or answer, but they also must justify their process for deriving their answer.

Authentic Assessment in the Online Classroom (Wiley University Services)

Authentic Assessment of Student Learning in an Online Class: Implications for Embedded Practice (Alverson, Schwartz, & Shultz)

Creating Authentic Assessments (University of Michigan Online Teaching)

Assessment Mapping

An assessment map charts the connections between the program learning outcomes, course learning outcomes, student learning objectives, and assessments. The mapping process ensures outcomes and objectives are measured effectively throughout the overall course. As part of the process of mapping, gaps or areas of over assessment may be identified and corrected.

An assessment map may be created using a spreadsheet or table, with each of the outcomes and/or objectives listed in a column and the assessments listed across the rows. Mark a point of intersection where the assessment addresses that particular outcome or objective. Depending upon the level of assessed knowledge, you may consider using a notation on the level of assessment such as "B" for Basic knowledge level, "I" for Intermediate, or "M" for Mastery level. This system may be helpful if information is scaffolded throughout the course.

36

Activities for Week 2

Required activities:

- **Lesson and Quiz**: Sociological imagination, leveraging and sharing our cultural capital
  Review incoming student casefiles and provide our initial impressions and approaches
- **Lesson**: Follow up to quiz results: Student case files and roster revealed.
- **Journal** (private reflection): Student Interaction - After reading through your student case files, how does this change how you might interact with these students (if at all)?
- **Discussion forum**: Please listen/watch "[America's Unmet Promise and The Equity Imperative](#)" from the Association of American Colleges & Universities. With respect to what you have just reviewed, provide your thoughts on the following:
    - What is means to be equity minded?
    - What does it mean to be involved in equity-minded pedagogy?
    - How can be value and embed student's cultural capitol in curricular and co-curricular design?
    - How can we make the shift to asset-minded from deficit-minded approach?
    - If we considered this group of students to be a representative sample for all your future classes, what adjustments or considerations would you make in your current classroom delivery?
- **Perusall**: Instructional Design Learner Analysis - Create a learner analysis based upon one of your courses. First, identify the course you will be using and provide a brief description.
    - List your course outcomes.
    - Describe methods and sources for obtaining information about the target population, performance setting, and learning setting.
    - Analyze and describe the general characteristics of a target population.
    - Analyze and describe the contextual characteristics of the eventual performance and instructional settings.

Optional activities (choose 2 from the list):

- **Discussion forum**: Student stories
- **Journal** (private reflection): Student stories
- **Discussion**: revisit "The Biggest Myth in Education (https://youtu.be/rhgwIhB58PA). What are your thoughts on the information presented within this video?

Assessments for Week 2

- **Quiz**: Observable behaviors
- **Perusall**: Course plan – read through the instructional design stages we've covered this week. Annotate the text and respond to annotations of others.
    - **Synchronous meeting (Zoom/Teams)**: Let's recap - based upon the annotations in Perusall, we'll tackle the questions, comments, and other items. Synchronous meeting date(s) will be determined by participant availability (Doodle poll) – depending upon availability, there may be more than one meeting scheduled (only required to join one – but welcome at all)

37

- **Discussion forum**: How to escape education's Death Valley - Share your thoughts on Sir Ken Robinson's TED talk "How to escape education's Death Valley." What are your impressions? What surprised you? What intrigued you? Where might you want to dig in deeper? How do you see this impacting KCC and more specifically, your class(es)? Consider our incoming students, particularly those coming directly from K-12 or dual enrolled students – how might their education impact how they perform at KCC/your class(es)? https://youtu.be/wX78iKhInsc
  - **Collaborative Whiteboard**: Authentic Assessment – Let's brainstorm ideas for how you might use authentic assessment within your discipline. Access the digital whiteboard through your Microsoft Team Site for this course. On the whiteboard template, add your ideas, respond to others.
  - **Course Plan**: This ongoing document will track your plan as we work through the instructional design steps, learn about best practices, and learn from each other. Using the template provided (only you will have editing capabilities), fill out the learner analysis, instructional analysis, and course outline.

38

Week 3: Instructional Design Continued

Introduction

This week we will continue to explore the ADDIE model. In the previous week, we covered the Analysis and Design steps of ADDIE, using this week to learn about the Development, Implementation, and the iterative Evaluation step.

Week 3: Course Learning Outcomes
- Identify digital options for student supports
- Demonstrate effective tools for assignment delivery
- Articulate the assessment process for newly developed online classes

Week 3: Participant Learning Objectives
- Develop a course plan.
- Incorporate instructional design principles into the development of online content.
- Identify opportunities for authentic assessment.
- Select aspects of authentic assessment that fit the assessment needs of your course.

Development

In the development stage, the course objectives are broken down into lessons. Each lesson will have specific measurable objectives. Assessment methods are also considered at this stage. All content, whether it is multimedia, audio, gaming, collaborative, must support the lesson objectives.

Determine the instructional strategy and select the appropriate media that best facilitates student understanding of new knowledge and supports the instructional strategy.

39
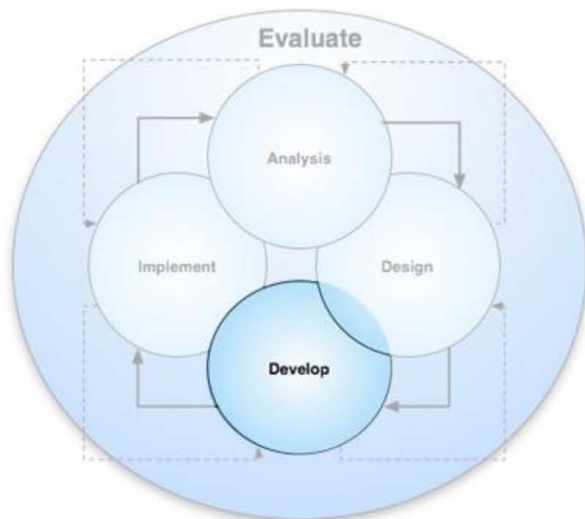
To Lecture or Not To Lecture

All too often, instructors are confused and frustrated as to how to adapt their face-to-face lecture material, as well as their current teaching style and methods, to best suit the online "virtual classroom." Faced with the uncertainty of how to translate their course from classroom to online, many instructors approach the task with the following question.

How do I lecture online?

One of the time-honored traditions of the face-to-face classroom is the lecture. However, without live students in front of the instructor taking notes, asking questions, or making comments, how do lecturers make the transition to online courses?

When deciding whether an online lecture is the appropriate instructional strategy to use to help your students meet the learning objectives of the associated lesson, ask yourself:

- What is the advantage to the student to receive this information, content, or instruction in the form of a lecture?
- How will they put this lecture to active use?
- How can they demonstrate what they can do (or know) based on this lecture?

The following reasons may be appropriate for deciding to provide a particular lecture online:

- Providing a "map" or structure for students to add new knowledge to prior knowledge, experiences, and ideas. You, as an expert in your field of study, may have a unique way of providing an overview and structuring content, skills, or processes to be learned that will provide students with a type of advanced organizer that can help them "fit" this new knowledge into already developed cognitive "schemas." Visuals that accompany lectures, such as concept maps or outlines, can help students see these connections or interrelationships more effectively.
- Modeling a critical thinking process, such as analysis or synthesis. Sometimes a well-designed lecture will help students take a deeper and more critical look at new content or information. By modeling how to compare, evaluate, analyze, or examine new knowledge, students can begin to learn such skills themselves. For example, you can provide them with an example of the kind of thinking you will want to see in their own writing, projects, and discussion responses.

40

- Using up-to-date, real-world events, situations, and research to add clarity, relevance, and breadth to reading assignments.

  One of the advantages of lectures to textbook readings is that information and examples can be added that connect to a student's experiences, recent world events, and new research developments. These lectures may have an overall context that stays the same but have "just-in-time" components that keep the lectures fresh and current. With the wealth of information available to students on the web, these lectures are natural starting points for online students to pursue their own research into areas of interest stimulated by the lecture.

  Other reasons for providing an online lecture:

  - To present information that is not available elsewhere.
  - To challenge students to think more deeply about subject matter by introducing conflicting ideas and various points of view.

Consider for Further Reading
- Take Your Teaching Online: The Micro-Lecture

Why Shouldn't I Just Record My Lectures and Put the Recordings Online?
You can humanize your virtual presence with your students by adding carefully designed (and produced) audio or video links to some of your lecture material. Recording face to face lectures may not be possible due to technical limitations of Bb and of student computers. In addition, there is too much peripheral interference in face-to-face lectures that will not be focused and relevant enough for online delivery. It is better to record small chunks of information.

You may want to add depth to your virtual presence by selectively recording yourself in one of the following situations:

- Welcoming your students to your online course. Provide your students with a face and voice to go with the name of the instructor.
- Asking questions that make the student "feel" like you are talking directly to him/her. Links to these short audio or video files can be scattered throughout one of the above types of lectures to make the student pause and think about the content.
- Demonstrating a skill or process that will model for students the criteria you will use to evaluate their demonstration of this skill or process. This might alleviate student fears about "what you want" in their own performance. Think about providing an example of a good (or poor) performance for a particular learning objective.
- Interviewing a guest speaker or expert. This interview segment, which should be short and edited, will help the student get a mental picture of your style, humor, and personality, as well as that of the guest speaker.

41

- Humanizing you online course infographic
- Humanizing Tool Buffet
- Preparing Lectures for Large Online Classes

Avoid Unnecessary "Lecture Dumping"

"Some people talk in their sleep. Lecturers talk while other people sleep."
- Albert Camus

Lecture dumping is the process of just dumping your face-to-face lecture material onto your online students. Without context, easily readable web pages, clear and organized layout, this material will mean nothing to your online students, and they will do nothing with these lectures.

There are reasons NOT to put a lecture online:

- To "cover" the material in the textbook reading.
- To "watch and/or listen" to you teach a face-to-face class.
- To "go over" the items on the test.

Remember that online lectures are really extractions of face-to-face lectures designed to present only the most relevant content necessary to help students meet their learning objectives. They should add value to the online course experience not found through another instructional strategy.

One Solution

You can use PowerPoints that summarize the information from the text and that focus students on key points. These work quite well and are often available as instructor resource supplements along with texts. I tend to edit the text supplement PowerPoints so that they are not too long and so that they really do focus on key points you want students to understand.

Please realize that your in-class PowerPoint presentation materials may not translate well into the online world when taken out of context. Without an accompany lecture, discussion, or other communication, a bullet pointed list of words may come across as meaningless and confusing. Consider ways to convert that presentation into a narrative or other more cohesive translation.

Adding Interactivity To Your Lectures

If online lectures are not connected to a student activity, chances are your online students will not read them!

Try one of the following ideas to involve your students:

- Provide questions during or at the end of the lecture for students to answer in an online threaded discussion. Or send them to that week's discussion forum to have students select questions to answer.
- For a large class, divide students into "lecture groups" and have them discuss questions you assign specifically to each group. Have the group then post their answers to the all-class forum and have

42
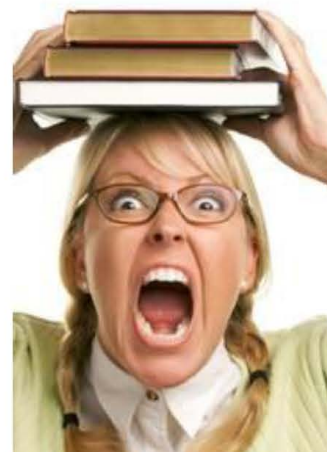
the groups respond to each other's answers. NOTE: Many LMSs have the ability to place students into groups with access to specific activities.

- Connect the lecture to a quiz (self-evaluated or graded) that allows them to check their understanding of the key concepts and ideas from your lecture. You may use a video lecture or even small video 'chunks' with breaks for comprehension checks/questions.

Consider Further Reading
- [7 Strategies for Make Your Online Teaching Better](#)
- [Going Online, Being Digital](#)
- [Some Practical Advice for Digital Pedagogy](#)

General Design Principles

- Good structure and clear objectives - Organization of the course and materials must be defined and clear to the student. The course must have internal consistency among the different parts. Students should know at all times what they are trying to learn, what is expected of them to achieve the learning, and when they have arrived at the goal. It is very easy to become lost as an online student and good design will minimize this.
- Small modules - Contents and the way the materials are organized and presented should be broken down into small modules - this is often called "chunking." modules may correspond to a single instructional objective or learning activity.
- Planned participation - Opportunities for interaction through student activities and exercises are embedded throughout the course.
- Repetition - Important ideas are repeated periodically (especially in summary) to provide reinforcement.
- Synthesis - Important ideas expressed in student material are woven together.
- Stimulation and variety -Through the use of interesting formats, content, and/or guests, the instructional materials should capture and hold students' attention. The material should appeal to students' varying interests and backgrounds.
- Open-ended - Assignments, examples, and problems are open-ended so students can adapt the content to their own interests or situation.
- Feedback - Students receive regular feedback on their assignments and progress in the course.
- Continuous evaluation - The effectiveness of the materials, media, and instructional methods are routinely assessed.

43

While it is possible, even appropriate on occasion, to shorten the instructional development process, it should be done only after considering the needs of the student, the requirements of the course, and the constraints facing both instructor and students. Adhering to sound principles of instructional development will not overcome all obstacles instructors encountered when developing effective online courses. It will, however, provide a process and procedural framework for addressing the instructional challenges that will surely arise.

Layout, Structure, and Content

This section is useful as you think about how you want to structure your online class, how you will use different mediums, technologies, and other strategies.

Good structure and clear objectives

Organization of the course and materials must be defined and clear to the student. The course must have internal consistency among the different parts. Students should know what they are trying to learn, what is expected of them to achieve the learning, and when they have arrived at the goal. It is very easy to become lost as an online student. Good design will minimize this.

- Introduce each new session with objectives and outcomes
- Use a syllabus with course outcomes (these will match those of the face-to-face course and should not be changed)
  NOTE: You will be provided with a syllabus template already structured in an accessible format.
- Provide information on how the class is graded
- Indicate which assignments match which outcomes
- Provide course, college, and other policies
- Make any other expectations clear (late work, what constitutes substantive interaction, extra credit, etc.)
- Use a course map to show students where they can find course materials
- Use a schedule which shows the breakdown of chapters and due dates

Small Modules/Units

Content and the way the materials are organized and presented should be broken down into modules or topics - this is often called "chunking." Modules or topics may correspond to a single instructional objective or learning activity or to sections of the text, a set of concepts or course content. The easiest method I have found for chunking is to link modules to sections of the text and to then break the modules down into weekly sessions.

For example, organize a course by weeks and call those weeks modules or topics. For each week have all of the activities for that week listed under the main link called Module 1 or Unit 1. You will have more chunks this way, but each chunk consists of activities tied directly to the course calendar and week.

44

Another idea is to take chapters from the textbook being used and organize the course by the content contained in those chapters. For example, a module or unit might contain one or two chapters of material.

Planned Participation

Opportunities for interaction through student activities and exercises are embedded throughout the course.

- Think how you are going to use student-to-student and student-to-instructor, and instructor-to-student activities on Discussion Forums, in Groups, in Chat Rooms, and so on.

To learn more about student engagement, participation, and active learning, take a read through:

- Chickering's Seven Principles of Good Practice: Student Attrition in Community College Online Courses (Tirrell & Quick, 2012)
- Applying Chickering's 7 Principles to Remote Learning (Siering, 2020)

Repetition

Important ideas are repeated periodically (especially in summary) to provide reinforcement.

For example, at the end of each session:

- Students reflect on concepts they have learned during the session through open-ended questions on Discussion Forums and through submission of short papers.
- Chapter quizzes are completed

Synthesis

Important ideas expressed in student material are woven together.

For example, at the end of each module:

- Students complete 'mini-capstone' projects that consolidate learning of several major concepts during the module.

Stimulation and Variety

Through the use of interesting formats, content, and/or guests, the instructional materials should capture and hold students' attention. The material should appeal to students' varying interests and backgrounds.

- Many of the concepts are related to students' lives and personal experience. For learning to be meaningful, concepts should relate to real world experiences.
- A variety of different delivery media is used, including Camtasia (screenshots with audio), audio files, web links - which often including video clips and interactive features that support and enhance learning.

Open-Ended Assignments

Assignments, examples, and problems are open-ended so students can adapt the content to their own interests or situation.

This is very relevant in Discussion Forums where students can freely express their ideas from their own points of view and, using personal examples, without feeling that they are lacking in knowledge on topics.

Discussion Board Example 1: Chapter 10, Personality Test Response

45

Give an overview of your personality test findings. State A) something you were surprised about B) something that matched what you expected to find out about yourself. C) Explain how your experience with this personality test fits with the information in the text. Read other students' postings and comment on one. Use complete sentences.

Discussion Board Example 2: Chapter 9, Staff Recruitment and Retention Review

My Best Interview ever…

- What did you like about it?
- Why were you successful?
- What was the attitude of the interviewer?
- How many people interviewed you?
- If you took the job, did it live up to the promise you felt it had at your interview - if not, why not?
- How does your own experience relate to what you have read in the text about appropriate interviews?

Respond to one other student with comments on their posting

Feedback
Students receive regular feedback on their assignments and progress in the course.

- On Discussion Forums as responses to postings.
- Through comments that instructors can write in the grade book.
- On occasion, through emails, when the message needs to be sent quickly and requires a response.
- Comments can also be provided to students on submitted work using the Assignment submission area in Moodle.

Continuous Evaluation
The effectiveness of the materials, media, and instructional methods are routinely assessed.

- This can be achieved through analyzing the responses you receive from students in their assignments: ask, did this assignment achieve what you intended? If not, can the instructions or assignment be rephrased or adjusted slightly to achieve the original outcome you wanted.
- Update the content to incorporate updates in research findings etc.

46

Implementation

In the implementation stage, all the individual assets are created (multimedia presentations, video, audio, written documents, etc.). The delivery method for the content is created (learning management system, printed items, streaming content, etc.)
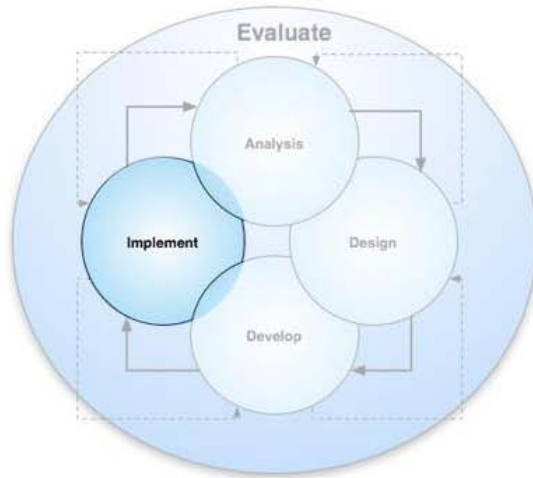
There are three basic steps to consider as part of the Implementation phase:

- Training the instructor
- Preparing the learners
- Setting up the learning space

Training the Instructor

At KCC, the online course developer is often the individual teaching the course. However, there are instances where the full-time faculty may develop a course and provide the content to other instructors (full-time or adjunct).

As part of the Online Course Development Committee's new online course development review, many of the needed documents are already present in the course (outcomes, objectives, activities, assessments, etc.). However, an instructor who is new to teaching either the specific subject matter or modality, will benefit from a review meeting to make sure the outcome assessment maps are understood, the media and technology is appropriate and familiar, and the analysis step is discussed.

Preparing the Learners

This step ensures the students have the tools and knowledge to participate in the class. At KCC, all students are required to complete the Online Learner Orientation. This relatively brief course walks students through the expectations for online learning, effective communication strategies, how to use some of the common technologies, where to access technology assistance, and where to access additional support services. If you

47

are using educational technologies outside of the technology KCC supports, please make sure students understand how to use the tools and where to find help.

Make sure to notify students of any additional tools they may need for your specific class (e.g., webcam and microphone for synchronous meetings and office hours).
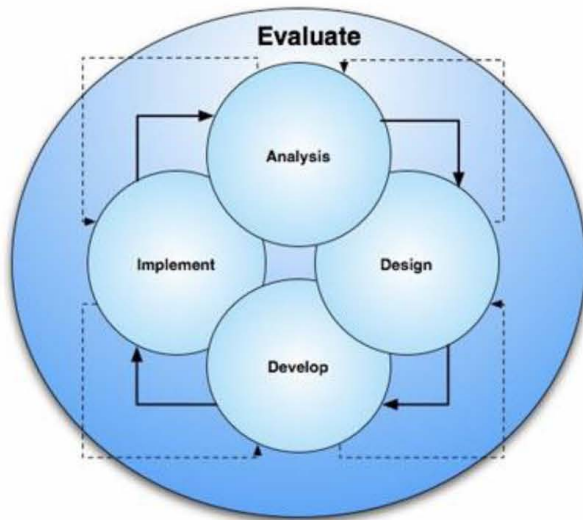
Setting up the Learning Space

In a face-to-face classroom, this step might include making sure the desks and chairs are arranged to support the class activities. However, in the online environment, you will need to make sure you are using the right tools for the right job. KCC's learning management system, Moodle, offers a wide range of tools for delivering content. Some tools work better than others in certain situations – for example, a discussion forum might not be the best tool for assessing based upon a multiple-choice test. In this example, using a quiz, assignment, or journal tool might be a better option to allow each student to submit their own answers without publicly sharing their answers with the entire class.

As you design your content delivery, make sure to consider the student perspective. While it might make sense to you to group all assignments in one area, all assessments in another area, and list all the readings in yet another area, this structure may become exceptionally frustrating to the students as they try to find all the individual items from each section that they will need to fulfill for that session. Instead, consider how the student might approach the content. First, they may want to have a brief overview of the section, access the appropriate readings, and then move on to the required assignments and/or assessments. Having all these items listed in one area may be very helpful for the student – a kind of "one stop shopping" space.

48

Evaluation

Evaluation of the content will happen throughout the design process. It consists of both formative and summative evaluations:

- Formative evaluation (internal): throughout each stage of the ADDIE process. It is used to catch deficiencies and provide for proper learning interventions allowing the learners to master the required skills and knowledge.
- Summative evaluation (external): focuses on the overall outcome. Instruments such as questionnaires, surveys, interviews, observations, and quizzes/exams provide user feedback opportunities.
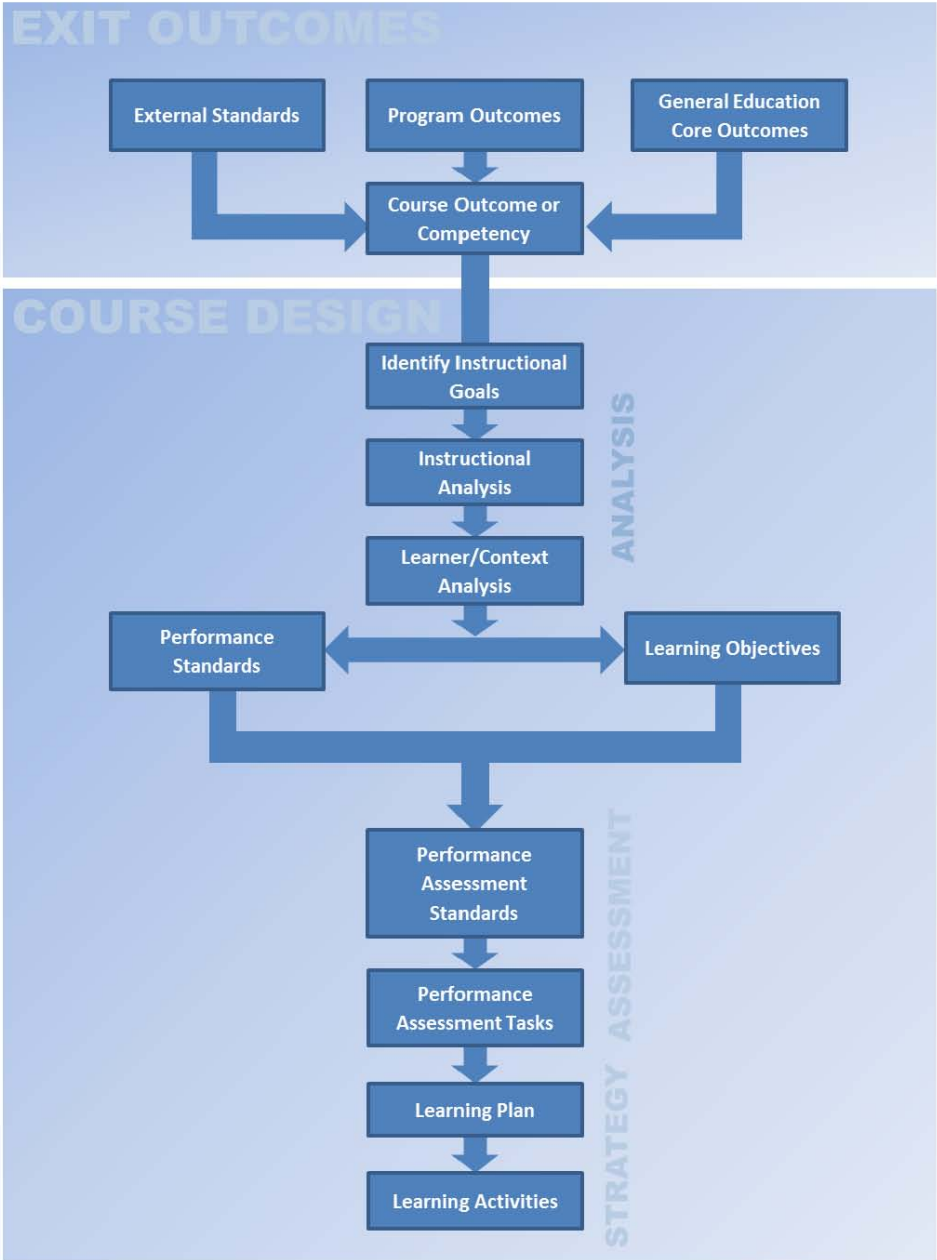

Performance-Based Learning

Working through the ADDIE framework involves decisions about performance. Specifying performance expectations is essential if learners are to reach their full potential and earn a degree or credential based on performance results.

Research supports the KCC belief that students demonstrate more learning at higher levels when learning outcomes are clearly understood by students. Throughout learning, students gain knowledge, skills, and work habits which they apply through practice in "real world' situations. This approach, called performance-based learning (PBL), emphasizes achievement of student learning outcomes. "[It] places students at the center of the learning process by enabling the demonstration of mastery based on high, clear, and commonly-shared expectations." (The Council of Chief State School Officers, 2011)

For more information, please read through Project-Based Learning Research Review (http://www.edutopia.org/pbl-research-learning-outcomes)

49

Design Framework for Performance-Based Learning

EXIT OUTCOMES

External Standards → Course Outcome or Competency ← General Education Core Outcomes

Program Outcomes → Course Outcome or Competency

COURSE DESIGN

ANALYSIS

Identify Instructional Goals

Instructional Analysis

Learner/Context Analysis

Performance Standards ←→ Learning Objectives

STRATEGY ASSESSMENT

Performance Assessment Standards

Performance Assessment Tasks

Learning Plan

Learning Activities

50

Activities for Week 3

Required:

- **Discussion forum** or **Journal**: ADDIE, ADDIE, ADDIE....this just doesn't work for me
  While KCC does use the modified ADDIE process (as previously outlined), there are other instructional design models available. Take a look at some of these other models and consider how these differ (or are similar) to the ADDIE process:
  Merrill's Principles of Instruction
  Gagne's 9 Events of Instruction
  Cognitive Task Analysis (CTA)
  Dick & Carey Model
  Air Force Five Step Approach
  Backwards Design (Wiggin & McTighe)
  There are many more, these are just the highlights!

- **Collaborative Whiteboard**: Revising Authentic Assessment – Let's refine some of your ideas for how you might use authentic assessment within your discipline. Access the digital whiteboard through your Microsoft Team Site for this course. On the whiteboard template, revise, update, and add to your ideas, respond to others.

- **Matching activity**: Is it measurable? Click on the link to access the interactive matching exercise (Hot Potato activity) connecting commonly used assessments with outcome language.

Optional (choose 2):

- **Matching activity:** Grudge Match: Program vs Course: Still struggling with writing your outcomes and getting the language just right? Try out this fun exercise to help you work through some of the common challenges. Frustrated? Check out the 'not tappin' out yet' link for ABCD guidance (Audience, Behavior, Condition, Degree) – you'll master this in no time!
- **Discussion:** Differentiated learning: Watch Real-Time Assessment: Providing a Window Into Student Learning. Although this video shows high school students in Advanced Placement face-to-face classes, these strategies are certainly transferrable to the community college online environment. How might you approach differentiated learning strategies in your course(s). What barriers and concerns do anticipate? What supports might you and/or your students require to accomplish this?
- **Journal** (private reflection): Embedded student supports. As you reflect on your learner analysis, outcomes, and assessments, what are some of the most needed supports your students might need (reference your course plan document – Supports column). As you review these supports, are they primarily academic or non-academic (or a mix). Challenge yourself to reach a mix of both academic and non-academic – consider all aspects of the student, their characteristics, ways in which they learn, etc.
- **One minute paper:** We've covered a lot of materials over a very short time. What are your concerns, where are the gaps, what questions do you have about your course plan, where do you need help/ideas/assistance/review?

51

Assessments for Week 3

- **Assignment**: Course outcome development. Use the worksheet and packet provided to begin to create your course learning outcomes. Be sure to include your program outcomes (if you are a transfer course, use the program outcomes from the Associate in Arts degree program).
- **Assignment**: Create an assessment map. You may use any digital tool of your choice to document your program learning outcomes, course outcomes, and connections to assessments (in other words, how are you measuring the outcomes to determine what/how students are learning). Don't forget about your authentic assessment brainstorming/refinement activity – these may fit in quite nicely.
- **Discussion forum**: metacognition and student learning. After reading Strategic Resource Use for Learning, Teaching Metacognition, and reviewing ideas presented through DePaul's Teaching Commons, what are some ways that you could use metacognitive strategies with your students?
- **Course Plan**: This ongoing document will track your plan as we work through the instructional design steps, learn about best practices, and learn from each other. Using the template provided (only you will have editing capabilities), add your outcomes, activities, and assessments. Identify some of the ways in which you plan to deliver your course content and materials. Based upon your analysis and outcomes, make notes in the "Supports" column where you believe your students might need the most assistance (academic and/or non-academic).
    - **Synchronous meeting (Zoom/Teams)**: Let's recap - based upon the content, assignments, and assessments, we'll tackle the questions, comments, and other items. Synchronous meeting date(s) will be determined by participant availability (Doodle poll) – depending upon availability, there may be more than one meeting scheduled (only required to join one – but welcome at all)

52

Week 4: Best Practices in Online Teaching and Learning

Introduction

Now that we've covered all the stages of the ADDIE model for course design, let's take a look at some of the best practices in online teaching and learning. What does the research show in terms of student success in online learning? What steps has KCC taken to assist with both teaching and learning success? What are the supports in place to help assist students and faculty? We have a lot to discuss this week!

Week 4: Course Learning Outcomes
- Develop effective online course organization, including clear directions and policies for students
- Plan effective management of course materials, assignments, interactions, and supports
- Identify components of a high-quality online class

Week 4: Participant Learning Objectives
- Develop a course plan.
- Identify and justify strategies to facilitate students' success in online courses.
- Incorporate instructional design principles into the development of online content.
- Identify "introductions or ice-breaking" activities while creating a first-week activity.
- Match communication activities and tools to differing instructional goals.
- Identify the advantages and disadvantages of using various communication tools.
- Choose and justify the use of a communication tool for an instructional objective.
- Describe and create techniques for managing and moderating communicative interactions.
- Establish an engaging and supportive learning environment.
- Identify non-cognitive student challenges.
- Identify student at-risk markers.

Social Presence Model

Historical research in the areas of social learning, cognitive development, and education has shown a positive impact on student success when students feel engaged, feel connected, and have a sense of belonging within the learning environment (Vygotsky, 1978; Wertsch, 1985; Wenger, 1998). Additional research by Whiteside (2015) expanded upon these areas to develop the Social Presence Model. This model consists of five integrated elements:

- Affective association
- Community cohesion
- Instructor involvement
- Interaction intensity
- Knowledge and experience

53

These five elements work together to indicate a student's motivation to become actively involved in their own and their peer's learning.

Let's take a look at each of these elements to better understand how they function as a category and then how they overlap to influence student motivation.

Affective Association

Affective Association examines the emotional connections in the online learning environment. While we prepare our course content and consider delivery methods, embedding time to make emotional connections through conveying emotion, humor, and self-disclosure related stories can engage students and humanize your online course.

Community Cohesion

As we work through the ADDIE process, consider how you might set up a structure to create community within your course. How are you greeting students? In what ways do you address students or determine how they might prefer to be addressed? How might you model appropriate remarks, spark respectful debate, or present opposing viewpoints? This takes time and can be challenging to monitor and guide, but all the small nuances help build a learning environment where students will engage and feel safe sharing ideas.

Instructor Involvement

As you prepare to launch your course, consider the ways in which students will find you 'present' in the course. Online learning can feel isolating for students particularly if the primary activities are asynchronous and there isn't a lot of individualized feedback. While you may be working in your course every day or several times a week, students may not 'see' you.

Instructor Investment is the extent to which you, the instructor, are an invested, active partner in the learning community. To this end, what is your strategy for creating presence and connecting with students?

Interaction Intensity

As your online class get underway, take a look at the level of interaction among the participants. Are students connecting in any meaningful way (beyond a simple "I agree" discussion reply)? Consider how you might foster interactions by paraphrasing, complementing, or asking question to guide further discourse. This may be difficult if the majority of activities are asynchronous and students tend not to revisit, thereby missing the opportunity to engage. If this is the case, consider ways in which the interactions might occur more rapidly or ways to incentivize ongoing discourse.

Knowledge and Experience

Whether you developed all your own content and course materials or you were provided with a completed course shell, consider the value-added perspective. How might you share additional resources, experiences, and knowledge with students beyond the current content. From the student perspective, the content is somewhat static, like reading a textbook. Students may not realize your authorship or understand your subject matter expertise. One of the most effective ways I found to offer my expertise is to provide extra resources, stories, experiences, etc. in response to student posts and/or submissions. If a student is exploring a concept around a theory, I might provide an extra link or video to support their exploration to

54

help engage with the student(s), show understanding and guidance, and hopefully engage the student in the learning process.

Role of the Instructor

Instructors should choose how active they will be in their course's online discussions. Once decided, instructors should clearly indicate to the students how active they will be and why they have chosen the level of active participation.

These choices can be arrayed along a continuum of passive to active.

Absent	Moderator / Facilitator	Expert

Absent

The extreme position is for the instructor to choose not to be a part of the discussion at all. Instructors who choose this option indicate that they want the interaction to go unimpeded. They want to remove all censorship, temptation on their part to provide the expert opinion, or anything that could hinder candid and open conversation among students. The instructor should make it abundantly clear to the students the reasons why they are choosing not to participate in the online discussions. Failure to do so can result in students' perceiving online discussions as meaningless because of the lack of input and participation from the course instructor. (Or worse the students may perceive the instructor as inaccessible or lazy.) Another consideration in the amount of participation on the part of the instructor are the guidelines set forth by the Higher Learning Commission (HLC – KCC's accreditation entity). The HLC sets for particular standards specific to online education (C-RAC guidelines) that address quality standards for distance education, which KCC's follows in the development of all online/hybrid/ITC courses. One distinction that determines the type of course, according to HLC, is "regular and substantive interaction" which can determine if a class is considered 'online' or 'correspondence.' KCC is currently approved to offer online/hybrid courses and programs but not approved to offer correspondence courses.

However, as you consider ways in which you structure your course, you are able to offer discussions in which you do not interact for various pedagogical reasons. The lack of interaction cannot make up the majority of your course.

Moderator / Facilitator

A more popular choice among instructors is that of moderator/facilitator. In this role, the instructor sets up the interaction, monitors the flow, and participates only to increase communication and to correct any misinformation. The instructor might establish rubrics or rules for participation and intervene only if they are being ignored or need to be encouraged. The instructor might also try to stimulate a lagging conversation by asking a new

55

question, following up on a neglected point, praising a student contribution or extending the thought, or linking some other part of the course to the point that is being considered. Generally, though, the instructor refrains from commenting on issues of content, focusing instead on group process.

Expert

Other instructors choose to maintain a strong presence in the interactions, providing supplementary or corrective information, calling on students directly to participate, or contributing personal insights or opinions. This more directive stance might work best with students who are unsure of content, when the content is technical or introductory in nature, or when there is pressure to move quickly, and discussion must be focused. Too much directive interaction can shut down student interactions, especially with each other.

Overall

While different instructional goals dictate different choices, most of the online instructors favor the middle range position. Many are unwilling to totally absent themselves, yet at the same time they want the discussion to be student directed. Research has found that the most successful discussions in terms of the frequency and depth of comments have some instructor presence. When commenting on the role of the instructor, students express a preference for some instructor participation with sufficient leeway for student direction.

My Preference

My own preference is to let students post and interact without being specifically directive so that students are free to express their own thoughts and ideas and frequently to provide feedback to others in the forum, until the end of the session. I find that this unfiltered interaction provides for deeper and richer student participation and interaction that works well with this particular subject matter. Later, I provide either individual feedback to each discussion forum posting (typically through the gradebook), or I summarize the postings (usually under the Announcements or a comment within the discussion forum), draw attention to a few concepts or ideas that threaded through the class's discussion, point out individual postings that I felt were exemplary and correct any general misconceptions. However, if the discussion forum is not progressing or students begin posting very abbreviated initial postings/replies, I will jump in with some additional probing questions to help guide the student into a deeper though process. If the student does not take the discussion any deeper, then they will be graded as such with feedback in the gradebook (a hint to push them back to the discussion in case they chose not to revisit the postings).

As you progress through this class, consider your subject matter and the delivery methods (we'll delve into this very soon!). You may want to use different approaches depending upon the desired outcome, the subject matter, or other pedagogical reasons.

Connecting with Students

One of the most effective online teaching strategies you can use is to provide your students with a "face" and a "real" persona behind the name.

56

This can take many forms:

Write a Welcome Letter

I think a welcome letter is essential to orient students to an online class. KCC Learning Technologies sends a generic one to online students, but I feel that the one that you send as an instructor, before the class starts, sets the tone for the whole online semester.

A welcome letter, similar to the one you received before this class started can be sent via email or can take the form of a printed letter that is sent via postal mail to students a week or two prior to the start of your course. I suggest that you use email and wait to send your letter until the course has been loaded with your student population. This usually occurs several days prior to the start of the semester.

The welcome letter should be informative, including such details as how to locate and log into the course web site. This is also a good opportunity to confirm the basic skills needed to take the class and to provide references for technical support such as an orientation for online learning (if available).

TIP: Encourage your students to get in touch with you within the first few days or week of class. In the welcome letter request that the students either email you reporting that they received your letter or have them enter the course web site and in the discussion board "post" a message indicating successful log in to the course. Many instructors have a forum titled "Introduce Yourself to the Class" serving dual purposes – introductions and a virtual-check of initial attendance (the student has successfully accessed and logged into the course). Another great idea is to have students post in the discussion board that they have read the course syllabus and calendar.

TIP: If you are new to some or most of the technology that may be used in your course, *do not be afraid to admit it!* Students will most likely feel more comfortable if they realize that you might be stumbling along in the beginning just as they are, and that their insights as to how to make things work better might be valuable to you -- as long as the learning is viewed positively, as an adventure.

TIP: Your enthusiasm for your students and their learning should be conveyed in as many ways as possible. No matter how beautifully designed or technologically up-to-date and impressive looking your course may be (whether designed by you or another faculty member), YOU are the one who brings the material to life. You are the one who will moderate engaging online discussions, send students off in different directions to do research, or plant a seed based on a student's comment that just might lead to an interesting discovery. Failing to do this, students might as well be handed a CD-ROM and be told to return for an exam in three months.

57

Get To Know Your Students
"Without a sense of community, of common interest and action, there is no class."
Skip Knox, PhD, Boise State University

There is considerable evidence indicating that online students need the opportunity to get to know each other before they will feel that they are a legitimate member of the class and wholeheartedly engage in online discussions. Given the physical limitations to the online environment there is an understandable reluctance to state their opinions and post work within an online course when the audience is unknown.

Those with extensive experience in online instruction report that online learners need to feel connected – both to their instructors and to the other students in their online class. Students do not want to feel isolated and alone in an online course. Online courses are wonderful opportunities for instructors and students to get to know, communicate, and work with each other.

Some possible activities are:

- at minimum, create a discussion forum where students can post a brief introduction (e.g., their name, why they are taking the class, etc.)
- use of a synchronous chat tool (e.g., Virtual Classroom) to have a "get to know everyone" chat session
- Create an ice-breaking activity as a Discussion Board forum

Examples of Ice-Breaking Activities
I find that ice-breakers work really well when they are related to the content area of your class. In my courses I often ask students what career they are pursuing and why learning about this topic will help them. Any idea where you draw out some personal experiences that relate to your topic, can break the ice in your online class. Below is a nice ice-breaker example from an online instructor:

Learning/Teaching Experience from H---!
In terms of an icebreaker activity or a way to get started, I use the following discussion item when teaching my Online Learning Strategies course. I don't know that my activity is "fun" but it seems to be effective.

I post the following discussion item:

> "All of us have experienced difficulty in teaching learners, both in classrooms and online. Please describe a recent difficult experience you had when you were teaching adult learners. This can be your 'learning/teaching experience from H---.' Finish your posting by describing how you would handle this differently now."

This discussion item serves several purposes:

- It immediately builds an environment where everyone is on a similar footing (we have all "failed" in some way). Beginning with failure also tends to open up students to more intimate or rich conversations and, hopefully, demonstrates a safe environment for sharing real issues.

58

- It begins the bonding process because students read a bad experience and commiserate with the writer.
- It usually also opens a door into the background of the writer as they put their difficult experience in context of a current or past job.
- It gives each writer an opportunity to shine by posting a potential resolution or learning from the problem.

Maggie McVay Lynch, Ed.D. Portland State University, Instruction and Research Services

Many instructors create ice-breakers using a common theme or idea that most students can relate to. Sometimes this theme or idea focuses on the course while at other times it relates to common activities or knowledge. If you are able to bring the two together, even better! This can help students begin to make connections to prior knowledge which will create the foundation for learning.

Examples include:

- Favorite hobbies or interests
- Favorite foods or movies
- Examples of success and failure
- Favorite vacation locations
- Discussing what you like about yourself
- Focusing on a simple application of the course topic

Engaging Students

Often, we find it challenging to get students to engage, but once they overcome their reluctance, they tend to retain the materials when they engage with it during class time (think back to the Social Presence Model).

How can you build this type of environment? How can you engage students as active participants?

- Recognize various learning styles
- Learn student names
- Establish clear expectations for both students and instructor
- Provide contact information and availability
- Understand where they currently are
- Leverage what they already know
- Providing timely and specific feedback
- Positive corrective feedback
- Encourage diverse opinions/minority opinions

Through examining the recent research on how people learn, it is important to learning about the experiences your students bring to the classroom. Instead of a passive movement of information from

59

teacher to student, many faculty members believe learning to be an active process. From this perspective, students are engaged in a creative act of building understanding by drawing from prior experiences as they evaluate new information.

Learn Student Names

This may sound simplistic, however, the quicker you can connect a name to a face and any other information, the quicker you begin building a positive relationship with your students. Students place a higher value on those instructors who treat them as individuals rather than an anonymous group. They will feel more responsive and tend to engage in discussion and class materials.

Ice breakers can help you learn more about your students and assist them in finding those important connections with each other.

Establish Clear Expectations for Both Students and Instructor

As presented in the earlier "Setting Expectations" section, clearly and consistently convey your expectations. Much of this can be done through a review of the syllabus, but also consider discussing the 'ground rules' for your classroom. Let students know what they need to do in order to succeed – not only what they must achieve, but how they will know when they have achieved success. Include ramifications when rules are not followed.

You may never experience a severely disruptive student but having this framework in place can make dealing with those uncomfortable situations 'easier'.

Provide Contact Information and Availability

Being available to students before and after class and help you build those individual relationships with students. Some students feel more forthcoming with concerns and/or questions rather than verbalizing them in front of the class/group.

If you are unable to have any extra time before/after class, let students know (e.g., you teach another class before and after) and provide alternative resources for contact.

60

Understand Where Students Are

Consider the levels of diversity within your classroom. Just based on age alone, take a look at The Mindset List for your youngest and oldest student (as well as yourself). How might these perceptions challenge the way in which we deliver (and students receive) course content? From these insights, also consider where the gaps may occur – are there skills sets that might be poorly developed or not exist that could present challenges?

With KCC's open enrollment, we find ourselves with students who possess a wide range of experience and skills levels. However, research has found a large percentage of incoming students are placing in the developmental courses. Presenting course materials to students with such a wide range of knowledge in math, science, English, and technology is challenging. We will take a look at instructional design strategies to work with this diversity.

Leverage What They Already Know

As noted in the previous section, the range of skill levels, experience, and education is vast. What have your students already learned in their program? Other classes? In their current profession? How can you build upon these experiences? Are there ways you can leverage the experience of highly experienced students to assist those just starting out? Can there be collaborations that can help to build a sense of community within the classroom?

In what ways can you motivate your learners? How do you gain their attention and sustain it throughout the instruction? You can tap into their interests using emotional or personal information, ask questions, create challenging scenarios, and/or use real-world examples.

However, how might our initial perceptions effect students throughout the semester? Consider this article by David Gooblar, columnist for Chronicle Vitae: Pedagogy Unbound "Getting Our Students Wrong."

Providing Feedback

Feedback that is both affirming and corrective is necessary to facilitate learning. Feedback to students may be provided in a variety of formats, such as rubrics, written comments, formative, summative, group or individual comments. While this feedback is very important for student learning, it is even more important to provide it in a timely manner.

For students to improve, feedback must be timely, frequent, and relevant. Learning occurs when feedback includes not only what the student did well, but also what needs improvement and ways to make the improvements. Consider providing exemplary student examples (without any identifying information). Conversely, consider providing poorly constructed examples along with feedback for improvement.

61

Encourage Diverse Opinions/Minority Opinions

One of the most diverse learning environments is that of the community college. At KCC, we see a diverse range of students in the classroom – varied backgrounds, experiences, and characteristics. Each class will contain a unique mix of student demographics.

The majority of students come to the classroom with fears and uncertainty. They may not have any college experience or are returning after years in the workforce; they might be dual enrolled high school students or an expert in a different field brushing up on skills to become more marketable. Whatever the situation, fear and uncertainty can result in apprehension engaging with peers.

Can you think of ways in which this diversity can be leveraged to promote learning and community? Might there be ways in which you can ease apprehension to encourage engagement?

In order to sustain learners' attention long term, they must perceive relevance in the instruction. The instruction must be relate to the learners' goals in some way.

Research shows that students obtain higher learning achievement and retention in student-centered classrooms in which they are actively engaged - not only with the content, but with the instructor and other students.

Guess what? You're doing learner analysis!

Creating Online Communication

Current learning theory holds that meaningful learning requires the student to interact with new information in a way that will enable comprehension and recall. Comprehension is aided by clear presentation of the information, linking to the student's prior experience, and opportunities for the student to work with or apply the information - often by interacting with each other.
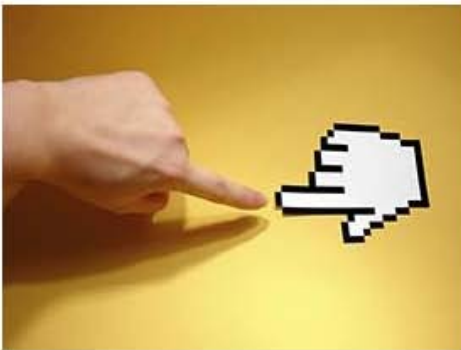
Recall is much more likely if the student has the opportunity to fit the information within the structure that they have assembled to logically organize ideas, facts, and concepts. Both comprehension and recall occur within a social context, which affects motivation and attention, as well as providing cues for comprehension and recall. As students actively engage in new learning, they can move to higher levels of cognition, involving applying and evaluating knowledge (think Bloom's Taxonomy).

Although the argument has been made that learning is enhanced when opportunities are provided for students to encounter new information in a social environment that calls upon them to work actively with this new information, there are certainly many ways in which this can be done. Such examples include the utilization of case studies, group projects, and problem-based learning activities.

62

116

Just as there should be a reason for the face-to-face discussion, it is important that online discussions be planned to complement the course learning objectives.

The Nature of Online Communication

"Students graduating from a university often describe the opportunities to learn from other students and informal learning opportunities derived from being part of the university environment to be even more important than their formal coursework."
Bertram Bruce , PhD - University of Illinois at Urbana-Champaign

Many learning theorists define instruction as "a purposeful interaction to increase a student's knowledge or skills in a specific, predetermined fashion." If instructors accept this definition, then the thousands of educational web pages currently in existence with links to other pages or other online resources do not, by themselves, constitute instruction. Even though some educators may argue that there is interaction with the content, that interaction is not enough to constitute instruction. In this example consider the interaction (or lack thereof) between students. Where is the mentoring relationship with the instructor? Where is the problem-solving and application to real-world situations? An online instructor cannot assume the best learning will occur by simply reading content and following links.

Many online courses rely heavily on discussion forums to enable interaction among students. However, an online discussion forum is very different from a face-to-face discussion and requires more prior planning. Interaction, whether in speech or in writing, can be a very complex process.

Online communications tend to be very **text-based**. However, the 'text' that is created within these communications is a special version of text – it lies somewhere between spoken conversation and formal writing. Spoken conversation has a free-flow nature where topics jump from one idea to the next. Formal writing is highly organized and drafted to follow grammatical conventions. Please be aware of the parameters placed around discussion writing and grading.

As participants in online discussions, we expect to see the conventions of formal writing because we are communicating with text. However, even if individual postings are carefully crafted, the communication can appear informal and disorganized because of the conversational aspects of the students' interaction. There is no one correct method for implementing communications between and among you and your students, yet online instructors do have to be aware of the potential confusion and pitfalls associated with this communication medium. Creating formal writing expectations for an informal discussion can be very disengaging and even stressful for students. Consider using the purpose and set necessary parameters accordingly.

Creating a Community of Learners

Watch the following video showing community college students in an Aquarium Science class.

At the beginning of the video, Dr. John Bransford, professor of education from the University of Washington School of Education and editor of *How People Learn*, introduces the concept of a community of learners.

http://special.league.org/gettingresults/web/module1/introduction/creating_community_video.html

63

Challenge, Confusion, Pitfalls of Online Discussions

What can online discussions do that is positive?

Online discussions can encourage:

- Active learning
- Responsibility and reflection
- Deeper information processing
- Student collaboration
- Prompt feedback
- Uninhibited participation
- Student ownership of work
- Sense of community

We will explore many of these applications of online discussions in not only this module but throughout the entire course by interacting and communicating with each other. In the process of completing this online course, you will share information with the other members of this class regularly. In doing so this communication will address two applications - **a sense of community and deeper information processing**.

By now, you should feel connected to the rest of the class, even though you may not see everyone regularly. Online students like to feel connected to the other people in the class, and there are many good ways to accomplish this (for example, check out UpsideLearning's *10 Thoughts on Engagement on eLearning*)

By sharing your knowledge with others in writing, you have spent more time developing your thoughts so that there is a deeper meaning in them: this is a very different process from a quick response in a face-to-face classroom setting (Yoo & Huang, 2013). All of this often leads to more thoughtful processing and a deeper understanding of concepts for all course participants. Students learn best when they have the opportunity to ask questions and get answers from a variety of viewpoints and Discussion Boards are very helpful in achieving this (Dailey-Hebert, 2018).

Although text-based communications tend to be the norm, they certainly are not the only form of communication and engagement. While discussions can help encourage students who may not otherwise speak up in class, they can also be frustrating for students who struggle with writing and/or communicating effectively. As you think about your students, their needs, and your strategies, consider additional and/or alternative ways in which you can engage students (NOTE: we'll be examining technology tools a bit later in this course).

On the other hand, when we ask a question, we don't usually want to sit and wait for a day or two for an answer. Students can get frustrated and insecure when they need help to understand an assignment or a concept. When you develop a class and a communication plan, think about how you are going to find a way to respond in a timely manner without over-committing yourself to your teaching responsibilities! Do you need to be the authority, or can you leverage your students' knowledge and encourage engagement?

64

Communication Strategies

Some possible uses and examples of online discussions include:

Community

The main goal is social: students are encouraged to get to know each other so that other tasks can be accomplished. For example, instructors can learn about the students' interests by asking them about such things as their hometowns, hobbies, or areas of specialization. A business instructor may want the students to develop a sense of community that would sustain the students through their program. The instructor may want students to know which of their peers are from similar geographic locations and who came from the same industrial or corporate fields. Ice-breaking activities that incorporate a focus of the course content as well as 'getting to know each other' aspects work exceptionally well for building communities in online courses.

Group Work

A common collaborative learning approach is called the 'jigsaw'. In this approach, different students in a learning group read or learn about different things and then have the responsibility to share the information with the entire group. An online version of this approach might have students researching a topic from different perspectives or looking at different aspects of a broad topic, bringing specified kinds of information to the larger group. Students are often concerned about working in groups, either face-to-face or online, but the jigsaw concept can be used to explain to them how valuable group work can be, how it can relieve them of the burden of finding every piece by themselves, and how the finished product looks superior as a result of working collaboratively.

Build on Learning

Whether information is presented to students through online instructional material, textbook, or supplemental readings, it can be processed by students together through online discussion. Many instructors use online discussions as a way extending the topic by providing a 'question - answer' session or by posting probing questions that students must respond to based upon the course material or personal experience. Instructors may ask one or two open-ended discussion questions that complement assigned readings. Another option is to bring one or more outside experts into the discussion (e.g., guest speakers, former students, or industry experts). For example, an author of a research project or book may be dropping in for a virtual visit. Readings could be assigned prior to the visit. The author of the assigned readings facilitates a discussion forum or participate/host a synchronous (and possibly recorded) session to respond to or interact with the students and their questions.

General Questions

Students can receive extra practice using the skills needed in a course or can obtain study assistance. Some online instructors use a General Questions discussion forum (e.g., Coffee Shop, Open Forum, etc.) for asking logistical questions about the class, for concept and exam reviews, or even a space for socializing away from the content. Students can ask questions of each other, and the instructor and all of the class participants can read the questions and subsequent answers, or they can answer the questions themselves.

65

Increase Functional Skills

Functional skills such as communication, critical thinking, and creative thinking cross all content areas and can be approached through engaging students in online discussions or other interactions. Some online instructors request that students lead (moderate) a discussion session over the course of a week on a topic of either their choice or the instructor's choice. To get the discussion started, assign students as 'starters / initiators' of discussions and 'wrappers / summarizers'. Such an activity provides an opportunity for the students to better absorb the course information by being the 'topic experts for the week', as well as provide an opportunity for developing the immensely important soft skills that are needed in numerous learning and working environments.

Provide Feedback

A frequent use of online discussions is for students to share ideas for paper or speech topics or drafts of their work for others to critique. In Moodle courses, instructors can create small work groups with their own group-specific discussion board (hence a semi-private workspace) for such peer-evaluation or critique activities.

Coffeehouse – Student Lounge

One of the criticisms of online courses is that there are no after-class opportunities for students to get to know each other and talk about topics not directly related to the course content. Set up a virtual coffee lounge so that students can just 'just hang out and chat' off-topic. Consider seeding this space with some fun off content prompts.

Online Communication Tools

Online instructors are thrilled (possibly overwhelmed) at the abundance of instructional material that can be found on the web. However, I strongly encourage you to think beyond using this material simply as a library repository. Remember that learning also happens in exchanges between students, and online instructors can and should exploit the Internet and their course web site as a communication medium.

There are two primary categories of online communication:

- <u>Synchronous</u> communication requires all participants to 'logged onto the course site' at the same time. An example of synchronous communication is an online chat session or video meeting.
- <u>Asynchronous</u> communication does not require participants to be available at the same time, but rather offers a window of time during which interactions occur. This is how discussion boards operate.

Email, text, and communication....oh my!

Email supports asynchronous interaction, and it is still the primary form of communication for higher ed professionals. As a flexible and familiar technology, email can be a powerful support to learning. Students are better able to concentrate on the content of an exchange when they are not confused or distracted by the technology involved.

66

While we may use email frequently, consider the ways in which students communicate. Texting is often used for quick immediate responses. Not a fan of texting or pass out your phone number? There are many different free apps that allow you to schedule a series of messages and mask your direct contact information. An example of a popular text app is Remind. A Remind group can be set up and students can opt in to receive text alerts and messages.

These communication tools are often used for:

- class-wide announcements and updates
- 'form' messages that are sent routinely, such as student feedback comments, late assignment notices, change of schedule dates, etc.
- distribute or call attention to documents and other files
- connect with individual students to discuss sensitive and personal matters or to simply add a personal touch to the student-instructor relationship.

Despite its ease-of-use and effective communication features, frequent individual message usage can be overwhelming in an online course. Many online instructors are quickly overcome with the sheer volume of email/texts and demands on their time when it comes to responding to each and every email message.

Seasoned online instructors encourage new online instructors to limit the usage of email/text as the primary mode of communication because of these issues. John Wilson, of College Southern Maryland, recommends the OHIO (Only Handle It Once) method when it comes to reading and responding to email. Do not open a message unless you have the time and intention to adequately respond to it.

Consider tracking the basics information/questions sent along individually and encourage students to utilize the more 'public and community-building' method of communicating like the discussion board or wiki (e.g., contributing to a FAQ (frequently asked questions).

Discussion Forum

The discussion forum is the most frequently used method of communication in online courses. A discussion forum is an important tool for online learning as it encourages interaction among students and instructors. This tool functions as asynchronous communication, through which anyone in the class can post a question or respond to anyone at any time. The discussion forum in Moodle supports group (public) communication and file exchange among students whose online schedules may conflict or who live in different time zones.
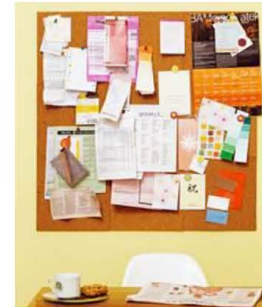
Discussion forums work well for large groups, but even with discussion boards you should keep group size in mind. If you require weekly use of the discussion board as an assignment in your class, this means that every class member must post, read, and respond to multiple messages per week. This can be very time-consuming for group sizes larger than twenty students or so. To effectively use discussion forums in a larger class, either create smaller student groups for discussion, require posting less than once per week, require only a limited amount of reading/response, or assign each student particular roles in the discussion (i.e., some students post, some comment, and some summarize).

67

The discussion forum can have some obvious advantages by:

- extending class "time" by providing for the exchange of ideas outside the class setting
- removing itself from time or place dependence so extra work outside the class is possible for students who are not nearby or who have schedule conflicts
- being easily archived so the instructor has a record of the kind and amount of participation and the ways in which students are thinking
- enabling prompt feedback by the instructor or by peer learners
- encouraging all students to have a voice
- establishing a social environment that will help motivate the student and create a forum within which ideas can be tested and applied

Online discussions also have the added advantage of allowing people who are shy, introverted, and/or introspective to have a 'voice' in an online discussion forum without intimidation or fear of reprisal by more extroverted students in the class. It does not have the immediacy of a face-to-face class discussion, but it can certainly enable deeper and more meaningful group interaction. Asynchronous discussion works well for online discussions requiring detailed, thoughtful, long posts. Depending on how you ask the discussion questions or require participation as a part of the grade, almost all students participate.

Chat

Chat allows students to interact with each other synchronously using text to send messages. Students experience the "conversation" as a continually scrolling transcript. Students who log off or otherwise lose their connection to the conversation cannot recapture dialog that unfolds in their absence unless a transcript is kept and posted online for later retrieval. Moodle 'archives' chat sessions, so that students who missed or could not attend the chat session can read what was missed.

The key to a successful online chat experience is effective moderation. The immediacy of the medium makes it necessary to take a more active stance than with an asynchronous threaded discussion. It is essentially the virtual equivalent of running a small course discussion group. Since people are freely "talking" out their ideas and debating topics, a successful online moderator must be watchful and tactful in keeping the discussion on task. Chat can, however, be very powerful for idea generation (e.g., brainstorming), voting, or decision-making where prior asynchronous or face-to-face discussion has laid the groundwork.

Chat generally works better for small groups (ten or fewer participants) than for larger groups. However, there are situations in which a large number of students can effectively attend a chat, particularly if the discussion is intended to be one-to-many. Examples of this are if you plan to hold online office hours or a Q&A session, or if you invite a guest expert to your class. In each of these cases, one student can post a question, and all attendees can see the question and the answer. You may also consider the chat as a back-channel communication option - an additional dialog that flows from the main communication.

68

While synchronous communication can lend an immediacy to student-student and student-teacher interactions, it is not always practical. Many people are involved in distance learning because they can't commit to a standard schedule, so depending on such real-time interaction may be counter-productive to participation. Also, if a student (or you!) experiences a software, hardware, or network glitch during the scheduled time, that person is cut out of the activity.

That does not mean you must avoid using the chat communication tool. It does mean that you should not make assumptions about what your students can and cannot do. Be explicit about the hardware and software requirements for the chat tool. Offer alternatives to the chat activities for those students who cannot participate. Above all, weigh the trade-offs between the learning value added and students' frustration or confusion when deciding what role real-time communication will play in your online course. Consider using a poll, survey (Microsoft Forms), or tool like Doodle or Microsoft Poll to gather meeting times, or Calendly for scheduling.

Some disadvantages to real-time chat include:

- writing and keyboarding skills necessary for chatting might preclude the participation of some students and may slow down the exchange of ideas
- important social cues, such as nonverbal communication, tone, and pitch are absent
- lag time between one comment and another may cause the discussion to become sluggish or may cause some confusion
- hardware and software requirements and knowledge of how to use these tools are often greater than with asynchronous communications
- scheduling problems of the availability of all students at the same time
- some students can dominate the chat, especially if they have faster Internet connectivity

Video

Synchronous tools can be a great addition to your digital learning tools by humanizing your course and encouraging collaboration. What's the catch? It takes intentional preparation to foster collaboration and connection synchronously. There are several options for synchronous online video chat tools:

- Zoom
- Microsoft Teams
- Skype
- Google Meet
- Discord
- and a variety of others!

While synchronous video chat may seem like the perfect transition from face-to-face classrooms over to the online classrooms, be mindful of the equity of synchronous meetings.

View
"Online Learning in a Hurry" with Dave Cormier and Autumm Caines
https://youtu.be/uOuEaIfvosM

69

Setting Expectations

Many students choose to take online and/or hybrid classes because of the flexibility. Students may have a full load of courses (in a variety of modalities), have family or work obligations that inhibit their ability to be placed in a traditional classroom, or have the misconception that online courses are easier. Online learning is a great choice for a student who is a self-motivated and who is an independent learner. Those who are not as motivated or independent, will take more care and encouragement.

It is important to take time to structure and communicate realistic expectations for your online learning environment. Setting realistic expectations does not mean lowering expectations (Myth buster: online courses are NOT easier). Instead, it's a matter of figuring out the dynamics of the online learning experience and establishing standards for your course, your students, and yourself.

At the beginning of the class, clearly explain how to use the various activities by developing a rubric and a set of guidelines for students to follow. Explain how the activities are connected to the course goals and objectives. Consider creating a link to the course syllabus and/or rubric from within the activity instructions. Some Moodle activities allow for the creation of a rubric from within the tool (i.e., assignments) that work within the grading process. Advise students on how you will review and provide feedback on all activities.

For discussion forums, offer comments during the discussion to ensure students you are aware of their contributions and are "present." Require discussions as an integral part of larger activities and assignments to encourage engagement but do not implement discussions just for the sake of adding more busy work - this will quickly disengage students. As a general rule, don't answer every posting, although this may be effective depending on the goal of the discussion forum. For example, you may be highly present in welcoming students in the initial introduction discussion forum and then back out as student grapple with the content and support each other. You may offer guidance and encouragement throughout.

Rubrics

Consider creating specific rubrics for evaluation of the discussions and other activities. Share these with your students so they have clear expectations. Consider the ways in which you structure your points so that they result in rewarding value and not just compliance.


70

Use clear criteria such as:

- Online netiquette for discussion postings (how to communicate with civility)
- Expectations for correct grammar and spelling
- How many postings you require for each forum
- Length of contributions — e.g., three to six sentences; 100 words…
- Content of posting: including reference to the text, other sources, weblinks, from own experience
- How to demonstrate critical thinking in response
- How many students to respond to and the type of response required

I have found that the more explicit I am in the requirements I have for a discussion board posting, the higher quality work I get from students.

If appropriate, make discussion participation a significant percentage of the final course grade. Set a minimum between 20% and 40% for the final grade allotted to discussion or other collaborative participation. Instructors have found that less than 20% invites non-participation. More than 40% would depend on the nature of the course. For example, seminars might be mostly discussion-oriented while an introductory terminology class or math class may not lend itself well to overall discussion but rather lean more toward articulating discovery.
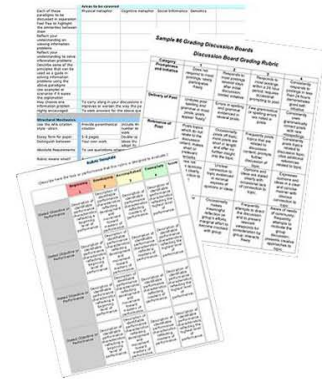
NOTE: There are different types of discussion forums such as the typical 'threaded' discussion or the Q&A. A Q&A discussion forum allows a prompt and a student response before any other posts/replies may be viewed. Q&A is beneficial for those limited response prompts and pushes students to produce their own thoughts before viewing the thoughts of others.

Insist on a minimum number of contributions per week or discussion topic and inform students of how many postings are required that respond to another student's comments to help the flow of 'discussion' rather than a one-time dump of information without return for response.

You may decide to require postings on at least 2 different days to ensure students are coming back to the discussion. For example, students must submit a minimum of 3 postings per week on at least 2 different days. Two of those postings should be in response to other student comments. This strategy helps prevent students from all posting at the last minute which does not lend itself to unfolding discovery but rather pushes posting toward compliance.

In most of the courses I teach, I have students post an initial posting by Thursday evening and a response to another student post by Sunday evening. Although some students will always wait until the last possible minute to post, this provides a fair amount of interaction in my courses. Be mindful to remain as consistent as possible with the pattern; the days do not matter as long as they provide enough time to prepare and to follow up.

71

A Word of Warning!
Do remember that the more complex your requirements are, the more monitoring you will have to complete, so be realistic about your own time commitments!

Try to give yourself some "room" in your rubric for students who may not exactly follow the requirements but do an exceptional job.
Some additional suggested research article "How to structure online discussions for meaningful discourse: A case study" which looks at the impact of structuredness in online asynchronous discussion forums.

Also, refer again to the readings:

- Three Principles of Online Pedagogy
- As we step forward, we must stand still: Critical digital pedagogy and the praxis of taking time

Activities for Week 4

Required:

- **Padlet**: Ice-breaking/Fire starters: Based upon the readings, how might you begin to engage students with each other, with you, and with the course? As noted in the readings, building community has a positive impact on success and retention (for both students AND instructor). Access the "Fire & Ice" Padlet and contribute your idea to begin building engagement and community.
- **Collaborative Document**: Continuous Improvement - Based upon summative assessment and student feedback, create a course continuous improvement plan. While you will not have the specific feedback at this point, how will you use this when you do have it? Will you share the feedback (and with whom – don't forget FERPA/identifiable info)?
  Not sure what to do with the feedback?
  o Consider categorizing feedback from students into topics (e.g., email response time, proctoring, assignments, technology support, etc.) and creating a FAQ (frequently asked questions) to address the feedback proactively.
  o Document feedback (and any revisions/improvements based on it) to share in peer discussions, share with your department chair/director, connect with other online instructors across campus.
  o Keep feedback longitudinally for any future re-design consideration.
  o Consider feedback as part of any modality/student success/prerequisite conversations

- **Discussion forum**: Reaction to Rubrics. As you read through the content on rubrics, what are your thoughts? Good idea/not-so-great/horrible idea? Is there a place for rubric(s) in your course? Would this help with grading (create a more objective structure – and is that good/bad)?
- **Collaborative groupwork/Discussion forum**: Identifying factors that impact student success. In an online class, it can be difficulty to identify when a student is struggling or in need to support/help. You are assigned a small group (members should be from other subject areas). Use the collaborative document/whiteboard (or any other tool) to brainstorm and document ways that you might use to

72

identify student challenges, barriers, struggles (cognitive and non-cognitive) that impact student learning and success. What markers or ways might you alert yourself and others to students in need of support?

After the brainstorming and documentation group work, compile your findings to share with others. Post your findings on the "Challenges and Markers" discussion forum. You may create your findings in any way (video, text, images, checklists, resource lists, etc.)

Optional activities (choose 2 from the list):

- **Journal** (private reflection): Reflect upon what you're learned about the role of the instructor in various modalities. Compare what you're read with your role within your current teaching – what do you agree with? Disagree with? What would you change (if anything)? Would you shift based upon modality (and how/why)?
- **Glossary of Best Practices**: Using Moodle's glossary tool, contribute at least four (4) online best practices and provide examples of how each might work within your discipline area. NOTE: The glossary of best practices will then appear on the right course block to display a new best practice entry each time you enter the course. You may click the entry to see the entire glossary.
- **Assignment**: Create a strategy for communication throughout the semester. What are the tools and methods you will use to connect with students? Do you have a back up plan if you find students are not responsive? Are there multiple ways you might consider using?
- **Journal**: More Markers and Alerts – based upon the results of the discussion forum, what strategies, tools, methods, etc. might you choose to use in your course (and why)? What, if any, might you choose to avoid (and why)? How do you expect the items you've chosen assist in improving student success?

Assessments for Week 4

- **Perusall**: Reflection on online best practices readings with collaborative annotation.
- **One Minute Paper Reflection**: [revisit week 1 one-minute paper….what (if anything) has changed about how you might approach communication to engage students?
- **Course Plan**: This ongoing document will track your plan as we work through the instructional design steps, learn about best practices, and learn from each other. Using the template provided (only you will have editing capabilities), fill in the content delivery plans. You will need to address any textbook access (or OER, readings, research access, etc.) – not how students are to obtain the necessary content. If you are using primarily a text-based content delivery, how might you approach this from a universal design perspective (students might greatly benefit from alternative formats but not have/want documented accommodations). What learning technology tools might be beneficial, engaging, interesting, helpful in your course plan? If you do not have/know of specific learning technologies, what are you hoping to have occur (collaborative workspace? Group work with meetings, synchronous meetings, watch demonstration? Etc.)? Listing the idea/intent of the delivery will help us provide suggestions/ideas.

73

- **Synchronous meeting (Zoom/Teams)**: Let's recap - based upon the content, assignments, and assessments, we'll tackle the questions, comments, and other items. Synchronous meeting date(s) will be determined by participant availability (Doodle poll) – depending upon availability, there may be more than one meeting scheduled (only required to join one – but welcome at all)

Week 5: Quality Standards

Introduction

Online course quality is an essential consideration in the design process, but "quality" can mean different things to different stakeholders (administrators, instructors, students, accreditors, etc.). Without guidance and agreed-upon standards, quality becomes more subjective and difficult to define.

KCC's Online Course Development Committee (OCDC) has developed a quality rubric used to review every new online and hybrid course development. Reviewers consist of online faculty. The KCC rubric is a compilation of a variety of best practices.

Course Learning Outcomes
- Locate resources for the evaluation of online classes

Participant Learning Objectives
- Assess online courses success and online instructor proficiency.
- Establish an engaging and supportive learning environment.

Online Course Checklists

Accreditation Standards (HLC)
The Guidelines for the Evaluation of Distance Education (Online Learning) have been developed by the Council of Regional Accrediting Commissions (C-RAC) to assist institutions in planning distance education and to provide an assessment framework for institutions already involved in distance education and for evaluation teams. The rubric that KCC's Online Course Development Committee uses to evaluate new online course developments is based upon these guidelines. Not all of the guidelines are addressed during the course development phase because KCC has a decentralized course development process and some of these items are addressed by different areas and within different contexts.

C-RAC Guidelines

MCO Course Guidelines
Michigan Colleges Online (MCO) is a sub-group of the Michigan Community College Association (MCCA) to all community colleges in Michigan belong. KCC is an active member with both MCCA and within MCO (Tammy Douglas is the college's representative with MCO). MCO has worked to set standards within our state for the creation and maintenance of online classes and provide a wealth of resources. The rubric and guidelines MCO put forth is the basis for the checklist that KCC has developed.

Online Course Development Guidelines and Rubric

74

KCC's Online Course Development Checklist

KCC's Online Course Development Committee (OCDC) has recently revised the college's rubric to evaluate new online courses and determine if critical components are included in the course.

KCC Online Course Development Rubric

UPDATE: During the recent Zoom meetings, several inquired about the overall course development process at KCC. If a course is approved to be offered in an online (or hybrid) format, then the course structure has already been reviewed by OCDC using the above rubric. Typically, full time faculty are tasked with course development (regardless of modality) and some structure should be available for all to use. Below is the online/hybrid course development process (and the PDF if this is too hard to read!)

Activities for Week 5

Required:

- **Discussion forum**: After reading through the Online Course Development Guidelines, Checklists, and Rubric, create your posting considering the following: How helpful do you think this will be to you in your online class development and maintenance? Are there any areas you have questions, concerns or doubts about?
- **Journal** (private reflection): Quality standards rubric. As you read through KCC's quality standards rubric for online and hybrid course delivery, what are your thoughts?
- **One minute paper**: Consider that various quality check points, best practices, and guidelines from various stakeholders. Compare/contrast KCC's processes to expectations of stakeholders. Are there gaps?

✎ Assessments for Week 5

- **Course Plan**: Revise (if needed) and finalize your course plan based on this course.
- ○ **Synchronous meeting (Zoom/Teams)**: Let's recap - based upon the content, assignments, and assessments, we'll tackle the questions, comments, and other items. Synchronous meeting date(s) will be determined by participant availability (Doodle poll) – depending upon availability, there may be more than one meeting scheduled (only required to join one – but welcome at all)
- **Journal** (private reflection): Reflection on KCC's course development best practices rubric guidelines. As you consider all that you've learned so far and examine KCC's review rubric, do you think successful completion of the OCDC review process and rubric criteria will produce quality online courses? Why? What is missing or what might need to be added to the overall rubric and/or process?

75

Glossary of Terms

Accreditation

Recognition from an agency recognized by the U.S. Department of Education (i.e., HLC) that an education institution has obtained and maintains a certain level of education standards.

Active learning

An approach to instruction that constructively engages learners to explore, connect, and apply concepts and skills.

Aggregate data (summaries of data)

Information collected from multiple sources and/or on multiple measures, variables, or individuals and compiled into summaries, typically for the purposes of public reporting or statistical analysis.

Analysis

First step/phase of the ADDIE instructional design model used to clarify the instructional goals and objectives for the learning environment. The learner's existing skills and knowledge are determined, and any gaps identified.

Andragogy

The method and practice of teaching adult learners.

Asynchronous learning

Method of virtual teaching and learning that does not occur in real time.

Assessment

Measuring what an individual student knows and can do to determine whether students have acquired skills, knowledge, and competencies associated with the outcomes. Assessment is also any activity designed to collect information on the success of a program, course, or college curriculum.

Case study

A description of a problem situation that contains enough detail to enable the students to recommend a solution.

Chat

Text-based tool allowing for synchronous communication.

Collaborative learning

Creating a learning opportunity for students to work together in small groups to develop their own answer through interaction and reaching consensus, not necessarily a known answer.

76

Council for Regional Accrediting Commissions (C-RAC)

The overarching entity that represents the seven organizations responsible for the accreditation of roughly 3,000 U.S. colleges and universities.

Design

The second stage of the ADDIE instructional design model. The learning objectives, tests, and the required skills and knowledge for a task are constructed and sequenced.

Development

The third stage of the ADDIE instructional design model. The purpose of this phase is to develop and validate the instructional material and content.

Disaggregated data

The numerical or non-numerical information that has been collected from multiple sources and/or on multiple measures, variables, or individuals and compiled into aggregate data (summaries of data) typically for the purposes of public reporting or statistical analysis. Disaggregated data is broken down in component parts or smaller units of data.

Discussion forum

A discussion forum tool allows participants to exchange ideas by creating posts and exchanging comments through replies.

Distance education

A form of education in which the main content includes a separation of student and faculty by means of asynchronous technology.

Differentiated learning

An approach to teaching that customizes instruction to meet all student learning needs. While the outcomes remain consistent, the content may be delivered in a variety of methods.

Educational technology

Digital technology used to facilitate learning.

Evaluation

The fifth stage in the ADDIE instructional design model. This phase determines the effectiveness of the instruction. This phase is iterative and conducted during and between all the other phases.

Experiential learning

A learning process that engages students in the process of "doing" and reflecting upon their experiences.

Face-to-face

Students and instructors are in the same location at the same time (also referred to as 'in-person'; 'on-ground').

Facilitator

The online course instructor is often referred to as the course facilitator. Online instructors do not retain their traditional "teacher-centered" roles from the traditional face-to-face classroom.

Feedback

Providing students with information with regard to actual performance compared to planned performance. Feedback can be positive, negative, or neutral with the purpose of continuous improvement and learning.

Formative assessment

A wide variety of methods utilized by instructors to conduct in-process evaluations of student comprehension, learning needs, and academic progress while making adjustments to lessons, instructional techniques, and academic support to promote student comprehension and learning.

High Impact Practices

Teaching and learning practices that have shown to be beneficial across a wide range of teaching and learning environments.

Higher Education Act (HEA)

A U.S. law established in 1965 intended to strengthen the education resources of colleges and universities and to provide financial assistance to post-secondary students.

Higher Learning Commission (HLC)

The accrediting body covering colleges and universities in a 19-state North Central region of the United States.

Hybrid

A combination of face-to-face meetings along with the use of synchronous and asynchronous technology to facilitate learning. The ratio of face-to-face to asynchronous technology use is typically defined within the institution.

Implementation

The fourth stage of the ADDIE instructional design model. During this stage, the strategy for delivery of instruction is developed.

Instructional analysis

The procedures applied to an instructional goal to identify the relevant skills, subordinate skills, and information required for a student to achieve the goal.

78

Instructional design

The intentional creation of learning experiences and materials resulting in the acquisition and application of knowledge and skills.

Instructional goals

Clear statements of behavior that students are to demonstrate as a result of instruction.

Instructional method

An element of the instructional strategy defining how an objective is to be accomplished.

Instructional strategy

The approach used to present information in a manner that achieves learning.

Learner (student) centered instruction

An instructional process in which the content is determined by the student's needs. Instructional materials are designed for the student's abilities.

Learning management system (LMS)

Technology platform through which learning content is delivered and managed. A combination of software tools that offers a variety of functions to facilitate teaching and learning.

Modality

A method of teaching and learning typically defined by the institution with a ratio of face-to-face, synchronous, asynchronous, and technology use.

Needs analysis

A method used to determine training needs by reviewing work tasks, identifying performance factors and objectives, and defining training objectives and recommendations.

Non-academic supports

Activities and programs that are designed to encourage academic success but that do not deal directly with academic content.

Online

The use of technology to facilitate asynchronous learning. The institution typically defines a ratio of face-to-face, synchronous, asynchronous, and technology use to define modalities.

Pedagogy

The method and practice of teaching, particularly an academic subject or theoretical concept. Traditionally this term focused on all learners but more recently has been defined as a focus on the younger learner.

79

Remote Teaching and Learning

The act of quickly moving face-to-face elements of a course online temporarily. A shift to remote is typically reactionary and is not intended for long-term use.

Rubric

A scoring guide typically used in subjective assessments to ensure adherence to guidelines and promote equity in grading.

Simulation

An instructional strategy used to teach problem solving, procedures, or operations by immersing students in situations resembling reality. Students' actions can be analyzed, feedback about specific errors provided, and performance can be scored. They provide safe environments for users to practice real-world skills. They can be especially important in situations where real errors would be too dangerous or too expensive.

State Authorization Reciprocity Agreement (SARA)

An agreement among states that establishes national standards for the interstate offering of postsecondary distance-education courses and programs.

Student learning objective (SLO)

A statement of what the students will be expected to do when they have completed a specified course of instruction. An SLO prescribes the conditions, behavior (action), and standard of task performance for the training setting.

Summative assessment

A summative assessment is completed and documented just prior to the completion of the course to assure that course met the identified learning objectives for the knowledge, skills, and attitudes there were expected to be learned by the students.

Synchronous learning

Method of virtual teaching and learning that occurs in real time.

Target population

A subset of people (students) for whom the program and/or course is designed.

80

CHAPTER FIVE: DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS FOR FUTURE RESEARCH

INTRODUCTION

The purpose of this community college training seminar is to provide a professional development opportunity for faculty to learn the necessary skills and best practices in course design and facilitation as they transition from teaching face-to-face to fully online. This seminar was also developed to increase student success through the development and design of high-quality online courses and programs. The final seminar is a modular course design that may be built within any learning management system and customized to meet the needs of a variety of community college structures.

RESEARCH SUMMARY

Overall enrollment in higher education has decreased nationwide with higher education institutions experiencing an enrollment decline of approximately 3 percent (NCES, 2021). Pre-COVID-19 pandemic enrollment within distance education, specifically online courses and programs, was remaining consistent and in some cases, trending upward (Seaman et al., 2018). Although the COVID-19 pandemic negatively impacted enrollment, approximately two-thirds of students were obtaining their education through distance education. As the higher education landscape continues to rapidly evolve, institutions are finding that students are increasingly choosing alternative delivery options such as online and hybrid modalities to fit around their already busy lives.

Although the majority of students taking online classes remains fairly localized, there remains a need for a flexible modality that accommodates the community college student's current work/life responsibilities (Clinefelter et al., 2019). The literature also reveals concern with course quality, success, and completion, particularly in the absence of high-quality faculty professional development and comprehensive online student supports (Banas & Velez-Solic, 2012; Boettcher & Conrad, 2016; Dick et al., 2005; Dirksen, 2012; Hart et al., 2018; Smith Jaggars & Xu, 2010; McGuire, 2015; Nilson, 2010; Nilson & Goodson, 2018; Xu & Smith Jaggars, 2011).

To address these needs, *Reducing Cognitive Dissonance: Creating Holistic Student Support in the Online Classroom. A Training Seminar for Community College Faculty* was designed to provide faculty with the skills and best practices to teach online and offer flexible embedded online student supports. This seminar is not intended to solve all challenges; it will, however, provide faculty with needed support and skills for online teaching and learning and the knowledge and understanding of the importance of holistic embedded student supports.

LIMITATIONS AND DELIMITATIONS

As noted in Chapter 1, there are several factors and assumptions that frame the structure of this training seminar:

- The training was designed for community college faculty.

- The seminar has a capacity of 24 participants based upon the diligent level of participant interaction, guidance, and engagement.

- A mandatory online orientation is a prerequisite on all classes for all students.

- Optional technology training for the learning management system exists for faculty.

- Faculty contract specifies completion of an instructional design course as part of the tenure process.

- Faculty contract specifies completion of an online teaching and learning course prior to teaching online or hybrid sections.

- The college is part of a non-system state and operates as an independent institution.

While the content speaks to overall best practices in teaching and learning with an emphasis on the online learning environment, some of the policies, procedures, and approaches may differ based upon institutional organization. The content of the course is structured to allow the instructional design content to be separated from the online teaching and learning content for institutions that may have a more centralized or structured approach to faculty development and overall course design.

The course is structured to be facilitated with significant participant interaction which limits the number of participants per section, possibly creating a challenge for institutions needing to scale professional development up rapidly.

What is not clear in the research is the impact of the dramatic increase for online instructors needed to meet student demand and increased course load, quality checkpoints, and course development reviews. According to Means et al. (2010), much of the criticism surrounding online learning is attributed to those teaching online courses and according to Banas and Velez-Solic (2012), lack of training or low-quality training and professional development is often a factor.

CHALLENGES AND RECOMMENDATIONS

Traditionally, higher education has focused on teaching and learning in the physical classroom, often basing institutional change and policies around this modality. However,

student enrollment and recent COVID-19 pandemic conditions are pushing a broader definition

of "classroom," one that encompasses broad and flexible modalities (Blumenstyk, 2020;

Marcus, 2020). It is important for community colleges to recognize the rapidly evolving student

demand for online classes and programs and prepare faculty for this impending demand. Much

of the criticism surrounding online learning is attributed to those teaching online courses. Lack

of training or low-quality training and professional development is often a factor.

With the recent rapid growth in online learning and technology, Frankel (2020) notes

that although professional development specializing in online teaching is available, the

pedagogical training has not kept pace resulting in a gap in knowledge pertaining to online

teaching and learning.

In the spirit of Vincent Tinto (1975, 1993, & 1999) proposing to bring student supports

to the student at the time they need it most – in the classroom, this seminar demonstrates and

discusses ways in which this spirit can be accomplished in the online classroom.

SUGGESTIONS FOR FUTURE RESEARCH

The current and foundational research reviewed demonstrate the need to further

explore the methods and strategies community colleges use to support online students and

faculty. While support services exist for students and data show a positive correlation between

using support services and student success, research also indicates support services are often

underutilized, particularly by the students who need them most (Karp, 2011, 2016; Kauffman,

2015).

While the OTL seminar integrates high-impact institutional and teaching practices within

the seminar and, in turn, suggests strategies for integrating these practices into online course

development, longitudinal research is recommended to study the effect of these integrated strategies in the online classroom and across the institution on student success, persistence, and retention. Additional research is also recommended to examine how high-quality effective online classes improve student engagement, completion, persistence, and retention.

Although student support leading to success is the ultimate goal, additional research is suggested to examine the faculty experience. For institutions that do not have coordinated and/or centralized faculty professional development, there is opportunity to conduct research to better understand the effectiveness of this seminar and identify gaps and/or additional areas or professional development and sustainable faculty support.

Additional research is suggested on faculty perception of the effectiveness of integrating holistic student supports and high-impact practices into their online course development both upon completion of the OTL seminar and after initially teaching online after completing the OTL seminar.

CONCLUSION

The motivation for this training course is to provide faculty with a professional development resource for gaining the necessary skills to teach online and provide holistic support options for online students. In partnership with Student Affairs, faculty, academic instructional design support, and technology support, the goal is for faculty to be well-equipped to design and teach high-quality online classes with embedded holistic student support.

REFERENCES

Abel, R., Brown, M., & Suess, J. (2013). A new architecture for learning. *EDUCAUSE Review, 48*(5), 88-102. https://er.educause.edu/articles/2013/10/a-new-architecture-for-learning

Acevedo, M. (2014). Collaborating with faculty to compose exemplary learning objectives. *Internet Learning, 3*(1), 5-16. https://doi.org/10.1080/0305764X.2016.1259389

Acevedo-Gil, N., & Zerquera, D. (2016). Community college first-year experience programs: Examining student access, experience, and success from the student perspective. *New Directions for Community Colleges, 175*, 71-82. https://doi.org/10.1002/cc.20213

Achieving the Dream. (2018). *Holistic student supports redesign: A toolkit for redesigning advising and student services to effectively support every student* (version 3.0). Achieving the Dream. https://achievingthedream.org/holistic-student-supports-redesign-toolkit/

Achtemeier, S., Morris, L., & Finnegan, C. (2003). Considerations for developing evaluations of online courses. *Journal of Asynchronous Learning Networks, 7*(1), 1-13.

Adams, S., Bali, M., Eder, Z., Fladd, L., Garrett, K., Garth-McCullough, R., Gibson, A., Gunder, A., Iuzzini, J., Knott, J., Rafferty, J., & Weber, N. (2021). *Caring for students playbook*. Every Learner Everywhere. https://onlinelearningconsortium.org/tools/caring-for-students-playbook/#:~:text=The%20Caring%20for%20Students%20Playbook,putting%20student%20care%20into%20action.

Alexander, B., Ashford-Rowe, K., Barajas-Murphy, N., Dobbin, G., Knott, J., McCormack, M., Pomerantz, J., Seilhamer, R., & Weber, N. (2019). *EDUCAUSE Horizon Report*. EDUCAUSE. https://library.educause.edu/resources/2019/4/2019-horizon-report

Allen, D., Donham, R., & Bernhardt, S. (2011). Problem-based learning. *New Directions for Teaching and Learning, 128*, 21-29. https://doi.org/10.1002/tl.465

Allen, I., & Seaman, J. (2008). *Staying the course: Online education in the United States*. The Sloan Consortium and Babson Survey Research Group. https://www.bayviewanalytics.com/reports/staying-the-course.pdf

Alpert, W., Couch, K., & Harmon, O. (2016). A randomized assessment of online learning. *The American Economic Review, 106*(5), 378-382. https://doi.org/10.1257/aer.p20161057

Altindag, D., Filiz, E., & Tekin, E. (2021). *Is online education working?* (Working Paper 29113). National Bureau of Economic Research. https://www.nber.org/papers/w29113

Alverson, J., Schwartz, J., & Shultz, S. (2019). Authentic assessment of student learning in an online class: Implications for embedded practice. *College & Research Libraries, 80*(1), 32. https://doi.org/10.5860/crl.80.1.32

Ambrose, S., Bridges, M., Lovett, M., DePietro, M., & Norman, M. (2010.) *How learning works: 7 research-based principles for smart teaching*. Jossey-Bass Publishers.

American Association of Community Colleges. (2012*). Reclaiming the American dream: Community colleges and the nation's future*. American Association of Community Colleges. https://www.completionbydesign.org/servlet/fileField?entityId=ka66A000000H50vQAC&field=file1__name__s

American Association of Community Colleges. (2013). *Demographics: Community college presidents.* American Association of Community Colleges. http://www.aacc.nche.edu/AboutCC/Trends/Pages/ceocharacteristics.aspx

American Association of Community Colleges. (2019, August 7). *Community college enrollment crisis? Historical trends in community college enrollment*. American Association of Community Colleges. https://www.aacc.nche.edu/wp-content/uploads/2019/08/Crisis-in-Enrollment-2019.pdf

American Association of Community Colleges. (2019). *Driving success – VFA summary report: Leading indicators of success and student outcomes for community colleges*. American Association of Community Colleges. https://www.aacc.nche.edu/2019/03/29/vfa-summary-report-leading-indictors-of-success-and-student-outcomes-for-community-colleges/

American Association of Community Colleges. (2022). *Fast Facts 2022*. American Association of Community Colleges. https://www.aacc.nche.edu/research-trends/fast-facts/

Anastasia, T., Tremblay, K., & Makela, C. (1999). Student gender differences in perceived importance of college services. *College Student Journal, 33*(2), 206-210.

Andersen, C., & West, R. (2021). "We overwhelm them with hope": How online mentors can support online learners. *Online Learning Journal, 25*(4), 388-415. http://dx.doi.org/10.24059/olj.v25i4.2440

Angelo, T., & Cross, K. (1993). *Classroom Assessment Techniques* (2nd ed). Jossey-Bass Publishers.

Angelo, D. (2018). Lessons learned: campus stores share insights and tips from rolling out and growing inclusive-access programs for their schools. *The College Store Magazine, 85*(2), 21-27. http://onlinedigitalpublishing.com/publication/?i=479094

Antonietti, A., Ignazi, S., & Perego, P. (2000). Metacognitive knowledge about problem-solving methods. *British Journal of Educational Psychology, 79*, 1-16. https://doi.org/10.1348/000709900157921

Arias, J., Swinton, J., & Anderson, K. (2018). Online vs. face-to-face: A comparison of student outcomes with random assignment. *e-Journal of Business Education & Scholarship of Teaching, 12*(2), 1-23.

Arreola, R. (2006). *Developing a comprehensive faculty evaluation system* (3rd ed.). Jossey-Bass Publishers.

Association of American Colleges and Universities. (2009). *Inquiry and analysis VALUE rubric*. Association of American Colleges and Universities. https://www.aacu.org/initiatives/value-initiative/value-rubrics/value-rubrics-inquiry-and-analysis

Astin, A. (1985). *Achieving educational excellence: A critical assessment of priorities and practices in higher education*. Jossey-Bass Publishers.

Astin, A. (1999). Student Involvement: A developmental theory for higher education. *Journal of College Student Development, 40*(5), 518-529.

Astin, A., Banta, T., Cross, P., El-Khawas, E., Ewell, P., Hutchings, P., Marchese, T., McClenney, K., Mentkowski, M., Miller, M., Moran E., & Wright, B. (1996). *9 principles of good practice for assessing student learning*. American Association for Higher Education, AAHE Assessment Forum. https://www.liberty.edu/institutional-effectiveness/wp-content/uploads/sites/128/2019/12/9Principles.pdf

Azzam, A. (2007). Why students drop out. *Association for supervision and curriculum development, 64*(7), 91-94. https://www.ascd.org/el/articles/why-students-drop-out

Bahmani, S. (2018). Developing a reliable and valid assessment tool for online classes. *Assessment Update, 30*(2), 4-13. https://doi.org/10.1002/au.30127

Bailey, A., Vaduganathan, N., Henry, T., Laverdiere, R., & Pugliese, L. (2018). *Success strategies from six leading universities and community colleges*. The Boston Consulting Group. http://hdl.voced.edu.au/10707/466913

Bailey, T. (2017). Community colleges and student success: Models for comprehensive reform. *EDUCAUSE Review, 52*(3), 33-39.

Bailey, T., & Alfonso, M. (2005). Paths to persistence: An analysis of research on program effectiveness at community colleges. *Lumina Foundation for Education, New Agenda Series, 6*(1), 1-44.

Bailey, T., & Jaggars, S. (2016). *When college students start behind*. The Century Foundation. https://tcf.org/content/report/college-students-start-behind/

Bailey, T., Jaggars, S., & Jenkins, D. (2015). *Implementing guided pathways: Tips and tools*. Columbia University, Teachers College, Community College Research Center.

Bailey, T., Jaggars, S., & Jenkins, D., (2015). *Redesigning America's community colleges*. Harvard University Press.

Bailey, T., Jeong, D., & Cho, S. (2010). Referral, enrollment, and completion in developmental education sequences in community colleges. *Economics of Education Review, 29*, 255-270.

Bain, K. (2004). *What the best college teachers do*. Harvard University Press.

Bajko, R., Hodson, J., Seaborn, K., Livingstone, P., & Fels, D. (2016). Edugamifying media studies: Student engagement, enjoyment, and interest in two multimedia and social media undergraduate classrooms. *Information Systems Education Journal, 14*(6), 55-72.

Baker, J. (2004). An investigation of relationships among instructor immediacy and affective and cognitive learning in the online classroom. *Internet and Higher Education, 7*(1), 1-13.

Baldwin, C., & Shanker, J. (2015, May 12-14). *Michigan guided pathways institute overview: Regional faculty conversations* (PowerPoint slides). Michigan Center for Student Success.

Baldwin, S., & Trespalacios, J. (2017). Evaluation instruments and good practices in online education. *Online Learning, 21*(2). https://doi.org/10.24059/olj.v21i2.913

Ball, M. (2020, May 13). *Literacies teachers need during COVID-19*. Al-Fanar Media. https://www.al-fanarmedia.org/2020/05/literacies-teachers-need-during-covid-19/

Banas, J., & Velez-Solic, A. (2012). *Designing effective and efficient online instructor training and professional development*. In L. Kyei-Blankson and S. Keengwe (Eds.) Learning by doing: Professional development in online learning environments. IGI Global. https://doi.org/ 10.4018/978-1-4666-5780-9.ch041

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychology Review 84*(2), 191-215. https://doi.org/10.1037/0033-295X.84.2.191

Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies, 2*(2), 113-115. https://doi.org/10.1002/hbe2.191

Barbatos, P. (2010). Underprepared, ethnically diverse community college students: Factors contributing to persistence. *Journal of Developmental Education, 33*(3), 14-24.

Barber, W., King, S., & Buchanan, S. (2015). Problem based learning and authentic assessment in digital pedagogy: Embracing the role of collaborative communities. *The Electronic Journal of e-Learning, 13*(2), 59-67.

Barnett, E. (2011a). Faculty validation and persistence among nontraditional community college students. *Enrollment Management Journal, 5*(2), 97-117. https://doi.org/10.7916/D81V5C1V

Barnett, E. (2011b). Validation experiences and persistence among community college students. *The Review of Higher Education, 34*(2), 193-230. http://dx.doi.org/10.1353/rhe.2010.0019

Barnett, E., & Reddy, V. (2017). *College placement strategies evolving considerations and practices*. Community College Research Center, Teachers College, Columbia University.

Baran, E., Correia, A., & Thompson, A. (2011). Transforming online teaching practice: Critical analysis of the literature on the roles and competencies of online teachers. *Distance Education, 32*(2), 421-439. https://doi.org/10.1080/01587919.2011.610293

Barr, R., & Tagg, J. (1995). From teaching to learning – a new paradigm for undergraduate education. *Change: The Magazine of Higher Education, 27*(6), 12-26. https://doi.org/10.1080/00091383.1995.10544672

Barragan, M., & Cormier, M. (2013). Enhancing rigor in developmental education. *Inside Out, 1*(4), 1-5.

Barrett, B. (2010). Virtual teaching and strategies: Transitioning from teaching traditional classes to online classes. *Contemporary Issues in Education Research, 3*(12), 17-20. http://dx.doi.org/10.19030/cier.v3i12.919

Barrett, J. & Duran, F. (2021). Does psychological capital and social support impact engagement and burnout in online distance learning students? *The Internet and Higher Education, 51.* https://doi.org/10.1016/j.iheduc.2021.100821

Barrett-Fox, R. (2020, March 12). Please do a bad job of putting your courses online. AnythingGood. https://anygoodthing.com/2020/03/12/please-do-a-bad-job-of-putting-your-courses-online/

Barshay, J. (2015, November 23*). Growth mindset guru Carol Dweck says teachers and parents often use her research incorrectly*. Hechinger Report: Proof Points. https://hechingerreport.org/growth-mindset-guru-carol-dweck-says-teachers-and-parents-often-use-her-research-incorrectly/

Barshay, J. (2018, February 19). *How to help students avoid the remedial ed trap*. The Hechinger Report: Proof Points. https://hechingerreport.org/help-students-avoid-remedial-ed-trap/

Bass, R. (2012, March 21). Disrupting ourselves: The problem of learning in higher education. *EDUCAUSE Review, 47*(2).

Bateman, T. (2021). Using academic social networks to enhance the student experience in online education. *Online Learning Journal, 25*(4), 296-323. http://dx.doi.org/10.24059/olj.v25i4.2532

Baum, S., Kurose, C., & Ma, J. (2013). *How college shapes lives: Understanding the issues*. CollegeBoard. https://research.collegeboard.org/media/pdf/education-pays-how-college-shapes-lives-report.pdf

Baum, S. & McPherson, M. (2019). Improving teaching: Strengthening the college learning experience. *Dædalus, the Journal for the American Academy of Arts & Sciences, 148*(4), 5-13. https://doi.org/10.1162/daed_e_01757

Beard, D. (2009). Successful applications of the balanced scorecard in higher education. *Journal of Education for Business, 84*(5), 275-282. https://doi.org/10.3200/JOEB.84.5.275-282

Becker, S., Leahy, S., Flintoff, K., & Scragg, B. (2020). Introduction: Shaping the futures of learning in the digital age. *Current Issues in Education, 21*(2), 1-6.

Beland, K. (2007). Boosting social and emotional competence. *Educational Leadership, 64*(7), 68-71.

Bennett, S. & Lockyer, L. (2004). Becoming an online teacher: Adapting to a changed environment for teaching and learning in higher education. *Educational Media International, 41*(3), 231-244. https://doi.org/10.1080/09523980410001680842

Bernard, R., Abrami, P., Borokhovski, E., Wade, C., Tamim, R., Surkes, M., & Bethel, E. (2009). A meta-analysis of three types of interaction treatments in distance education. *Review of Educational Research, 79*(3), 1243-1289. https://doi.org/10.3102/0034654309333844

Bernstein, D., & Greenhoot, A. (2012). *Final narrative report on Spencer/Teagle foundations project* (Report). University of Kansas. http://valueresearch.aacu.org/articles/final-narrative-report-on-spencer-teagle-foundations-project/

Bertrand, M., Mullainathan, S., & Shafir, E. (2006). Behavioral economics and marketing in aid of decision making among the poor. *Journal of Public Policy & Marketing, 25*(1), 8-23. https://doi.org/10.1509/jppm.25.1.8

Bettinger, E., & Loeb, S. (2017). Promises and pitfalls of online education. *Evidence Speaks Reports, 15*(2), 1-4.

Bettinger, E., & Long. B. (2009). Addressing the needs of underprepared students in higher education. Does college remediation work? *The Journal of Human Resources, 44*(3), 736-771. http://dx.doi.org/10.1353/jhr.2009.0033

Bettinger, E., Fox, L., Loeb, S., & Taylor, E. (2017). Virtual classrooms: How online college courses affect student success. *American Economic Review, 107*(9), 2855-2875. https://doi.org/10.1257/aer.20151193

Bickerstaff, S., Barnett, E., & Salazar, A. (2021). Caring campus: An initiative to involve community college staff in increasing student success (Research Brief). Columbia University, Teachers College, Community College Research Center.

Bickerstaff, S., & Ran, F. (2020). *How did six community colleges design supports for part-time faculty?* Columbia University, Teachers College, Community College Research Center.

Biggs, J. (2003). *Aligning teaching and assessing to course objectives*. Teaching and Learning in Higher Education: New Trends and Innovations, University of Aveiro. https://doi.org/10.7575/aiac.ijalel.v.4n.5p.82

Bird, K., Castleman, B., & Lohner, G. (2022). *Negative impacts from the shift to online learning during the COVID-19 crisis: Evidence from a statewide community college system* AERA Open. https://doi.org/10.1177/23328584221081220

Blackwell, L., Trzesniewski, I., & Dweck, C. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal student and an intervention. *Child Development, 78*(1), 246-263. https://doi.org/10.1111/j.1467-8624.2007.00995.x

Bloemer, W., Day, S., & Swan, K. (2017). Gap analysis: An innovative look at gateway courses and student retention. *Online Learning, 21*(3), 5-14. http://dx.doi.org/10.24059/olj.v21i3.1233

Bloom, B. (1968). Learning for mastery. *UCLA Center for the Study of Evaluation of Instructional Programs, 1*(2), 1-12.

Bloom, B. (1984). The 2 sigma problem: The search for methods of group instruction as effective as one-to-one tutoring. *Educational Researcher, 13*(6), 4-16. https://doi.org/10.2307/1175554

Blumenstyk, G. (2020, March 11). *Why coronavirus looks like a 'black swan' moment for higher ed*. The Edge: The Chronicle of Higher Education. https://www.chronicle.com/newsletter/the-edge/2020-03-11

Boettcher, J., & Conrad R. (2016). *The online teaching survival guide*. (2nd ed.). Jossey-Bass Publishers.

Bolliger, D., & Wasilik, O. (2009). Factors influencing faculty satisfaction with online teaching and learning in higher education. *Distance Education, 30*(1), 103-116. http://dx.doi.org/10.1080/01587910902845949

Booth, K., Cooper, D., Karandjeff, K., Large, M., Pellegrin, N., Purnell, R., Rodriguez-Kiino, D., Schiorring, E., & Willett, T. (2013). *Using student voices to redefine success: What community college students say institutions, instructors and others can do to help them succeed*. The Research and Planning Group for California Community Colleges (The RP Group).

Boroch, D., Fillpot, J., Hope, L., Johnstone, R., Mery, P., Serban, A., Smith, B., & Gabriner, R. (2007). *Basic skills as a foundation for student success in California community colleges*. Research and Planning Group for California Community Colleges (RP Group).

Borowiec, K., Kim, D., Wang, L., Kim, J., & Wortham, S. (2021). Supporting holistic student development through online community building. *Online Learning Journal, 25*(4), 125-155. http://dx.doi.org/10.24059/olj.v25i4.2882

Bouchey, B., Gratz, E., & Kurland, S. (2021). Remote student support during COVID-19: Perspectives of chief online officers in higher education. *Online Learning, 25*(1), 28-40. http://dx.doi.org/10.24059/olj.v25i1.2481

Boylan, H. (1999). Exploring alternatives to remediation. *Journal of Developmental Education, 22*(3), 2-12.

Branch, R., & Dousay, T. (2015). *Survey of instructional design models*. Association for Educational Communications and Technology.

Bransberger, P. (2021). *COVID-19 and public high school enrollments and graduates*. Western Interstate Commission for Higher Education.

Brion-Meisels, G. (2016). "It starts out with the little things": An exploration of urban adolescents' support-seeking strategies in the context of school. *Teachers College Record, 118*(1), 1-38.

Britto, M., & Rush, S. (2013). Developing and implementing comprehensive student support services for online students. *Journal of Asynchronous Learning Networks, 17*(1), 29-42. http://dx.doi.org/10.24059/olj.v17i1.313

Broadbent, J., Sharman, S., Panadero, E., & Fuller-Tyszkiewicz. (2021). How does self-regulated learning influence formative assessment and summative grade? Comparing online and blended learners. *The Internet and Higher Education, 50*. https://doi.org/10.1016/j.iheduc.2021.100805

Brock, T., & LeBlanc, A. (2005). *Opening doors: Promoting student success in community college and beyond*. MDRC. https://www.mdrc.org/sites/default/files/full_484.pdf

Brookfield, S. (2002). Using the lenses of critically reflective teaching in the community college classroom. *New Directions for Community Colleges, 118*, 31-38. https://doi.org/10.1002/cc.61

Brown, P., Roediger, H. III, & McDaniel, M. (2014). *Make it stick: The science of successful learning*. Belknap Press of Harvard University Press.

Brownell, J., & Swaner, L. (2010). *Five high-impact practices: Research on learning outcomes, completion and quality*. Association of American Colleges and Universities. https://doi.org/10.1111/teth.12035

Buch, K. (2020). Using certificates to engage faculty in professional development. *Current Issues in Education, 21*(2), 1-8.

Buck, S. (2016). In their own voices: Study habits of distance education students. *Journal of Library & Information Services in Distance Learning, 10*(3-4), 137-173. https://doi.org/10.1080/1533290X.2016.1206781

Buck, T. (2013, October 18). *The awesome power of gaming in higher education*. EdTech Magazine. https://edtechmagazine.com/higher/article/2013/10/awesome-power-gaming-higher-education

Buelow, J., Thomas, B., & Rich, L. (2018). Supporting learning engagement with online students. *Online Learning, 22*(4), 313-340. http://dx.doi.org/10.24059/olj.v22i4.1384

Bumphus, W. (2014). In K. McClenney, *Aspirations to achievement: Men of color and community colleges.* Center for Community College Student Engagement. http://www.ccsse.org/docs/MOC_Special_Report.pdf

Burns, K. (2017). Community college faculty as pedagogical innovators: How the scholarship of teaching and learning (SoTL) stimulates innovation in the classroom. *Community College Journal of Research and Practice, 41*(3), 153-167. https://doi.org/10.1080/10668926.2016.1168327

Bydr, K., & MacDonald, G. (2005). Defining college readiness from the inside out: First-Generation college student perspectives. *Community College Review, 33*(1), 22-37. https://doi.org/10.1177%2F009155210503300102

Caldwell-O'Keefe, J., Boyd, D., Ashe, D., Bach, D., & Diede, M. (2020). Turning off the firehose and fostering community for the new professoriate: Five institutional perspectives on new faculty orientation. *The Journal of Faculty Development, 34*(2), 59-66.

Calhoun, D., Green, L., & Burke, P. (2017). Online learners and technology: A gap in higher education and student affairs professional preparation. *The Quarterly Review of Distance Education, 18*(1), 45-61.

Calkins, S., Diehl, J., Getis, V., Guittar, M., Lee, R., & Stachowiak, J. (2021). Transparent by design: Collaborating to build a reflective faculty development program to enhance online teaching. *The Journal of Faculty Development, 35*(2), 78-86.

Carales, V., Garcia, C., & Mardock-Uman, N. (2016). Key resources for community college student success programming. *New Directions for Community Colleges, 175*, 95-109. https://doi.org/10.1002/cc.20215

Carpenter, S., Witherby, A., & Tauber, S. (2020). On students' (mis)judgments of learning and teaching effectiveness. *Journal of Applied Research in Memory and Cognition, 9*, 137-151. https://doi.org/10.1016/j.jarmac.2019.12.009

Carson, C., & Coppin, J. (2021). Coaching from a distance: Exploring video-based online coaching. *Online Learning Journal, 25*(4), 104-124. http://dx.doi.org/10.24059/olj.v25i4.2881

Carter, J., Mallory, B., Refaei, B., & Benander, R. (2021). How a small teaching center made a big impact during the pandemic crises. *To Improve the Academy, 39*(3), 51-63. https://doi.org/10.3998/tia.17063888.0039.304

Causey, J., Liu, Q., Ryu, M., Shapiro, D., & Zheng, Y. (2020, June). *A COVID-19 supplement to spring 2020 current term enrollment estimates*. National Student Clearinghouse Research Center.

Cebeci, H., Yazgan, H., & Geyik, A. (2009). A comparative analysis of the effects of instructional design facors on student success in e-learning: Multiple-regression versus neural networks. *Research in Learning Technology, 17*(1), 21-31. http://dx.doi.org/10.3402/rlt.v17i1.10772

Cellini, S., & Crueso, H. (2021). Student learning in online college programs. *AERA Open, 7*(1), 1-18. https://doi.org/10.1177%2F23328584211008105

Center for Community College Student Engagement. (2012). *A matter of degrees: Promising practices for community college student success*. The University of Texas at Austin, College of Education, Department of Educational Leadership and Policy.

Center for Community College Student Engagement. (2013). *A matter of degrees: Engaging practices, engaging students (high-impact practices for community college student engagement)*. The University of Texas at Austin, College of Education, Department of Educational Leadership and Policy.

Center for Community College Student Engagement. (2014). *A matter of degrees: Practices to pathways*. The University of Texas at Austin, College of Education, Department of Educational Leadership and Policy.

Center for Community College Student Engagement. (2015*). Engagement rising: A decade of CCSSE data shows improvements across the board*. The University of Texas at Austin, College of Education, Department of Educational Leadership and Policy.

Center for Community College Student Engagement. (2019). *A mind at work: Maximizing the relationship between mindset and student success*. The University of Texas at Austin, College of Education, Department of Educational Leadership and Policy.

Center for Community College Student Engagement. (2020). *Teaching and learning within a guided pathways framework: A playbook.* The University of Texas at Austin, College of Education, Department of Educational Leadership and Policy.

Center for Engaged Learning. (2017, October 23.) *George Kuh – Key Features of High-Impact Practices*. YouTube. https://www.youtube.com/watch?v=4i9xHt5erAc&feature=youtu.be

Center for Mental Health in Schools at UCLA. (2014). *Integrated student supports and equity: What's not being discussed?* UCLA.

Center for Postsecondary Research. (2022). *The pandemic and student engagement: Trends, disparities, and opportunities*. Center for Postsecondary Research, Indiana University Bloomington School of Education.

Cerven, C. (2013). Public and private lives: Institutional structures and person supports in low-income single mothers' education pursuits. *Educational Policy Analysis Archives, 21*(17), 1-25. http://dx.doi.org/10.14507/epaa.v21n17.2013

Chametzky, B. (2014). Andragogy and engagement in online learning: Tenets and solutions. *Creative Education, 5*(10), 813-821. http://dx.doi.org/10.4236/ce.2014.510095

Chandross, D. (2017, June 1). *Gamification research results: Gamification neuroscience to reduce decision error and build a learning community*. eLearning Industry. https://elearningindustry.com/gamification-research-results-gamification-neuroscience-reduce-decision-error-build-learning-community

Chang, J. (2005). Faculty-student interaction at the community college: A focus on students of color. *Research in Higher Education, 46*(7), 769-802. https://doi.org/10.1007/s11162-004-6225-7

Chang, Z., Schwartz, M., Hinesley, V., & Dubinsky, J. (2021). Neuroscience concepts changed teachers views of pedagogy and students. *Frontiers in Psychology, 12*(685856), 1-19. https://doi.org/10.3389/fpsyg.2021.685856

Chaplot, P., Cooper, D., Johnstone, R., & Karandjeff, K. (2015). *Beyond financial aid*. Lumina Foundation. https://www.luminafoundation.org/files/resources/beyond-financial-aid.pdf

Chaves, C. (2012). Involvement, development, and retention: Theoretical foundations and potential extension for adult community college students. *Community College Review, 34*(2), 139-152. https://doi.org/10.1177%2F0091552106293414

Chen, C., Pedersen, S., & Murphy, K. (2011). The influence of perceived information overload on student participation and knowledge construction in computer-mediated communication. *Instructional Science, 40*, 325-349. https://doi.org/10.1007/s11251-011-9179-0

Cheng, S., & Xie, K. (2021). Why college students procrastinate in online courses: A self-regulated learning perspective. *The Internet and Higher Education, 50*, 1-17. https://doi.org/10.1016/j.iheduc.2021.100807

Chickering, A., & Gamson, Z. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin, 80*(120), 3-7. http://dx.doi.org/10.1002/tl.37219914708

Chickering A., & Reisser, L. (1993). *Education and identity* (2nd ed.). Jossey-Bass Publishers.

Choi, H., & Park J. (2006). Difficulties that a novice online instructor faced: A case study. *The Quarterly Review of Distance Education, 7*(3), 317-322.

Chyr, W., Shen, P., Chiang, Y., Lin, J., & Tsai, C. (2017). Exploring the effects of online academic help-seeking and flipped learning on improving students' learning. *Educational Technology & Society, 20*(3), 11-23.

Cicco, G. (2013). Faculty development on online instructional methods: A protocol for counselor educators. *Journal of Educational Technology, 10*(2), 1-6.

Clark, B. (1960). The "cooling-out" function in higher education. *American Journal of Sociology, 65*(6), 569-576. https://psycnet.apa.org/doi/10.1037/11302-021

Clark, L. (2012). When nontraditional is tradition: A faculty dialogue with graduating community college students about persistence. *Community College Journal of Research and Practice, 36*(7), 511-519. https://doi.org/10.1080/10668926.2012.664090

Clark College. (n.d.). *Outcomes assessment handbook*. Clark College. https://www.clark.edu/tlc/outcome_assessment/oa_handbook.php

Clinefelter, D., Aslanian, C., & Magda, A. (2019). *Online college students 2019: Comprehensive data on demands and preferences*. Wiley Education Services.

Cohen, A., Brawer, F., & Kisker, C. (2014). *The American community college* (6th ed.). Jossey-Bass Publishers.

Collier, J., Soler, M., & Ramos, A. (2020). *College and university presidents respond to COVID-19: 2020 fall term survey*. American Council on Education and TIAA Institute.

Collier, P. (2000). The effects of completing a capstone course on student identity. *Sociology of Education, 73*(4), 285-299. https://doi.org/10.2307/2673235

Collier, P. (2001). A differentiated model of role identity acquisition. *Symbolic Interaction, 24*(2), 217-235. https://doi.org/10.1525/si.2001.24.2.217

Collier, P., & Morgan, D. (2008). "Is that paper really due today?": Differences in first-generation and traditional college students' understanding of faculty expectations. *Higher Education, 55*, 425-446. https://doi.org/10.1007/s10734-007-9065-5

Columbaro, N., & Monaghan, C. (2008). *Employer perceptions of online degrees: A literature review*. Adult Education Research Conference, 2008 Conference Proceedings St. Louis, MO.

Colvard, N., & Watson, C. (2018). The impact of open educational resources on various student success metrics. *International Journal of Teaching and Learning in Higher Education, 30*(2), 262-275.

Community College Research Center. (2013). *What we know about nonacademic student supports*. Columbia University, Teachers College, Community College Research Center.

Community College Research Center. (2017). *Technology-mediated advising and student support: An institutional self-assessment*. Columbia University, Teachers College, Community College Research Center.

Community College Research Center. (2019, March 28-29). *What we're learning about guided pathways: Focus on teaching and learning*. [PowerPoint slides]. Columbia University, Teachers College, Community College Research Center.

Community College Research Center. (2020, September 16). *How colleges adapted advising and other supports during COVID-19 shutdowns*. The Mixed Methods Blog, Columbia University, Teachers College, Community College Research Center.

Community College Research Center. (2022). *Community college FAQs: Community college enrollment and completion*. Columbia University, Teachers College, Community College Research Center.

Conachie, P. (2017, August 21). *How can higher ed institutions increase access for high-achieving, low-income students?* HigherEd DIVE, Deeper Dive. https://www.highereddive.com/news/how-can-higher-ed-institutions-increase-access-for-high-achieving-low-inco/503037/

Conklin, S., & Garrett Dikkers, A. (2021). Instructor social presence and connectedness in a quick shift from face-to-face to online instruction. *Online Learning, 25*(1), 135-150. http://dx.doi.org/10.24059/olj.v25i1.2482

Conley, D. (2007). The challenge of college readiness. *Educational Leadership, 64*(7), 23-29.

Connal, J., & Cook, N. (2015). *Integration of instruction with support services: Functional wiring. In Constructing a Framework for Success: A Holistic Approach to Basic Skills*. California Community College Chancellor's Office, Basic Skills Insights Information Innovation.

Connor-Greene, P. (2000). Assessing and promoting student learning: Blurring the line between teaching and testing. *Teaching of Psychology, 27*(2), 84-88. https://doi.org/10.1207%2FS15328023TOP2702_01

Cooper, I., Gin, L., & Brownell, S. (2019). Diagnosing differences in what introductory biology students in a fully online and an in-person biology degree program know and do regarding medical school admission. *Advances in Physiology Education, 43*(2), 221-232. https://doi.org/10.1152/advan.00028.2019

Cooper, M. (2010). *Student support services at community colleges: A strategy for increasing student persistence and attainment* [Conference paper]. White House Summit on Community Colleges.

Council of Regional Accrediting Commissions. (2011). Interregional Guidelines for the Evaluation of Distance Education. Council of Regional Accrediting Commissions. https://www.nc-sara.org/sites/default/files/files/2019-08/C-RAC%20Guidelines%282011%29.pdf

Craig, R. (2020, April 2). *What students are doing is remote learning, not online learning. There's a difference (opinion)*. EdSurge, Remote Instruction. https://www.edsurge.com/news/2020-04-02-what-students-are-doing-is-remote-learning-not-online-learning-there-s-a-difference

Cramp, J., Medlin, F., Lake, P., & Sharp, C. (2019). Lessons learned from implementing remotely invigilated online exams. *Journal of University Teaching & Learning Practice, 16*(1), 1-18. https://doi.org/ http://dx.doi.org/10.53761/1.16.1.10

Crawley, A., & Fetzner, M. (2013). Providing service innovations to the students inside and outside of the online classroom: Focusing on student success. *Journal of Asynchronous Learning Networks, 17*(1), 7-12.

Crisp, G. (2009). Conceptualization and initial validation of the college student mentoring scale (CSMS). *Journal of College Student Development, 50*(2), 177-194. https://psycnet.apa.org/doi/10.1353/csd.0.0061

Crisp, G. (2010). The impact of mentoring on the success of community college students. *The Review of Higher Education, 34*(1), 39-60.

Crisp, G., & Taggart, A. (2013). Community college student success programs: A synthesis, critique, and research agenda. *Community College Journal of Research and Practice, 37*(2), 114-130. https://doi.org/10.1353/rhe.2010.0003

Cross, T., & Polk, L. (2018). Burn bright, not out: Tips for managing online teaching. *Journal of Educators Online, 15*(3), 1-6.

Cung, B., Xu, D., & Eichhorn, S. (2018). Increasing interpersonal interactions in an online course: Does increased instructor email activity and voluntary meeting time in a physical classroom facilitate student learning? *Online Learning, 22*(3), 175-197. http://dx.doi.org/10.24059/olj.v22i3.1322

Currie, N. (2010). Virtual counseling for students enrolled in online educational programs. *Educational Considerations, 37*(2), 22-26. https://doi.org/10.4148/0146-9282.1153

Czerkawski, B., & Lynam III, E. (2016). An instructional design framework for fostering student engagement in online learning environments. *TechTrends, 60*, 532-539. http://dx.doi.org/10.1007/s11528-016-0110-z

Dadgar, M., Nodine, T., Bracco, K., & Venezia, A. (2013). *Integrating student supports and academics*. WestEd. https://www2.wested.org/www-static/online_pubs/resource1296.pdf

Dahlstrom, E. (2015). *Educational technology and faculty development in higher education* [Research report]. EDUCAUSE, ECAR.

Daniel, J. (2021). After COVID-19: Can quality teaching be sustained? *Change: The Magazine of Higher Learning, 53*(2), 6-10. https://doi.org/10.1080/00091383.2021.1883970

Darby, F., & Lang, J. (2019). *Small teaching online*. Jossey-Bass Publishers.

Darling-Hammond, L., Flook, L., Cook-Harvey, C., Barron, B., & Osher, D. (2020). Implications for educational practice of the science of learning and development. *Applied Developmental Science, 24*(2), 97-140. https://doi.org/10.1080/10888691.2018.1537791

Davidson, C. (2020, May 11). *The single most essential requirement in designing a fall online course*. Humanities, Arts, Science, and Technology Alliance and Collaboratory (HASTAC). https://www.hastac.org/blogs/cathy-davidson/2020/05/11/single-most-essential-requirement-designing-fall-online-course

Davis, B. (2009). *Tools for teaching* (2nd ed.). Jossey-Bass Publishers.

Davis, D. (2009). Bringing language to life in second-year Spanish. *New Directions for Teaching and Learning, 119*, 17-23. https://doi.org/10.1002/tl.360

Davis, E., & Krajcik, J. (2005). Designing educative curriculum materials to promote teacher learning. *Educational Researcher, 34*(3), 3-14. https://doi.org/10.3102%2F0013189X034003003

Davis, V., McGuire, A., Poulin, R. (2022, February 17). *Online adjunct faculty: A survey of institutional policies and practices*. Every Learner Everywhere. https://www.everylearnereverywhere.org/resources/online-adjunct-faculty-a-survey-of-institutional-policies-and-practices/

Davis-Bownam, J. (2021). African American child and adolescent academic help-seeking: A scoping review. *Education and Urban Society, 53*(1), 42-67. https://doi.org/10.1177%2F0013124520916174

de los Santos, G., & Rosser, W. (2021). COVID-19 shines a spotlight on the digital divide. *Change: The Magazine of Higher Learning, 53*(1), 22-25. https://doi.org/10.1080/00091383.2021.1850117

Deci, E., & Ryan, R. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum Press.

Deci, E., & Ryan, R. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78. https://psycnet.apa.org/doi/10.1037/0003-066X.55.1.68

Deci, E., & Ryan, R. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227-268. https://doi.org/10.1207/S15327965PLI1104_01

Deegan, W., & O'Banion, T. (1989). Student development philosophy: A perspective on the past and future. *New Directions for Community Colleges, 67*, 5-30. https://doi.org/10.1002/cc.36819896703

Deil-Amen, R. (2011). Socio-academic integrative moments: Rethinking academic and social integration among two-year college students in career-related programs. *The Journal of Higher Education, 82*(1), 54-91. https://doi.org/10.1080/00221546.2011.11779085

Dell, C., Hobbs, S., & Miller, K. (2008). Effective online teacher preparation: Lessons learned. *MERLOT Journal of Online Learning and Teaching, 4*(4), 602-610.

Derby, D., & Smith, T. (2004). An orientation course and community college retention. *Community College Journal of Research and Practice, 28*(9), 763-773. https://doi.org/10.1080/10668920390254771

Devaney, J., Fishman, B., Keren-Kolb, E., Lavaque-Manty, M., Neimer, R., & Taylor, S. (2015). *Gameful assessment in Michigan education (GAME)*. University of Michigan.

Di Tommaso, K. (2012). Developmental students: The challenge of peer relationships. *Community College Journal of Research and Practice, 36*(12), 941-954. https://doi.org/10.1080/10668920903299304

Dick, W., Carey, L., & Carey, J. (2005). *The systematic design of instruction* (6th ed.). Pearson.

Dickmeyer, N., & Zhu, C. (2013). *Higher education "output costing."* LaGuardia Community College.

Dickmeyer, N., & Zhu, C. (2017). *Help-seeking behavior and predictions of retention*. LaGuardia Community College.

Dimeo, J. (2017, October 11). *Teaching teachers to teach online*. Inside HigherEd.

Dirksen, J. (2012). *Design for how people learn*. New Riders.

D'Orio, W. (2019, April 17). *Colleges rethink student services for online learners*. Higher Ed Dive. https://www.highereddive.com/news/its-sunday-evening-where-are-online-colleges-student-services/552911/

Doucette, D., & Dayton, L. (1989). A framework for student development practices: A statement of the League for Innovation in the Community College. *New Directions for Community Colleges, 67*, 61-71.

Douglas, K. (2008). *Rigorously applying the Scholarship of Teaching and Learning: A community college case study* (Publication No. 5818) [Doctoral Dissertation, University of Massachusetts Amherst]. ProQuest Dissertations Publishing.

Downs, L. (2018, April 5). *Rigor, meet reality*. WCET Frontiers. https://wcet.wiche.edu/frontiers/2018/04/05/rigor-meet-reality/

Drury, R. (2003). Community colleges in America: A historical perspective. *Inquiry, 8*(1), 1-6.

Dunn, K., Rakes, G., & Rakes, T. (2014). Influence of academic self-regulation, critical thinking, and age on online graduate students' academic help-seeking. *Distance Education, 35*(1), 75-89. https://doi.org/10.1080/01587919.2014.891426

Duran, R. (2014). National Community College Hispanic Council, 2014. http://www.ncchc.com/

Dykman, C., & Davis, C. (2008a). Online education forum: Part two – teaching online versus teaching conventionally. *Journal of Information Systems Education, 19*(2), 157-164.

Dykman, C., & Davis, C. (2008b). Online education forum: Part three – a quality online educational experience. *Journal of Information Systems Education, 19*(3), 281-289.

EAB. (2017). *Examining drivers of instructional cost*. EAB. https://eab.com/technology/study/operations/examining-drivers-of-instructional-cost/

Eaton, J. (2021). Change and innovation in quality assurance: Accreditation and the opportunity of COVID-19. *Change: The Magazine of Higher Learning, 53*(1), 50-54. https://doi.org/10.1080/00091383.2021.1850130

Eblen-Zayas, M. (2021). Promoting transparency when experienced faculty transition to online teaching. *The Journal of Faculty Development, 35*(2), 65-71.

Eddy, P., Sydow, D., Alfred, R., & Garza-Mitchell, R. (2015). *Developing tomorrow's leaders: Context, challenge, and capabilities*. Rowman & Littlefield Publishers and Association of Community College Trustees.

Edgecomb, N. (2019). *Demography as opportunity* (CCRC Working Paper No. 106). Columbia University, Teachers College, Community College Research Center.

Edgecombe, N., & Bickerstaff, S. (2018). Addressing academic underpreparedness in service of college completion. *Texas Education Review, 6*(1), 75-83.

Edgecombe, N., & Bickerstaff, S. (2019, April 4). *Transforming developmental education to support students throughout college* [Audio podcast episode 150]. In Center for the Analysis of Postsecondary Readiness, Community College Research Center. https://soundcloud.com/user-97919373

EdSurge. (2014). *How teachers are learning: Professional development remix*. Edsurge. https://www.edsurge.com/research/reports/how-teachers-are-learning-professional-development-remix

EducationWeek. (2020, March 6). *Map: Coronavirus and school closures in 2019-2020*. https://www.edweek.org/leadership/map-coronavirus-and-school-closures-in-2019-2020/2020/03

EDUCAUSE Learning Initiative. (2018). *7 things you should know about: Emerging classroom technologies*. EDUCAUSE, Learning Initiative (ELI). https://library.educause.edu/resources/2018/4/7-things-you-should-know-about-emerging-classroom-technologies

EDUGains. (2008). *Connecting practices and research: Metacognition guide*. Literacy GAINS, Ontario Ministry of Education's Curriculum and Resources.

Edwards, A. (2019, February 8). *Productive persistence & grit: The non-cognitive side of developmental education reform*. Plenary session: Integrating Redesigned Developmental Education into Maricopa's Pathways; Maricopa Community Colleges.

Edwards, A., & Beattie, R. (2016). Promoting student learning and productive persistence in developmental mathematics: Research frameworks informing the Carnegie Pathways. *National Association for Developmental Education Digest, 9*(1), 30-39.

Ekal, D., Hurley, S., & Padilla, R. (2011). Validation theory and student success: The UTEP way. *Enrollment Management Journal, 5*(2), 138-156.

Ender, S., Newton, F., & Caple, R. (1996). Contributions to learning: Present realities. *New Directions for Student Services, 75*, 5-32. http://dx.doi.org/10.1002/ss.37119967503

Epper, R., Derryberry, A., & Jackson, S. (2012). *Game-based learning*. EDUCAUSE Research Bulletin. https://library.educause.edu/resources/2012/8/gamebased-learning-developing-an-institutional-strategy

Ertmer, P. (1999). Addressing first- and second-order barriers to change: Strategies for technology integration. *Educational Technology, Research and Development, 47*(4), 47-61. https://doi.org/10.1007/BF02299597

Estrada, M., Eroy-Reveles, A., & Matsui, J. (2018). The influence of affirming kindness and community on broadening participation in STEM career pathways. *Social Issues and Policy Review, 12*(1), 258-297. https://doi.org/10.1111/sipr.12046

Eyler, J. (2018). *How humans learn*. West Virginia University Press.

Faculty Focus. (2020, December 14). *Effective online strategies to improve your online teaching*. Magna Publishing.

Fain, P. (2016, February 8). *Programs have success helping low-income students graduate*. Inside Higher Ed. https://www.insidehighered.com/news/2016/02/08/programs-have-success-helping-low-income-students-graduate

Fallahi, C., Levine, L., Nicoll-Senft, J., Tessier, J., Watson, C., & Wood, R. (2009). Using Fink's integrated course design: How a book changed our students' learning, our university, and ourselves. *New Directions for Teaching and Learning, 119*, 43-52. https://doi.org/10.1002/tl.363

Farrell, O. & Brunto, J. (2020). A balancing act: a window into online student engagement experiences. *International Journal of Educational Technology in Higher Education, 17*(25), 1-19. https://doi.org/10.1186/s41239-020-00199-x

Fayne, H. (2009). Using integrated course design to build student communities of practice in a hybrid course. *New Directions for Teaching and Learning, 119*, 53-59.

Felder, P., & Castillo, M. (2011). A commentary about the black and Latino doctoral experience in the United States. *Academic Leadership: The Online Journal, 9*(1), 1-7.

Felder, R., & Brent, R. (2015). Navigating the bumpy road to student-centered instruction. *College Teaching, 44*(2), 43-47.

Fike, D., & Fike, R. (2008). Predictors of first-year student retention in the community college. *Community College Review, 36*(2), 68-88. https://doi.org/10.1177%2F0091552108320222

Fink, D. (2003a). *Creating significant learning experiences*. Jossey-Bass Publishers.

Fink, D. (2003). *A self-directed guide to designing courses for significant learning*. Jossey-Bass Publishers.

Fink, D. (2016). Five high-impact teaching practices. *Collected Essays on Teaching and Learning, 9*, 3-18. http://dx.doi.org/10.22329/celt.v9i0.4428

Finley, A., & McNair, T. (2013). *Assessing underserved students' engagement in high-impact practices*. Association of American Colleges and Universities.

Fischer, C., Baker, R., Li, Q., Orona, G., & Warschauer, M. (2021). *Increasing success in higher education: The relationships of online course taking with college completion and time-to-degree*. (EdWorkingPaper No. 21-427). Brown University, Annenberg Institute.

Fishman, B., & Deterding, S. (2013). *Beyond badges & points: Gameful assessment systems for engagement in formal education*. https://teach.its.uiowa.edu/sites/teach.its.uiowa.edu/files/docs/docs/cft_GBL_GLS_Beyond_Badges_ed.pdf

Flaherty, C. (2018, May 22). *Teaching Eval Shake-Up*. Inside Higher Ed. https://www.insidehighered.com/news/2018/05/22/most-institutions-say-they-value-teaching-how-they-assess-it-tells-different-story

Flavell, J. (1979). Metacognition and cognitive monitoring: A new area of cognitive-development inquiry. *American Psychologist, 34*(10), 906-911. https://psycnet.apa.org/doi/10.1037/0003-066X.34.10.906

Fleming, E., Robert, J., Sparrow, J., Wee, J., Dudas, P., & Slattery, M. (2021). A digital fluency framework to support 21st century skills. *Change: The Magazine of Higher Learning, 53*(2), 41-48. https://doi.org/10.1080/00091383.2021.1883977

Folkman, S. (2010). Stress, coping, and hope. *Psycho-Oncology, 19*, 901-908. https://doi.org/10.1002/pon.1836

Foster, S. (2022, January 28). *COVID has revealed colleges aren't supporting single moms enough* (opinion). Inside Higher Ed. https://www.insidehighered.com/views/2022/01/28/covid-has-revealed-colleges-arent-supporting-single-moms-enough-opinion

Fox, K. (2022, February 3). *Building a student-centered approach to digital learning* [Blog post]. Tyton Partners. https://tytonpartners.com/building-a-student-centered-approach-to-digital-learning/

Fox, K., Bryant, G., Srinivasan, N., Lin, N., Nguyen, A. (2020, October 6). *Time for class – COVID-19 edition part 2: Planning for a fall like no other*. Tyton Partners.

Fox, K., Khedkar, N., Bryant, G., NeJame, L., Dorn, H., Nguyen, A., (2021, June 22). *Time for Class – 2021*. Tyton Partners.

Frankel, A., Friedman, L., Mansell, J., & Ibrahim, J. (2020). Steps towards success: Faculty training to support online student learning. *Journal of Faculty Development, 34*(2), 23-32.

Franks, A., & Payakachat, N. (2020). Positioning the scholarship of teaching and learning squarely on the center of the desk. *American Journal of Pharmaceutical Education, 84*(9), 1169-1174. https://doi.org/10.5688/ajpe8046

French, R. (2020, October 19). *Michigan college freshman enrollment drops amid COVID. Will they return?* Bridge Michigan. https://www.bridgemi.com/talent-education/michigan-college-freshman-enrollment-drops-amid-covid-will-they-return

Friedel, J. (2010). University-based community college leadership programs: Where future community college leaders are prepared. *New Directions for Community Colleges*, 149, 51-58. https://doi.org/10.1002/cc.395

Frimpon, M. (2012). Using pre-identified attributes as the critical success factors of college leadership to measure candidates. *International Journal of Business and Management, 7*(18), 158-171. https://doi.org/10.5539/ijbm.v7n18p158

Frisby, B., Strawser, M., Martin, J., & Lawrence, A. (2020). An initial examination of instructor self handicapping and the influences on students and classroom climate: Implications for faculty development. *The Journal of Faculty Development, 34*(1), 13-22.

Gabriel, K. (2008). *Teaching unprepared students: Strategies for promoting success and retention in higher education*. Stylus Publishing, LLC.

Gall, S. (1985). Help-seeking behavior in learning. *Review of Research in Education, 12*, 55-90. https://doi.org/10.2307/1167146

Galoyan, T., Betts K., Delaney, B., Fourie, M. (2021). Exploring online pedagogical practices for enhancing transfer of learning in higher education. *Online Learning Journal, 25*(1), 178-197. http://dx.doi.org/10.24059/olj.v25i4.2887

Gamrat, C., Tiwari, S., & Bekiroglu, S. (2022). Inclusive ADDIE: Initial considerations for DEI pedagogy. *EDUCAUSE Review, 2022*(1).

Gannon, K. (2018, May 6). *In defense (sort of) of student evaluations of teaching*. The Chronical of Higher Education. https://www.chronicle.com/article/in-defense-sort-of-of-student-evaluations-of-teaching/

Gardenhire-Crooks, A., Collado, H., & Ray, B. (2006). *A whole 'nother world: Students navigating community college*. MDRC. https://www.mdrc.org/sites/default/files/OD_A_Whole%20_Nother_World_0.pdf

Gardner, J., Barefoot, B., & Swing, R. (2001). *Guidelines for evaluating...the first-year experience at two-year colleges* (2nd ed.). The National Resource Center for the First-Year Experience and Students in Transition, University of South Carolina.

Garrett, R. (2021). Looking back: Sizing up instructional innovation in U.S. higher education since 2000. *Change: The Magazine of Higher Learning, 53*(1), 8-11. https://doi.org/10.1080/00091383.2021.1850113

Garrett, R., Legon, R., Fredericksen, E., & Simunich, B. (2020). *CHLOE 5: The Pivot to Remote Teaching in Spring 2020 and Its Impact, The Changing Landscape of Online Education, 2020*. Quality Matters. https://www.qualitymatters.org/qa-resources/resource-center/articles-resources/CHLOE-project

Garrett, R., Simunich, B., Legon, R., & Fredericksen, E. (2021). *CHLOE 6: Online learning leaders adapt for a post-pandemic world, the changing landscape of online education, 2021*. Quality Matters. https://www.qualitymatters.org/qa-resources/resource-center/articles-resources/CHLOE-project

Garrison, D., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2-3), 87-105. https://doi.org/10.1016/S1096-7516(00)00016-6

Gaytan, J., & McEwen, B. (2007). Effective online instructional and assessment strategies. *The American Journal of Distance Education, 21*(3), 117-132. https://doi.org/10.1080/08923640701341653

Gee, P. (2003). *What video games have to teach us about learning and literacy*. Palgrave Macmillan.

Gering, C., Sheppard, D., Adams, B., Renes, S., & Morotti, A. (2018). Strengths-based analysis of student success in online courses. *Online Learning, 22*(3), 55-85. http://dx.doi.org/10.24059/olj.v22i3.1464

Gausepohl, S. (2016, December 5). *Tackling 4 key challenges of the multigenerational workforce*. Business News Daily.

Gernsbacher, M. (2016, October 31). *Five tips for improving online discussion boards*. Association for Psychological Science. https://www.psychologicalscience.org/observer/five-tips-for-improving-online-discussion-boards

Gierdowski, D. Brooks, D., & Galanek, J. (2020). EDUCAUSE 2020 Student Technology Report: Supporting the Whole Student. EDUCAUSE Research.

Ginsberg, S., Friberg, J., Visconti, C., DeRuiter, M., & Hoepner, J. (2017). On the culture of scholarship of teaching and learning. *Teaching and Learning in Communication Sciences & Disorders, 1*(1), 1-5. https://doi.org/10.30707/TLCSD1.1Ginsberg

Glynn, J. (2017). *Opening doors: How selective colleges and universities are expanding access for high-achieving, low-income students*. Jack Kent Cooke Foundation.

Goldrick-Rab, S. (2010). Challenges and opportunities for improving community college student success. *American Educational Research Association, 80*(3), 437-469. https://doi.org/10.3102%2F0034654310370163

Goldrick-Rab, S. (2021). Centering humanity: Addressing #RealCollege needs during a pandemic. *Change: The Magazine of Higher Learning, 53*(1), 13-17. https://doi.org/10.1080/00091383.2021.1850115

Goldrick-Rab, S., Broton, K., & Gates, C. (2013). *Clearing the path to a brighter future: Addressing barriers to community college access and success*. Association of Community College Trustees and Single Stop USA.

Grajek, S. (2020, May 15). *EDUCAUSE COVID-19 quickpoll results: Fall planning for education and student support*. EDUCAUSE Review.

Greenhoot, A., & Bernstein, D. (2011). Using VALUE rubrics to evaluate collaborative course design. *Peer Review, 13/14*(4/4), 22.

Groccia, J. (2018). What is student engagement? *New Directions for Teaching and Learning, 154*, 11-20. https://doi.org/10.1002/tl.20287

Groff, J., Clarke-Midura, J., Owen, V., Rosenheck, L., & Beall, M. (2015). *Better learning in games*. Learning Games Network, MIT Education Arcade.

Grossman, A., & Johnson, L. (2017). How employers perceive online accounting education: Evidence from Kentucky. *Journal of Accounting Education, 40*, 19-31. https://doi.org/10.1016/j.jaccedu.2017.06.002

Grubb, N. (2001). *"Getting into the world": Guidance and counseling in community college*. Columbia University, Teachers College, Community College Research Center.

Grubb, N. (2002). *Honored but invisible: An inside look at teaching in community colleges*. Routledge.

Grubb, N. (2013). Ba*sic skills education in community colleges: Inside and outside of classrooms*. Routledge.

Gudmundsdottir, G., & Hathaway, D. (2020). "We always make it work:" Teachers' agency in the time of crisis. *Journal of Technology and Teacher Education, 28*(2), 239-250.

Gunder, A., Vignare, k., Adams, S., McGuire, A., & Rafferty, J. (2021, June 8). *Optimizing high-quality digital learning experiences: A playbook for faculty*. Every Learner Everywhere. https://www.everylearnereverywhere.org/resources/faculty-playbook/

Haberler, Z., & Levin, J. (2014). The four Cs of promising practices in community colleges. *Community College Journal of Research and Practice, 38*, 403-416. https://doi.org/10.1080/10668926.2012.748381

Hackman, H. (2006). Five essential components for social justice education. *Equity & Excellence in Education, 38*(2), 103-109. http://dx.doi.org/10.1080/10665680590935034

Hammond, Z. (2015). *Culturally responsive teaching & the brain*. Corwin.

Hanstedt, P. (2018). *Creating wicked students: Designing courses for a complex world*. Stylus Publishing, LLC.

Harper, S., & Wood, J. (Eds.). (2016). *Advancing black male student success from preschool through PhD*. Stylus Publishing, LLC.

Hart, C., Friedmann, E., & Hill, M. (2018). Online course-taking and student outcomes in California community colleges. *Education Finance and Policy, 36*(1), 42-71. http://dx.doi.org/10.1162/EDFP_a_00218

Hatch, D. (2016). A brief history and a framework for understanding commonalities and differences of community college student success program. *New Directions for Community Colleges, 175*, 19-31. https://doi.org/10.1002/cc.20209

Hatch, D., & Bohlig, E. (2014). An empirical typology of the latent programmatic structure of community college student success programs. *Research in Higher Education, 57*(72), 72-98. https://doi.org/10.1007/s11162-015-9379-6

Hatch, D., Crisp, G., & Wesley, K. (2016). What's in a name? The challenge and utility of defining promising and high-impact practices. *New Directions for Community Colleges, 175*, 9-17. https://doi.org/10.1002/cc.20208

Haymes, T. (2020). The STAC model: Rethinking the basic functionality of informal learning spaces. *Current Issues in Education, 21*(2), 1-12.

Haynie, D. (2013, November 8). *Benefits, drawbacks of online class discussion boards*. U.S. News & World Report. https://www.usnews.com/education/blogs/making-the-online-grade/2013/11/08/benefits-drawbacks-of-online-class-discussion-boards

Heart Research Associates. (2015). *Falling short? College learning and career success*. *NACTA Journal, 60*(1a), 1-6.

Heller, M., & Marchant, G. (2015). Facilitating self-regulated learning skills and achievement with a strategic content learning approach. *Community College Journal of Research and Practice, 39*(9), 808-818. https://doi.org/10.1080/10668926.2014.908752

Herman, J., & Nilson, L. (2018). *Creating engaging discussions*. Stylus Publishing, LLC.

Higbee, J., & Goff, E. (Eds.). (2003). *Pedagogy and student services for institutional transformation: Implementing universal design in higher education*. University of Minnesota.

Higher Learning Commission. (2020, September). *Determining qualified faculty through HLC's criteria for accreditation and assumed practices: Guidelines for institutions and peer reviewers*. Official HLC Guidelines. Higher Learning Commission. https://download.hlcommission.org/FacultyGuidelines_OPB.pdf

Hinton, V. (2020, August 18). *Facing the disconnect: College students and online learning*. Digital Promise. https://digitalpromise.org/2020/08/18/facing-the-disconnect-college-students-and-online-learning/

Hockaday, J., & Puyear, D. (2013). *Community college leadership in the new millennium. New expeditions: Charting the second century of community colleges* (Issues Paper No. 8). Community College Press.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020, March 27). The difference between emergency remote teaching and online learning. *EDUCAUSE Review, March 27, 2020*.

Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2021, November 10). One year later . . . and counting: reflections on emergency remote teaching and online learning. *EDUCAUSE Review, November 10, 2021*.

Hogan, R., & McKnight, M. (2007). Exploring burnout among university online instructor: An initial investigation. *Internet and Higher Education, 10*, 117-124. https://doi.org/10.1016/j.iheduc.2007.03.001

Holton, E., Swanson, R., & Naquin, S. (2001). Andragogy in practice: Clarifying the andragogical model of adult learning. *Performance Quarterly, 14*(1), 118-143. https://doi.org/10.1111/j.1937-8327.2001.tb00204.x

Hornum, B. (2007). "The times they are a-changing": Faculty support mechanisms in a shifting academic landscape. *PeerReview, 9*(4), 20-22.

Hornstein, G. (2017, March 26). *Why I dread the accommodations talk*. The Chronicle of Higher Education. https://www.chronicle.com/article/why-i-dread-the-accommodations-talk/

Horvitz, B., Garcia, L., & Garza, R. (2019). An examination of instructional approaches in online technical education in community colleges. *Online Learning Journal, 23*(4), 237-252. http://dx.doi.org/10.24059/olj.v23i4.1613

Howard, T. (2008). Who really cares? The disenfranchisement of African American males in preK-12 schools: A critical race theory perspective. *Teachers College Record, 110*(5), 954-985. http://dx.doi.org/10.1177/016146810811000507

Howard-Jones, P., Jay, T., Mason, A., & Jones, H. (2016). Gamification of learning deactivates the default mode network. *Frontiers in Psychology, 6*, 1-16. https://doi.org/10.3389/fpsyg.2015.01891

Howell, J., Hurwitz, M., Ma, J., Pender, M., Perfetto, G., Wyatt, J., & Young, L. (2021). *College enrollment and retention in the era of Covid*. CollegeBoard. https://research.collegeboard.org/reports/college-access/enrollment-retention-covid

Howell, S., Saba, F., Lindsay, N., & Williams, P. (2004). Seven strategies for enabling faculty success in distance education. *Internet and Higher Education, 7*(1), 33-49. http://dx.doi.org/10.1016/j.iheduc.2003.11.005

Huber, M. (2009). Shoeboxes and taxes: Integrated course design unleashes new creativity for a veteran teacher. *New Directions for Teaching and Learning, 119*, 9-15. https://doi.org/10.1002/tl.359

Huber, M. (2010). Caring for students: Pedagogy and professionalism in an age of anxiety. *Emotion, Space and Society, 3*, 71-79. https://doi.org/10.1016/j.emospa.2009.06.002

Huntington-Klein, N., Cowan, J., & Goldhaber, D. (2017). Selection into online community college courses and their effects on persistence. *Research in Higher Education, 58*, 244-269. https://doi.org/10.1007/s11162-016-9425-z

Hurtado, S., Cuellar, M., & Guillermo-Wann, C. (2011). Quantitative measures of students' sense of validation: Advancing the study of diverse learning environments. *Enrollment Management Journal, 5*(2), 53-71.

Ihara, R., & Principe, A. (2018). What we mean when we talk about reading: Rethinking the purposes and contexts of college reading. *Across the Disciplines, 15*(2), 1-14.

Ilga, H. (2019). Adult learners' participation in a blended learning environment: A case study on imposed pace learning. *Malaysian Online Journal of Educational Technology, 7*(4), 15-29. http://dx.doi.org/10.17220/mojet.2019.04.002

iNACOL. (2011). *National standards for quality online teaching* (version 2). International Association for K-12 Online Learning. https://aurora-institute.org/resource/inacol-national-standards-for-quality-online-teaching-v2/

Inman, J. (2021). Growing pains (and opportunities): Launching a center for teaching and learning during a global pandemic. *To Improve the Academy 39*(3), 39-50. https://doi.org/10.3998/TIA.17063888.0039.303

Intentional Futures. (2016). *Instructional design in higher education*. National Center for Educational Statistics.

Jacob, F., John, S., & Gwany, D. (2020). Teachers' pedagogical content knowledge and students' academic achievement: A theoretical overview*. Journal of Global Research in Education and Social Science, 14*(2), 14-44.

Jaggars, S. (2011). *Online learning: Does it help low-income and underprepared students?* CCRC Brief. Number 52. Columbia University, Teachers College, Community College Research Center.

Jaggars, S. (2014). Choosing between online and face-to-face courses: Community college student voices. *American Journal of Distance Education, 28*(1), 27-38.

Jaggars, S. & Xu, D. (2010). *Online learning in the Virginia community college system* (CCRC Working Paper). Columbia University, Teachers College, Community College Research Center.

Jaggars, S. & Xu, D. (2016). How do online course design features influence student performance? *Computers & Education, 95*, 270-284.

Jahnke, I., Reidel, N., Singh, K., & Moore, J. (2021). Advancing sociotechnical-pedagogical heuristics for the usability evaluation of online courses for adult learners. *Online Learning Journal, 25*(4), 416-439. http://dx.doi.org/10.24059/olj.v25i4.2439

Jamieson, J., Peters, B., Greenwood, E., & Altose, A. (2016). Reappraising stress arousal improves performance and reduces evaluation anxiety in classroom exam situations. *Social Psychological and Personality Science, 7*(6), 579-587. https://psycnet.apa.org/doi/10.1177/1948550616644656

Jaschik, S., & Lederman, D. (2019). *2019 survey of faculty attitudes on technology*. Inside Higher Ed and Gallup. https://www.insidehighered.com/booklet/2019-survey-faculty-attitudes-technology

Jenkins, D. (2007). Institutional effectiveness and student success: A study of high- and low-impact community colleges. *Community College Journal of Research and Practice, 31*(12), 945-962. https://doi.org/10.1080/03601270701632057

Jenkins, D., & Bailey, T. (2017). Early momentum metrics: Why they matter for college improvement (Research Brief No. 65). Columbia University, Teachers College, Community College Research Center.

Jenkins, D., & Cho, S. (2014). Get with the program...and finish it: Building guided pathways to accelerate student completion. *New Directions for Community Colleges, 164*, 27-35. https://doi.org/10.1002/cc.20078

Jenkins, D., Jaggars, S., & Roksa, J. (2009). *Promoting gatekeeper course success among community college students needing remediation* (Summary Report). Columbia University, Teachers College, Community College Research Center.

Johnson, H., & Mejia, M. (2014). *Online learning and student outcomes in California's community colleges*. Public Policy Institute of California.

Johnson, H., Mejia, M., & Cook, K. (2015). *Successful online courses in California's community colleges*. Public Policy Institute of California.

Johnson, N., Seaman, J., Veletsianos, G. (2021). *Teaching during a pandemic*. Bay View Analytics. https://www.bayviewanalytics.com/reports/teachingduringapandemic.pdf

Johnstone, R. (2015). *Guided pathways demystified: Exploring ten commonly asked questions about implementing pathways*. National Center for Inquiry & Improvement.

Johnstone, S. (2021). Making pass/fail options valuable for students. *Change: The Magazine of Higher Learning, 53*(1), 31-33. https://doi.org/10.1080/00091383.2021.1850123

Joosten, T., & Cusatis, R. (2019). A cross-institutional study of instructional characteristics and student outcomes: Are quality indicators of online courses able to predict student success? *Online Learning Journal, 23*(4), 354-378. http://dx.doi.org/10.24059/olj.v23i4.1432

Justice, E., & Dornan, T. (2001). Metacognitive differences between traditional-age and nontraditional-age college students. *Adult Education Quarterly, 51*(3), 236-249. https://doi.org/10.1177%2F074171360105100305

Justus, M. (2017). The role of pedagogical beliefs in emerging technology integration: An exploratory case student of faculty perspectives. *The Qualitative Report, 22*(2), 499-526. https://doi.org/10.46743/2160-3715/2017.2478

Juszkiewicz, J. (2016, March). *Trends in community college enrollment and completion data, 2016*. American Association of Community Colleges. https://www.aacc.nche.edu/wp-content/uploads/2017/11/TrendsCCEnrollment_Final2016.pdf

Kaiser, L., Kaminski, K., Foley, J., (Eds.). (2013). Learning transfer in adult education. *New Directions for Adult and Continuing Education, 137*, Jossey-Bass Publishers.

Karp, M. (2011). *Toward a new understanding of non-academic student support: four mechanisms encouraging positive student outcomes in community college* [CCRC Working Paper No. 28]. Columbia University, Teachers College, Community College Research Center.

Karp, M. (2016). A holistic conception of nonacademic support: How four mechanisms combine to encourage positive student outcomes in the community college. *New Directions for Community Colleges, 175*, 33-44. http://dx.doi.org/10.1002/cc.20210

Karp, M., & Bork, R. (2012). *"They never told me what to expect, so I didn't know what to do": Defining and clarifying the role of a community college student.* (CCRC Working Paper No. 47). Columbia University, Teachers College, Community College Research Center.

Karp, M., & Fletcher, J. (2014a). *Adopting new technologies for student success: A readiness framework*. Columbia University, Teachers College, Community College Research Center.

Karp, M., & Fletcher, J. (2014b). *Evaluating your college's readiness for technology adoption*. Columbia University, Teachers College, Community College Research Center.

Karp, M., Hughes, K., & O'Gara, L. (2010). An exploration of Tinto's integration framework for community college students. *Journal of College Student Retention, 12*(1), 69-86. https://doi.org/10.2190%2FCS.12.1.e

Karp, M., Kalamkarian, H., Kempin, S., & Fletcher, J. (2016). *How colleges use integrated planning and advising for student success (iPASS) to transform student support*. Columbia University, Teachers College, Community College Research Center.

Karp, M., Raufman, J., Efthimiou, C., & Ritz, N. (2017). Revising a college 101 course for sustained impact: Early outcomes. *Community College Journal of Research and Practice, 41*(1), 42-55. https://doi.org/10.1080/10668926.2016.1152929

Kauffman, H. (2015). A review of predictive factors of student success in and satisfaction with online learning. *Research in Learning Technology, 23*, 1-13. https://doi.org/10.3402/rlt.v23.26507

Kebritchi, M., Lipschuetz, A., & Santiague, L. (2017). Issues and challenges for teaching successful online courses in higher education: A literature review. *Journal of Educational Technology Systems, 46*(1), 4–29. https://doi.org/10.1177%2F0047239516661713

Kellen, K. & Kumar, S. (2021). Types of barriers experienced by online instructors in higher education. *Online Journal of Distance Learning Administration, 24*(4), 1-16.

Kelley, B. (2011). Inspiration and intellect: Significant learning in musical forms and analysis. *New Directions for Teaching and Learning, 119*, 35-41. https://doi.org/10.1002/tl.362

Kelley, B., Cruz, L., & Fire, N. (2017). Moving toward the center: The integration of educational development in an era of historic change in higher education. *To Improve the Academy, 36*(1), 1-8. https://doi.org/10.1002/tia2.20052

Kellogg Community College. (2021). *Director, Learning Technologies Position Description Questionnaire*. Unpublished internal company document. Kellogg Community College.

Kellogg Community College. (2020). *Academic Cabinet Committee Charter*. Unpublished internal company document. Kellogg Community College.

Kellogg Community College. (2018). *Online Course Development Committee Charter*. Unpublished internal company document. Kellogg Community College.

Kellogg Community College. (2002). *Online Course Standards*. Unpublished internal company document. Kellogg Community College.

Kentnor, H. (2015). Distance education and the evolution of online learning in the United States. *Curriculum and Teaching Dialogue, 17*(1 & 2), 21-34.

Klempin, S., & Lahr, H. (2021). *How Ohio community colleges are using guided pathways to personalize student support*. Columbia University, Teachers College, Community College Research Center.

Kilpatrick, J., Ehrlich, S., & Bartlett, S. (2020). Learning from COVID-19: Universal design for learning implementation prior to and during a pandemic. *The Journal of Applied Instructional Design, 10*(1), 1-17.

Kim, J., & Malony, E. (2021). Six post-COVID-19 provocations. *Change: The Magazine of Higher Learning, 53*(4), 57-64. https://doi.org/10.1080/00091383.2021.1930985

Kinzie, J., & Kuh, G. (2004). Going DEEP: Learning from campuses that share responsibility for student success. *About Campus, 9*(5), 2–8. https://doi.org/10.1002/abc.105

Kofoed, M., Gebhart, L., Gilmore, D., & Moschitto, R. (2021). *Zooming to class?: Experimental evidence on college students' online learning during COVI-19*. IZA Institute of Labor Economics.

Kolb, M., Kaline, M., & Chapman, A. (2014). Tuning toward completion. *New Directions for Community Colleges, 164*, 57-65. https://doi.org/10.1002/cc.20081

Koster, R. (2014). *A theory of fun for game design* (2nd ed.). O'Reilly Media, Inc.

Krieg, J., & Henson, S. (2016). The educational impact of online learning: How to university students perform in subsequent courses? *Education Finance and Policy, 11*(4), 426-448. https://doi.org/10.1162/EDFP_a_00196

Krathwohl, D. (2002). A revision of Bloom's taxonomy: An overview. *Theory Into Practice, 41*(4), 212-218. https://doi.org/10.1207/s15430421tip4104_2

Krumm, A., Beattie, R., Takahashi, S., D'Angelo, C., Feng, M., & Cheng, B. (2016). Practical measurement and productive persistence: Strategies for using digital learning system data to drive improvement. *Journal of Learning Analytics, 3*(2), 116-138. https://doi.org/10.18608/JLA.2016.32.6

Kuh, G. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter*. Association of American Colleges & Universities.

Kuh, G., Ikenberry, S., Janowski, N., Cain, T., Ewell, P., Hutchings, P., & Kinzie, J. (2015). Beyond compliance: Making assessment matter. *Change: The Magazine of Higher Learning, 47*(5), 8-17. https://doi.org/10.1080/00091383.2015.1077661

Kuh, G., & O'Donnell, K. (2013). *Ensuring quality & taking high-impact practices to scale*. American Association of Colleges and Universities.

Kyei-Blankson, L., & Keengwe, J. (2011). Faculty-faculty interactions in online learning environments. *International Journal of Information and Communication Technology Education, 7*(3), 25-33. http://dx.doi.org/10.4018/jicte.2011070103

Lachheb, A., Abramenka-Lachheb, V. & Huber, L. (2020). Challenges and opportunities in adhering to UDL principles to design online courses. *The Journal of Applied Instructional Design, 10*(1). https://dx.doi.org/10.51869/101alvall

Lane, C. (2021). Preparing mid-level enrollment management practitioners to implement quality services for fully online students. *Online Journal of Distance Learning Administration, 24*(4).

Lang, J. (2016). *Small teaching*. Jossey-Bass Publishers.

Lawton, J., & Toner, M. (2020). *Equity in design for holistic student supports: What we're learning*. Achieving the Dream.

League for Innovation in the Community College. (2004). *An Assessment Framework for the Community College*. Questionmark Corporation.

Leary, H., Dopp, C., Turley, C., Cheney, M., Simmons, Z., Graham, C.R., & Hatch, R. (2020). Professional development for online teaching: A literature review. *Online Learning, 24*(4), 254-275. http://dx.doi.org/10.24059/olj.v24i4.2198

Lee, J., & Busch, P. (2005). Factors related to instructors' willingness to participate in distance education. *The Journal of Educational Research, 99*(2), 109-115. https://doi.org/10.3200/JOER.99.2.109-115

Legon, R., & Garrett, R. (2017). *CHLOE: The changing landscape of online education*. Quality Matters & encoura. https://www.qualitymatters.org/qa-resources/resource-center/articles-resources/CHLOE-project

Legon, R., & Garrett, R. (2018). *CHLOE 2: The changing landscape of online education (CHLOE): A deeper dive*. Quality Matters & encoura. https://www.qualitymatters.org/qa-resources/resource-center/articles-resources/CHLOE-project

Legon, R., & Garrett, R. (2019). *CHLOE 3: Behind the numbers*. Quality Matters & encoura. https://www.qualitymatters.org/qa-resources/resource-center/articles-resources/CHLOE-project

Legon, R., & Garrett, R. (2020). *CHLOE 4: Navigating the mainstream, the changing landscape of online education*. Quality Matters & encoura. https://www.qualitymatters.org/qa-resources/resource-center/articles-resources/CHLOE-project

Legon, R., & Garrett, R. (2020). *CHLOE 5: The pivot to remote teaching in spring 2020 and its impact*. Quality Matters & encoura. https://www.qualitymatters.org/qa-resources/resource-center/articles-resources/CHLOE-project

Levicky-Townley, C., Stork, M., Zhang, J., & Weatherford, E. (2021). Exploring the impact of universal design for learning supports in an online higher education course. *The Journal of Applied Instructional Design, 10*(1). https://dx.doi.org/10.51869/101/clt

Levin, J. (2007). *Nontraditional students and community colleges*. Palgrave, Macmillan.

Levin, J., Cox, E., Cerven, C., & Harberler, Z. (2010). The recipe for promising practices in community colleges. *Community College Review, 38*(1), 31-5. https://doi.org/10.1177%2F0091552110374505

Levine, M. (2007). The essential cognitive backpack. *Educational Leadership, 64*(7), 16-22.

Lewis, L. (1992). How college affects students: Findings and insights from twenty years of research by Ernest T. Pascarella and Patrick T. Terenzini. *Academe, 78*(4), 44-47. https://doi.org/10.2307/40250363

Li, X., Lan, W., & Williams, A. (2021). The scale of online course anxiety: Assessing college students' anxiety in online courses. *Online Learning Journal, 25*(4), 440-460. http://dx.doi.org/10.24059/olj.v25i4.2505

Lin, Y., & Jou, M. (2013). Development of an integrated learning environment with knowledge management for cultivating student critical thinking skills. *Procedia – Social and Behavioral Sciences, 103*, 290-298. https://doi.org/10.1016/j.sbspro.2013.10.337

Linares, L., & Munoz, S. (2011). Revisiting validation theory: Theoretical foundations, applications, and extensions. *Enrollment Management Journal, 2*(1), 12-33.

Linder, K., & Hayes, C. (2018). *High-impact practices in online education*. Stylus Publishing, LLC.

Linder, K., & Stritto, M. (2017). *Research preparation and engagement of instructional designers in U.S. higher education*. Oregon State University Ecampus Research Unit.

Liu, C., & Correia, A. (2021). A case study of learner's engagement in mobile learning applications. *Online Learning Journal, 25*(4), 25-48. http://dx.doi.org/10.24059/olj.v25i4.2827

Liu, E., & Liu, R. (1999). An application of Tinto's model at a commuter campus. *Education, 119*(3), 537-541.

Lloyd, S., Byrne, M., & McCoy, T. (2012). Faculty-perceived barriers of online education. *MERLOT Journal of Online Learning and Teaching, 8*(1), 1-12.

Lloyd, D. (2021, December 9). *A paradigm for consequential discussion boards*. OLC Insights; The OLC Blog, Online Learning Consortium. https://onlinelearningconsortium.org/a-paradigm-for-consequential-discussion-boards/

Lockhart, M., & Stoop, C. (2018). Assessing a faculty development program in a changing environment. *The Journal of Faculty Development, 32*(2), 13-21.

Loes, C. (2019). Applied learning through collaborative educational experiences. *New Directions for Higher Education, 188*, 13-21. https://doi.org/10.1002/he.20341

Long, Y., & Koehler, A. (2021). Student participation and interaction in online case-based discussions: Comparing expert and novice facilitation. *Online Learning Journal, 25*(4), 220-246. http://dx.doi.org/10.24059/olj.v25i4.2901

Lorenzo, G. (2011). *Online education learner engagement & academic success strategies at community colleges*. The SOURCE on Community College Issues, Trends & Strategies.

Lorenzo, G. (2016, August 4). *Digital game-based learning in higher ed moves beyond the hype*. EdSurge News. https://www.edsurge.com/news/2016-08-04-digital-game-based-learning-in-higher-ed-moves-beyond-the-hype

Lowenthal, P., West, R., Archambault, L., Borup, J., & Belt, E. (2021). Faculty perceptions of using synchronous video-based communication technology. *Online Learning Journal, 25*(4), 74-103. http://dx.doi.org/10.24059/olj.v25i4.2890

Luke, C., Redekop, F., & Brugin, C. (2015). Psychological factors in community college student retention. *Community College Journal of Research and Practice, 39*(3), 222-234. https://doi.org/10.1080/10668926.2013.803940

Ma, J., & Baum, S. (2016). *Trends in community colleges: Enrollment, prices, student debt, and completion* (Research Brief). CollegeBoard. https://research.collegeboard.org/media/pdf/trends-community-colleges-research-brief.pdf

Magda, A. (2019). *Online learning at public universities: Recruiting, orienting, and supporting online faculty*. The Learning House, Inc.

Magda, A., Capranos, D., & Aslanian, C., (2020). *Online college students 2020: Comprehensive data on demands and preferences*. Wiley Education Services.

Magda, A., Poulin, R., & Clinefelter, D. (2015). *Recruiting, orienting, & supporting online adjunct faculty: A survey of practices*. The Learning House, Inc.

Malvik, C. (2020, May 27). *Online education vs. remote learning: 5 features of a quality distance learning program*. Collegis Education. https://collegiseducation.com/news/programs-and-course-content/quality-distance-learning-program/

Manpower Demonstration Research Corporation. (2009). *Integrating student support services and academic instructional at community colleges*. MDRC.

Marcus, J. (2020, December 18). *Number of rural students planning on going to college plummets*. The Hechinger Report.

Marcus, S. (2004). Leadership in distance education: Is it a unique type of leadership – a literature review. *Online Journal of Distance Learning Administration, 7*(2), 1-6.

Martin, F., Kumar, S., & She, L. (2021). Examining higher education instructor perceptions of roles and competencies in online teaching. *Online Learning Journal, 25*(4), 267-295. http://dx.doi.org/10.24059/olj.v25i4.2570

Mayer, R. (2004). Should there be a three-strikes rule against pure discovery learning? *American Psychologist, 59*(1), 14-19. https://psycnet.apa.org/doi/10.1037/0003-066X.59.1.14

173

Mayhew, M., Rockenbach, A., Bownam, N., Seifert, T., Wolniak, G., Pascarella, E., & Terenzini, P. (2016). *How college affects students* (volume 3). Jossey-Bass Publishers.

McCarron, G., Olesova, L., & Calkins, B. (2021). An exploratory examination of student-led, asynchronous collaborative online discussions in fostering higher-order cognitive skills and ethical leadership learning. *Online Learning Journal, 25*(4), 198-219. http://dx.doi.org/10.24059/olj.v25i4.2895

McClenney, K. (2001). Learning From the Learning Colleges: Observations Along the Journey. *The League for Innovation in the Community College: Learning Abstracts 4*(2).

McClenney, K. (2012). *Students speak: Are we listening?* Rowman & Littlefield Publishers.

McClenney, K. (2014). *Aspirations to achievement: Men of color and community colleges.* Center for Community College Student Engagement.

McClenney, K., Dare, D., & Thomason, S. (2013). Premise and promise: Developing new pathways for community college students*. Community College Journal, 83*(5), 56-63.

McCormick, A. (2010, September 3). A lapse in quality: 8 views of a flawed system. *Chronicle of Higher Education, 57*(11), B42-46.

McDonnell, R., & Soricone, L. (2014). *Promoting persistence through comprehensive student supports*. Jobs for the Future.

McGuire, S. (2015). *Teach students how to learn*. Stylus Publishing, LLC.

McGuire, S. (2018). *How your emotions affect your motivation and learning: Teach yourself how to learn*. Sterling.

McGuire, S., & McGuire, S. (2018). *Teach yourself how to learn: Strategies you can use to ace any course at any level*. Stylus Publishing, LLC.

McMurtrie, B. (2018). *The future of learning*. The Chronicle of Higher Learning.

McMurtie, B. (2020, November 5). The pandemic is dragging on. Professors are burning out. The Chronicle of Higher Education. https://www.chronicle.com/article/the-pandemic-is-dragging-on-professors-are-burning-out

McPherson, P. (2018, February 7). *The False Choice Between Education and Employment Readiness*. Inside Higher Ed. https://www.insidehighered.com/views/2018/02/07/enrolling-and-graduating-more-students-isn%E2%80%99t-enough-colleges-must-prepare-them-work

McQuiggen, C. (2012). Faculty development for online teaching as a catalyst for change. *Journal of Asynchronous Learning Networks, 16*(2), 27-61. https://doi.org/10.24059/OLJ.V16I2.258

Means, B., & Neisler, J., with Langer Research Associates. (2020). *Suddenly Online: A National Survey of Undergraduates During the COVID-19 Pandemic*. Digital Promise.

Means, B., & Neisler, J. (2021). Teaching and learning in the time of COVID: The student perspective. *Online Learning, 25*(1), 8-27. http://dx.doi.org/10.24059/olj.v25i1.2496

Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. U.S. Department of Education (ED), Office of Planning, Evaluation and Policy Development; SRI International.

Mellow, G., Woolis, D., Klages-Bombich, M., & Restler, S. (2015). *Taking college teaching seriously: Pedagogy matters!* Stylus Publishing, LLC.

Merrill, M. (2002). First principles of instruction. *Educational Technology Research and Development 50*(3), 43-59.

Metz, G. (2004). Challenge and changes to Tinto's persistence theory: A historical review. *Journal of College Student Retention, 6*(2), 191-207. https://doi.org/10.2190%2FM2CC-R7Y1-WY2Q-UPK5

Michigan Department of Education. (2021, August 31). *Disrupted learning during the pandemic causes dip in state assessment scores*. Michigan Department of Education.

Milem, J., & Berger, J. (1997). A modified model of college student persistence: Exploring the relationship between Astin's theory of involvement and Tinto's theory of student departure. *Journal of College Student Development, 38*(4), 387-400.

Miller, G., & Ives K. (Eds.) (2020). *Leading the eLearning transformation of higher education*. Stylus Publishing, LLC.

Millichap, N., & Dobbin, G. (2017). *7 recommendations for student success initiatives*. EDUCAUSE ELI Online Event: Addressing Student Success: Exploring Technology-enabled Advising. https://er.educause.edu/blogs/2017/10/7-recommendations-for-student-success-initiatives

Milliron, M. (2021). Meeting the moment. *Change: The Magazine of Higher Learning, 53*(1), 4-5. https://doi.org/10.1080/00091383.2021.1850110

Millis, B. (2016). *Using metacognition to promote learning* (IDEA Paper #63). The IDEA Center.

Miltiadou, M., & Savenye, W. C. (2003). Applying social cognitive constructs of motivation to enhance student success in online distance education. *AACE Review (formerly AACE Journal), 11*(1), 78-95.

Miners, L., & Nantz, K. (2009). More significant and intentional learning in the economics classroom. *New Directions for Teaching and Learning, 119*, 25-33. https://doi.org/10.1002/tl.361

Moodie, D. (2021). Comparing the outcomes of the different teaching modes: All-in-person, hybrid, and online, for different student demographic groups in a business school. *Online Learning Journal, 25*(4), 362-387. http://dx.doi.org/10.24059/olj.v25i4.2298

Moore, K. (2014). *Making the grade: Assessing the evidence for integrated student supports*. Child Trends.

Moore, K., & Emig, C. (2014). *Integrated student supports: A summary of the evidence base for policymakers*. Child Trends.

Motz, B., Quick, J., Wernert, J., & Miles, T. (2021). A pandemic of busywork: Increased online coursework following the transition to remote instruction is associated with reduced academic achievement. *Online Learning, 25*(1), 70-85. http://dx.doi.org/10.24059/olj.v25i1.2475

Murugan, E., & Badawi, N. (2018, January 5). *What online faculty can do to avoid burnout*. Magna Publications, Faculty Focus.

Nadworny, E., & Depenbrock, J. (2018, September 4). *Today's college students aren't who you think they are*. National Public Radio.

Nakajima, M., Dembo, M., & Mossler, R. (2012). Student persistence in community colleges. *Community College Journal of Research and Practice, 36*(8), 591-613. https://doi.org/10.1080/10668920903054931

National Academies of Sciences, Engineering, and Medicine. (2018). *How People Learn II: Learners, Contexts, and Cultures*. The National Academies Press.

National Center for Education Statistics. (2020). *Percent of students enrolled in distance education courses* [data set]. Institute of Education Sciences.

National Center for Education Statistics. (2021). *Number of students enrolled in postsecondary institutions annually, by sector of institution: 2019-20* [data set]. Institute of Education Sciences.

National Council for State Authorization Reciprocity Agreements, & National Center for Higher Education Management Systems. (2021). *Proposed 21st century distance education guidelines*. Unpublished.

National Research Council. (2000). *How people learn: Brain, mind, experience, and school: Expanded edition*. The National Academies Press.

National Student Clearinghouse Research Center. (2022, January 13). *Fall 2021 current term enrollment estimates*. National Student Clearinghouse.

National Survey of Student Engagement. (2020). *Engagement indicators & high-impact practices*. Indiana University.

National Survey of Student Engagement. (2021). *Coping with COVID topical module (2021)*. Trustees of Indiana University.

National Survey of Student Engagement. (2022). *Experiences with Online Learning Topical Module (2022)*. Trustees of Indiana University.

Newmann, F., Smith, B., Allensworth, E., & Bryk, A. (2001). Instructional program coherence: What it is and why it should guide school improvement policy. *Educational Evaluation and Policy Analysis, 23*(4), 297-321. http://dx.doi.org/10.3102/01623737023004297

Noel-Levitz. (2011). National online learners' priorities report. Noel-Levitz, Inc.

Nielsen, K. (2015)., "Fake it 'til you make it": Why community college students' aspirations "hold steady." *Sociology of Education, 88*(4), 265-283. https://doi.org/10.1177%2F0038040715601889

Nilson, L. (2010). *Teaching at its best*. (3rd ed.). Jossey-Bass Publishers.

Nilson, L. (2013). *Creating self-regulated learners: Strategies to strengthen students' self-awareness and learning skills*. Stylus Publishing, LLC.

Nilson, L. (2015). *Getting students to do the reading*. National Education Association.

Nilson, L., & Goodson, L. (2018). *Online teaching at its best*. Jossey-Bass Publishers.

Nisbett, R. (2015, November 15). *Thinking for dummies*. The Chronicle for Higher Education.

Nodeine, T., Jaeger, L., Venezie, A., & Bracco, K. with research support from Public Agenda. (2012). *Connection by design: Students' perceptions of their community college experiences*. WestEd.

Nortvig, A., Petersen, A., & Balle, S. (2018). A literature review of the factors influencing e-learning and blended learning in relation to learning outcome, student satisfaction and engagement. *The Electronic Journal of e-Learning, 16*(1), 46-55.

O'Banion, T. (2022, February 2). *A culture of leadership: The role of the modern community college*. The Evolllution.

O'Banion, T. (2011). Focus on learning: The core mission of higher education. In T. O'Banion & C. Wilson (Eds.), *Focus on learning: A learning college reader* (pp. 1-12). The League for Innovation in the Community College.

O'Banion, T. (1996). Learning communities, learning organizations, and learning colleges. *The League for Innovation in the Community College: Leadership Abstracts, 9*(8), 1-4.

Ocak, G. & Karafil, B. (2021). Teachers' perceptions of their technological competence in learning and teaching process. *Malaysian Online Journal of Educational Technology, 9*(4), 14-30. https://doi.org/10.52380/mojet.2021.9.4.221

Offenstein, J., Moore, C., & Shulock, N. (2010). *Advancing by degrees: A framework for increasing college completion*. The Education Trust.

O'Keefe, L., Gunder, A., & Long, K.C. (2021). *Stronger together: A briefing of finding and recommendations from the 2020 HBCU action nation town hall*. Online Learning Consortium.

Olsen, J., & Kenahan, R. (2021). "An overwhelming cloud of inertia": Evaluating the impact of course design changes following the COVID-19 pandemic. *Online Learning Journal, 25*(4), 344-361. http://dx.doi.org/10.24059/olj.v25i4.2444

Orcutt, J., & Dringus, J. (2017). Beyond being there: Practices that establish presence, engage students and influence intellectual curiosity in a structured online learning environment. *Online Learning, 21*(3), 15-35. http://dx.doi.org/10.24059/olj.v21i3.1231

Ortiz, N., Capraro, M., & Capraro, R. (2018). Does it really matter? Exploring cultural relevance within a majority white classroom. *The Journal of Negro Education, 87*(4), 404-419. https://doi.org/10.7709/jnegroeducation.87.4.0404

Otter, R., Sipel, S., Graeff, T., Alexander, B., Boraiko, C., Gray, J., Petersen, K., & Sadler, K. (2013). Comparing student and faculty perceptions of online and traditional courses. *The Internet and Higher Education, 19*, 27-35. https://doi.org/10.1016/j.iheduc.2013.08.001

Oyarzun, B., Bottoms, B., & Westine, C. (2020). Adopting and applying the universal design for learning principles in online courses. *The Journal of Applied Instructional Design, 10*(1). https://dx.doi.org/10.51869/101bobbcw

Ozaki, C., & Hornak, A. (2014). Excellence within student affairs: Understanding the practice of integrating academic and student affairs. *New Directions for Community Colleges, 160*, 79-84. https://doi.org/10.1002/cc.20104

Ozfidan, B., Fayez, I., & Ismail, H. (2021). Student perspectives of online teaching and learning during the COVID-19 pandemic. *Online Learning Journal, 25*(4), 461-485. http://dx.doi.org/10.24059/olj.v25i4.2523

Pacansky-Brock, M. (2013). *Best practices for teaching with emerging technologies*. Taylor & Francis.

Pacansky-Brock, M., Smedshammer, M., & Vincent-Layton, K. (2020). Shaping the futures of learning in the digital age: Humanizing online teaching to equitize higher education. *Current Issues in Education, 21*(2), 1-21.

Palacios, A., & Wood, J. (2016). Is online learning the silver bullet for men of color? An institutional-level analysis of the California community college system. *Community College Journal of Research and Practice, 40*(8), 643-655. http://dx.doi.org/10.1080/10668926.2015.1087893

Palloff, R., & Pratt, K. (2007). *Building online learning communities: Effective strategies for the virtual classroom* (2nd ed.). Jossey-Bass Publishers.

Palloff, R., & Pratt, K. (2009). *Assessing the online learner*. Jossey-Bass Publishers.

Palmer, S., & Holt, D. (2009). Examining student satisfaction with wholly online learning. *Journal of Computer Assisted Learning, 25*, 101-113. https://doi.org/10.1111/j.1365-2729.2008.00294.x

Pandit, D., & Agrawal, S. (2021). *Exploring challenges of online education in COVID times*. Fortune Institute of International Business.

Paris, D. (2021). Normal? *Change: The Magazine of Higher Learning, 53*(4), 2-4. https://doi.org/10.1080/00091383.2021.1883968

Parnes, M., Kanchewa, S., Marks, A., & Schwartz, S. (2020). Closing the college achievement gap: Impacts and processes of a help-seeking intervention. *Journal of Applied Developmental Psychology, 67*(2020), 1-12. https://doi.org/10.1016/j.appdev.2020.101121

Pathways to College Network. (2007). *Social support: An essential ingredient to success*. The Education Resources Institute, Inc.

Paul, J., & Jefferson, F. (2019). A comparative analysis of student performance in an online vs. face-to-face environmental science course from 2009 to 2016. *Frontiers in Computer Science, 1*(7), 1-9. https://doi.org/10.3389/fcomp.2019.00007

Pascarella, E., & Terenzini, P. (1979). Interaction effects in Spady and Tinto's conceptual models of college attrition. *Sociology of Education, 52*(4), 197-210. https://doi.org/10.2307/2112401

Pear, J., Schnerch, G., Silva, K., Svnningsen, L., & Lambert, J. (2011). Web-based computer-aided personalized system of instruction. *New Directions for Teaching and Learning, 128*, 85-94. https://doi.org/10.1002/tl.471

Pearson Foundation. (2015). Second annual Pearson foundation community college student survey. Pearson Foundation.

Pellegrino, M., & Sloan, A. (2021, September 15). *How to improve and promote student engagement in the online classroom*. Faculty Focus, Magna Publications.

Penn State. (n.d.). *Program assessment process (learning outcomes assessment)*. Schreyer Institute for Teaching Excellence. http://www.schreyerinstitute.psu.edu

Perry, D., & Steck, A. (2019). Changes in faculty perceptions about online instruction: Comparison of faculty groups from 2002 and 2016. *The Journal of Educators Online, 16*(2), 1-15. http://dx.doi.org/10.9743/JEO.2019.16.2.8

Peters, B., Crawley, A., & Brindley, J. (2017). *Lessons learned from the California community college system (CCC), the largest system of higher education in the U.S.A.* Contact North, Contact Nord Online Learning.

Phillippe, K. (2020, December 20). *The covid crisis in community colleges — what does the data say?* Community College Daily. https://www.ccdaily.com/2020/09/covid-19-crisis-in-community-colleges-what-does-the-data-say/

Phillips, B., & Horowitz, J. (2014). Maximizing data use: A focus on the completion agenda. *New Directions for Community Colleges, 164*, 17-25. https://doi.org/10.1002/cc.20077

Picciano, A. (2002). Beyond student perceptions: Issues of interaction, presence, and performance in an online course. *Journal of Asynchronous Learning Networks, 6*(1), 21-40. http://dx.doi.org/10.24059/olj.v6i1.1870

Pier, L., Christian, M., Tymeson, H., & Meyer, R. H. (2021). *COVID-19 impacts on student learning: Evidence from interim assessments in California* [Report]. Policy Analysis for California Education.

Prescott, B. (2021a). Post-COVID enrollment and postsecondary planning. *Change: The Magazine of Higher Learning, 53*(4), 6-13. https://doi.org/10.1080/00091383.2021.1906132

Prescott, B. (2021b). The cone of uncertainty: Planning in a pandemic. *Change: The Magazine of Higher Learning, 53*(1), 44-48. https://doi.org/10.1080/00091383.2021.1850128

Public Agenda. (2013). *What employers and community college students think about online education*. Public Agenda. https://www.publicagenda.org/reports/not-yet-sold-what-employers-and-community-college-students-think-about-online-education/

Purnell, R., & Blank, S. (2004). *Opening doors: Support success services that may help low-income students succeed in community college*. MDRC.

Qayyum, A. (2018). Student help-seeking attitudes and behaviors in a digital era. *International Journal of Educational Technology in Higher Education, 15*(17), 1-16. https://doi.org/10.1186/s41239-018-0100-7

Quintero, E. (2017). *Teaching in context: The social side of education reform*. Harvard Education Press.

Rai, L. (2000). Which comes first, the pedagogy or the digital tool? *Open Learning, 35*(3), 199-200. https://doi.org/10.1080/02680513.2020.1824780

Rainwater, T., & Mize, D. (2008). *Education beyond the rhetoric: Making "rigor" something real* (Policy Brief). Western Interstate Commission for Higher Education.

Rao, K. (2021). Inclusive instructional design: Applying UDL to online learning. *The Journal of Applied Instructional Design, 10*(1). https://dx.doi.org/10.51869/101/kr

Rawn, C., & Fox, J. (2017). Understanding the work and perceptions of teaching focused faculty in a changing academic landscape. *Research in Higher Education, 59*(5), 591-622. https://doi.org/10.1007/s11162-017-9479-6

Reder, M. (2007). Does your college really support teaching and learning? *PeerReview, 9*(4), 9-13.

Rendon, L. (1994). Validating culturally diverse students: Toward a new model of learning and student development. *Innovative Higher Education, 19*, 33-51. https://doi.org/10.1007/BF01191156

Redding, S. (2018). *Instructional design*. Center for Innovations in Learning, Temple University.

Revak, M. (2020, March 30). *When the tide goes out: Identifying and supporting students in online courses*. Faculty Focus, Magna Publications.

Richards, B. (2020). Help-seeking behaviors as cultural capital: Cultural guides and the transition from high school to college among low-income first generation students. *Social Problems, 0*(2020), 1-20. https://doi.org/10.1093/socpro/spaa023

Rincones-Gomez, R. (2009). *Evaluating student success interventions: Principles and practices of student success*. Achieving the Dream.

Risko, E., Anderson, N., Sarwal, A., Engelhardt, M., & Kingstone, A. (2012). Everyday attention: Variation in mind wandering and memory in a lecture. *Applied Cognitive Psychology, 26*, 234-242. https://psycnet.apa.org/doi/10.1002/acp.1814

Roberto, K., & Johnson, A. (2019). Employer perceptions of online versus face-to-face degree programs. *Journal of Employment Counseling, 56*(4), 180-189. https://doi.org/10.1002/joec.12132

Rochester Institute of Technology. (2016). *Academic program assessment planning guide*. Office of Educational Effectiveness Assessment, Rochester Institute of Technology.

Roddy, C., Amiet, D., Chung, J., Holt, C., Shaw, L., McKenzie, S., Garivaldis, F., Lodge, J., & Mundy, M. (2017). Applying best practice online learning, teaching, and support to intensive online environments: An integrative review. *Frontiers in Education, 2*(59), 1-10. https://doi.org/10.3389/feduc.2017.00059

Roderick, M., Nagaoka, J., & Coca, V. (2009). College readiness for all: The challenge for urban high schools. *The Future of Children, 19*(1), 185-210. https://doi.org/10.1353/foc.0.0024

Roe, D. (2020, May 13). *Why remote learning and online learning are not the same*. CMS Wire. https://www.cmswire.com/learning-development/why-remote-learning-and-online-learning-are-not-the-same/

Roksa, J., Jenkins, D., Jaggars, S., Zeidenberg, M., & Cho, S. (2009). *Strategies for promoting gatekeeper course success among students needing remediation: Research report for the Virginia community college system*. Columbia University, Teachers College, Community College Research Center.

Rogers, S., & Gronseth, S. (2021). Applying UDL to online active learning: Instructional designer perceptions. The Journal of Applied Instructional Design, 10(1). https://dx.doi.org/10.51869/101/srsg

Rosenbaum, J., Deil-Amen, R., & Person, A. (2006). *After admission: From college access to college success*. Russell Sage Foundation.

Ross, C., & Broh, B. (2000). The roles of self-esteem and the sense of personal control in the academic achievement process. *Sociology of Education, 73*(4), 270-284. https://doi.org/10.2307/2673234

Rotar, O. (2020). *A missing element of online higher education students' attrition, retention and success: an analysis through a systematic literature review* (Working Paper No. 3). Center for Higher Education Research and Evaluation, Lancaster University.

Rotar, O. (2022). Online student support: A framework for embedding support interventions into the online learning cycle. *Research and Practice in Technology Enhanced Learning, 17*(2), 1-23. https://doi.org/10.1186/s41039-021-00178-4

Rubin, H., & Rubin, I. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Sage Publications, Inc.

Rumble, G. (2000). Student support in distance education in the 21st Century: Learning from service management. *Distance Education, 21*(2), 216-235. https://doi.org/10.1080/0158791000210202

Rutherford, T., Karamarkovich, S., Xu, D., Tate, T., Sato, B., Baker, R., & Warschauer, M. (2021). Profiles of instructor responses to emergency distance learning. *Online Learning, 25*(1), 86-114. http://dx.doi.org/10.24059/olj.v25i1.2472

Ryan, J. (2005). Institutional expenditures and student engagement: A role for financial resources in enhancing student learning and development. *Research in Higher Education, 46*(2), 235-249. https://doi.org/10.1007/s11162-004-1601-x

Sanchez, O. (2022, April 6). *After the pandemic disrupted their high school education, students are arriving at college unprepared*. The Hechinger Report.

Savage-Austin, A., & Honeycutt, A. (2011). Servant leadership: A phenomenological study of practices, experiences, organizational effectiveness, and barriers. *Journal of Business & Economics Research, 9*(1), 49-54. https://doi.org/10.19030/jber.v9i1.939

Saville, B., & Zinn, T. (2011). Interteaching. *New Directions in Teaching and Learning, 128*, 53-61. https://doi.org/10.1002/tl.468

Savitz-Romer, M., Rowan-Kenyon, H., & Fancsali, C. (2015). Social, emotional, and affective skills for college and career success. *Change: The Magazine of Higher Learning, 47*(5), 18-27. https://doi.org/10.1080/00091383.2015.1077667

Schaffhauser, D. (2017, June 19). *Report: Faculty support lacking for wide adoption of digital learning*. Campus Technology, Digital Learning.

Schanzenbach, D., & Turner, S. (2022). *Limited supply and lagging enrollment: Production technologies and enrollment changes at community colleges during the pandemic* (Working Paper 29639). National Bureau of Economic Research.

Schrenk, N., Alves, K., Van Dam, D., & Schrenk, B. (2021). Reflecting on best practices for online learning in a post-COVID-19 world. *Online Learning, 25*(4), 486-504. http://dx.doi.org/10.24059/olj.v25i4.2460

Scrivener, S., Gupta, H., Weiss, M., Cohen, B., Cormier M., & Brathwaite, J. (2018). *Becoming college-ready*. MDRC.

Scrivener, S., & Weiss, M. (2009). *Opening doors: More guidance, better results?* MDRC.

Seaborn, K., & Fels, D. (2015). Gamification in theory and action: A survey. *International Journal of Human-Computer Studies, 74*, 14-31. https://doi.org/10.1016/j.ijhcs.2014.09.006

Seaman, J., & Seaman, J. (2017). *Digital learning compass: Distance education state almanac 2017*. Babson Survey Research Group, e-Literate, and WCET.

Seaman, J., Allen, I., & Seaman, J. (2018). *Grade increase: Tracking distance education in the United States*. Babson Survey Research Group.

Seaman, J., & Seaman, J. (2019). *Digital learning compass: Distance education state almanac 2019*. Bayview Analytics, Pearson, and Online Learning Consortium.

Seaman, J., Allen, I., Ralph, N. (2021). *Teaching online: STEM education in the time of COVID*. Bay View Analytics.

Senge, P. (1990). The leader's new work: Building learning organizations. *Sloan Management Review, 32*(1), 7-23.

Sengul, S., & Katranci, Y. (2012). Metacognitive aspect of solving function problems. *Procedia – Social and Behavioral Sciences, 46*, 2178-2182. https://doi.org/10.1016/j.sbspro.2012.05.450

Şenocak, D., Büyük, K., & Bozkurt, A. (2021). Examination of the Hexad user types and their relationships with gender, game mode, and gamification experience in the context of open and distance learning. *Online Learning Journal, 25*(4), 250-264. http://dx.doi.org/10.24059/olj.v25i4.2276

Sensoyt, O., & DiAngelo, R. (2014). Respect differences? Challenging the common guidelines in social justice education. *Democracy & Education, 22*(2), 1-10.

Shakouri, N. (2012). Constructing learner identity: A poststructuralist perspective. *Humanising Language Teaching, 12*(2), 583-594.

Shaw, C., Atanasio, R., Bryant, G., Michel, L., & Nguyen, A. (2021). *Driving toward a degree – 2021*. Tyton Partners.

Shea, P., & Bidjerano, T. (2011). Understanding distinctions in learning in hybrid, and online environments: An empirical investigation of the community of inquiry framework. *Interactive Learning Environments, 21*(4), 1-16. https://doi.org/10.1080/10494820.2011.584320

Shugart, S. (2013, February 7). *Rethinking the completion agenda*. Inside Higher Ed.

Shugart, S. (2015). *Resiliency and change*. Perspectives, Ferris State University. https://www.ferris.edu/administration/academicaffairs/extendedinternational/ccleadership/publications/pdfs-docs/perspectives/2015/Perspectives-September2015.pdf

Silverman, S., Caines, A., Casey, C., de Hurado, B., Riviere, J., Sintjago, A., & Vecchiola, C. (2021). What happens when you close the door on remote proctoring? Moving toward authentic assessments with a people-centered approach. *To Improve the Academy 39*(3), 115-131. https://doi.org/10.3998/tia.17063888.0039.308

Simunich, B., McMahon, E., Hopf, L., Altman, B., & Zimmerman, W. (2022). Creating a culture of online quality: The people, policies, and processes that facilitate institutional change for online course quality assurance. *American Journal of Distance Education, 36*(1), 36-52. https://doi.org/10.1080/08923647.2021.2010021

Smith Jaggars, S., & Xu, D. (2010). *Online learning in the Virginia community college system*. Columbia University, Teachers College, Community College Research Center.

Sorenson, D., & Reiner, C. (2003). Charting the uncharted seas of online student ratings of instruction. *New Directions for Teaching and Learning, 96*, 1-24. https://doi.org/10.1002/tl.118

Sorgen, C., Melton, T., & Diamanduros, T. (2020). Perceived levels of stress and quality of work-life of faculty. *The Journal of Faculty Development, 34*(1), 31-36.

Soria, K., Horgos, B., Chirikov, I., & Jones-White, D. (2020). *The experience of undergraduate students with physical, learning, neurodevelopmental, and cognitive disabilities during the pandemic*. SERU Consortium, University of California - Berkeley and University of Minnesota.

Spellman, N. (2007). Enrollment and retention barriers adult students encounter. *The Community College Enterprise, Spring 2007*, 63-79. https://doi.org/info:doi/

Spiceland, C., Spiceland, D., & Schaeffer III, S. (2015). Using a course redesign to address retention and performance issues in introductory accounting. *Journal of Accounting Education, 33*, 50-68. https://doi.org/10.1016/j.jaccedu.2014.12.001

Squire, K. (2011). *Video games and learning*. Teachers College Press, Columbia University.

St. Amour, M. (2020, October 20). *Black students need changes to policies and structures beyond higher education*. Inside Higher Ed. https://www.insidehighered.com/news/2020/10/20/black-students-need-changes-policies-and-structures-beyond-higher-education

Stark, E. (2019). Examining the role of motivation and learning strategies in student success in online versus face-to-face courses. *Online Learning, 23*(3), 234-251. http://dx.doi.org/10.24059/olj.v23i3.1556

Stassen, M., Doherty, K., & Poe, M. (n.d.). *Program-based review and assessment: Tools and techniques for program improvement*. University of Massachusetts Amherst, Office of Planning & Assessment.

State of Michigan. (2019, March 13). *Governor Whitmer Announces Statewide Closure of All K-12 School Buildings; School building closures will last Monday, March 16 through Sunday, April 5* [Press Release]. State of Michigan.

State of Victoria. (2020). *High impact teaching strategies: Excellence in teaching and learning*. Department of Education and Training, Melbourne.

Steele, C., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology, 69*(5), 797-811. https://psycnet.apa.org/doi/10.1037/0022-3514.69.5.797

Stewart, B., Goodson, C., Miertschin, S., Norwood, M., & Ezell, S. (2013). Online student support services: A case based on quality frameworks. *MERLOT Journal of Online Learning and Teaching, 9*(2), 290-303.

Stokes, S., McLane, C., & Jones, B. (2021). Assessing the performance of online adjunct instructor candidates: Process improvements and lessons learned. *Online Journal of Distance Education Administration, 24*(4).

Stout, D. (2020, November 19). *The emerging role of the community college in higher education*. The Evolllution.

Strawser, M. & Apostel, S. (2018). When did "sage on the stage" become 'weaned to the screen'?: Instructional implications of the new digital divide. *The Journal of Faculty Development, 32*(3), 55-57.

Strayhorn, T. (2019). C*ollege students' sense of belonging: A key to education success for all students* (2nd ed.). Routledge.

Stryker, S., & Burke, P. (2000). The past, present, and future of an identity theory. *Social Psychology Quarterly, 63*(4), 284-297. https://psycnet.apa.org/doi/10.2307/2695840

Taitl, A. (2000). Planning student support for open and distance learning. *Open Learning, 15*(3), 287-299. https://doi.org/10.1080/713688410

Tallent-Runnels, M., Thomas, J., Lan, W., Cooper, S., Ahern, T., Shaw, S., & Liu, X. (2006). Teaching courses online: A review of the research. *Review of Educational Research, 76*(1), 93-135. https://doi.org/10.3102%2F00346543076001093

Tan, Y., & Amiel, J. (2022). Teachers learning to apply neuroscience to classroom instruction: Case of professional development in British Columbia. *Professional Development in Education, 48*(1), 70-87. https://doi.org/10.1080/19415257.2019.1689522

Tanner, K. (2012). Promoting student metacognition. *CBE – Life Sciences Education, 11*, 113-120. https://doi.org/10.1187/cbe.12-03-0033

Taylor, K. (2016). Diverse and critical perspectives on cognitive development theory. *New Directions for Student Services, 154*, 29-41. https://doi.org/10.1002/ss.20173

Thomas, R., & Stritto, M. (2021). What is the future of online education? The perceptions of instructors with over a decade of online teaching experience. *Online Journal of Distance Learning Administration, 24*(4), 1-35.

Thomas-Spiegel, J., & Patthey, G. (2020). Action research for professional development. *The Journal of Faculty Development, 34*(1), 37-42.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*(1). 89-125. https://doi.org/10.3102%2F00346543045001089

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). University of Chicago Press.

Tinto, V. (1999). Taking student success seriously: Rethinking the first year of college. *NACADA Journal, 19*(2), 5-9. http://dx.doi.org/10.12930/0271-9517-19.2.5

Tinto, V., & Pusser, B. (2006). *Moving from theory to action: Building a model of institutional action for student success*. National Postsecondary Education Cooperative.

Tinto, V. (2012). *Completing college: Rethinking institutional action*. University of Chicago Press.

Tirrel, T., & Quick, D. (2012). Chickering's seven principles of good practice: Student attrition in community college online courses. *Community College Journal of Research and Practice, 36*(8), 580-590. http://dx.doi.org/10.1080/10668920903054907

Tobin, T., Mandernach, J., & Taylor, A. (2015). *Evaluating online teaching: Implementing best practices*. Jossey-Bass Publishers.

Top Hat Monocle Inc. (2020). *Top Hat Field Report: COVID-19 faculty preparedness*. Top Hat.

Troester-Trate, K. (2018). Breaking down nonacademic barriers: Outcomes from the first two years of a community school approach. *League for Innovation in the Community College, Innovation Showcase, 13*(10), 1-6.

Turk, J., Soler, M., & Ramos, A. (2020). College and university presidents respond to Covid-19: 2020 fall term survey. American Council on Education and TIAA Institute.

Turk, M., Müftüoğlu, A., & Toraman, S. (2021). Teaching presence in online courses: Similar perceptions but different experiences from multiple instructor perspectives. *Online Learning Journal, 25*(4), 156-177. http://dx.doi.org/10.24059/olj.v25i4.2885

Turner, R. (1990). Role change. *Annual Review of Sociology, 16*, 87-110. https://doi.org/10.1146/annurev.so.16.080190.000511

Turvey, K., & Pachler, N. (2020). Design principles for fostering pedagogical provenance through research in technology support learning. *Computers & Education, 146*, 1-14. https://doi.org/10.1016/j.compedu.2019.103736

Twigg, C. (2003). Improving learning and reducing costs: New models for online learning. *EDUCAUSE Review, 38*, 29-38.

Twigg, C. (2005). *Course redesign improves learning and reduces costs*. The National Center for Public Policy and Higher Education.

Twigg, C. (2005). *Increasing success for underserved students: Redesigning introductory courses*. National Center for Academic Transformation.

Tyton Partners. (2017). *Time for class: Lessons for the future of digital learning in higher education*. Babson Survey Research Group.

Umbach, P., & Wawrzynski, M. (2005). Faculty do matter: The role of college faculty in student learning and engagement. *Research in Higher Education, 46*(2), 153-184. https://doi.org/10.1007/s11162-004-1598-1

UNESCO. (2022, February 28). *COVID-19 impact on education*. UNESCO. https://en.unesco.org/covid19/educationresponse

United States Department of Education Office of Civil Rights. (2021). *Education in a pandemic: The disparate impacts of COVID-19 on America's students*.

Van Merriënboer, J., Kirschner, P., & Kester, L. (2003). Taking the load off a learner's mind: Instructional design for complex learning. *Educational Psychologist, 38*(1), 5-13. https://doi.org/10.1207/S15326985EP3801_2

Van Wart, M., Ni, A., Medina, P., Canelon, J., Kordrostami, M., Zhang, J., & Liu, Y. (2020). Integrating students' perspective about online learning: A hierarchy of factors. *International Journal of Educational Technology in Higher Education, 17*(53). https://doi.org/10.1186/s41239-020-00229-8

Venezia, A., Bracco, K., & Nodine, T. (2010). *One-shot deal? Students' perceptions of assessment and course placement in California's community colleges*. WestEd.

Venezia, A., & Hughes, K. (2013). Acceleration strategies in the new developmental education landscape. *New Directions for Community Colleges, 164*, 37-45. https://doi.org/10.1002/cc.20079

Verplanken, B., & Wood, W. (2006). Interventions to break and create consumer habits. *Journal of Public Policy & Marketing, 25*(1), 90-103. https://doi.org/10.1509%2Fjppm.25.1.90

Vick, N., Robles-Piña, R., Martirosyn, N., & Kite, V. (2015). The effectiveness of tutoring on developmental English grades. *The Community College Enterprise, 21*(1), 11-26.

Visher, M., Butcher, K., & Cerna, O. (2010). *Guiding developmental math students to campus services*. MDRC.

Waiwaiole, E., Bohlig, E., & Massey, K. (2016). Student success: Identifying high-impact practices. *New Directions for Community Colleges, 175*, 45-55. https://doi.org/10.1002/cc.20211

Waldman, D., Ramirez, G., House, R., & Puranam, P. (2001). Does leadership matter? CEO leadership attributes and profitability under conditions of perceived environmental uncertainty. *Academy of Management Journal, 44*(1), 134-143. https://doi.org/10.2307/3069341

Walton, G., & Cohen, G. (2007). A question of belonging: Race, fit, and achievement. *Journal of Personality and Social Psychology, 92*(1), 82-96. https://psycnet.apa.org/doi/10.1037/0022-3514.92.1.82

Walton, G., & Cohen, G. (2011). A brief social-belonging intervention improves academic and health outcomes of minority students. *Science, 331*(6023), 1447-1451. https://doi.org/10.1126/science.1198364

Wang, X., Lee, Y., Lin, L., Mi, Y., & Yang, T. (2021). Analyzing instructional design quality and students' reviews of 18 courses out of the Class Central Top 20 MOOCs through systematic and sentiment analyses. *The Internet and Higher Education, 50, 1-10*. https://doi.org/10.1016/j.iheduc.2021.100810

Wargo, K. (2021). Faculty development for online learning: Catalysts for transforming practice across modalities. *Online Journal of Distance Learning Administration, 24*(3), 1-9.

Watson, D. (2009). Addressing the needs of diverse students. In G. Myran (Ed.), *Reinventing the open door: Transformation strategies for community colleges* (pp. 13-24). Washington, DC: Community College Press.

Wiesenberg, F., & Stacey, E. (2008). Teaching Philosophy: Moving from face-to-face to online classrooms. *Canadian Journal of University Continuing Education, 34*(1), 63-79. https://doi.org/10.21225/D5JP4G

Weisman, I., & Vaughan, G. (2002). *The community college presidency 2001.* American Association of Community Colleges.

Weissman, E., Cerna, O., Geckeler, C., Schneider, E., Price, D., & Smith, T. (2009). *Promoting partnerships for student success: Lessons from the SSPIRE initiative*. MDRC.

Weissman, S. (2022, February 2). *A Massive Disruption, a Range of Student Reactions*. Inside Higher Ed. https://www.insidehighered.com/news/2022/02/02/how-pandemic-affected-student-engagement

West, C. (2020, May 20). *With higher ed in limbo, students are switching to community colleges*. The Hechinger Report.

Wiesenberg, F., & Stacey, E. (2008). Teaching philosophy: Moving from face-to-face to online classrooms. *Canadian Journal of University Continuing Education, 34*(1), 63-79. https://doi.org/10.21225/D5JP4G

Wiggins, G. (1990). The case for authentic assessment. *Practical Assessment, Research & Evaluation, 2*(2), 1-3. https://doi.org/10.7275/ffb1-mm19

Wiggins, G., & McTighe, J. (2005). *Understanding by design* (2nd ed.). Association for Supervision & Curriculum Development.

Willcox, K., Sarma, S., & Lippel, P. (2016). *Online education: A catalyst for higher education reforms*. Massachusetts Institute of Technology Online Education Policy Initiative: Final Report. https://oepi.mit.edu/files/2016/09/MIT-Online-Education-Policy-Initiative-April-2016.pdf

Williams, J. (2021). Designing for the margins: Addressing inequities in digital learning starts with hearing and engaging the student voice. *Change: The Magazine of Higher Learning, 53*(1), 26-29. https://doi.org/10.1080/00091383.2021.1850118

Williams, L., & Booth, M. (2021). Quality distance education for students is within reach. *Change: The Magazine of Higher Learning, 53*(1), 55-59. https://doi.org/10.1080/00091383.2021.1850131

Wind, D. (2020, June 15). *How to write discussion questions that actually spark discussions*. Eduflow. https://www.eduflow.com/blog/how-to-write-discussion-questions-that-actually-spark-discussions

Wolcott, H. F. (1992). *Posturing in qualitative inquiry.* Academic Press.

Won, S., Hensley, L., & Wolters, C. (2021). Brief research report: Sense of belonging and academic help-seeking as self-regulated learning. *The Journal of Experimental Education, 89*(1), 112-124. https://doi.org/10.1080/00220973.2019.1703095

Wyner, J. (2014). *What excellent community colleges do: Preparing all students for success*. Harvard Education Press.

Wood, J., & Harris, F. (2017). *Supporting men of color in the community college: A guidebook*. Montezuma Publishing.

Xu, D., & Smith Jaggars, S. (2011). *Online and hybrid course enrollment and performance in Washington state community and technical colleges* (CCRC Working Paper No. 31). Columbia University, Teachers College, Community College Research Center.

Xu, D., & Smith Jaggars, S. (2013). *Adaptability to online learning: Differences across types of students and academic subject areas* (CCRC Working Paper No. 54). Columbia University, Teachers College, Community College Research Center.

Xu, D., & Xu, Y. (2019). *The promises and limits of online higher education: Understanding how distance education affects access, cost, and quality*. American Enterprise Institute.

Yair, G. (2000). Educational battlefield in America: The tug-of-war over students' engagement with instruction. *Sociology of Education, 73*(4), 247-269. https://doi.org/10.2307/2673233

Yang, D. (2017). Instructional strategies and course design for teaching statistics online: Perspectives from online students. *International Journal of STEM Education, 4*(34), 1-15. https://doi.org/10.1186/s40594-017-0096-x

Yeager, D., Trzesniewski, K., & Dweck, C. (2013). An implicit theories of personality intervention reduces adolescent aggression in response to victimization and exclusion. *Child Development, 84*(3), 970-988. https://psycnet.apa.org/doi/10.1111/cdev.12003

Yeager, D., & Walton, G. (2011). Social-Psychological interventions in education: They're not magic. *Review of Educational Research, 81*(2), 267-301. https://doi.org/10.3102%2F0034654311405999

Yin, R. (2009). *Case study research: Design and methods* (4th ed.). Sage Publications, Inc.

Yu, H. (2015). Student retention at two-year community colleges: A structural equation modeling approach. *International Journal of Continuing Education and Lifelong Learning, 8*(1), 85-101.

Yukselturk, E., & Bulut, S. (2007). Predictors for student success in an online course. *Journal of Educational Technology & Society, 10*(2), 71-83.

Zeidenberg, M., Jenkins, D., & Calcagno, J. (2007). *Do student success courses actually help community college students succeed?* (CCRC Brief No. 36). Columbia University, Teachers College, Community College Research Center.

Zimmerman, B. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology, 81*(3), 329-339. https://psycnet.apa.org/doi/10.1037/0022-0663.81.3.329

Zimmerman, B. (1999). Self-regulated learning and academic achievement: An overview. *Educational Psychologist, 25*(1), 3-17. http://dx.doi.org/10.1207/s15326985ep2501_2

Zipper, T. (2020, November 13). The online vs. in-person learning debate is missing the point. University Business. https://universitybusiness.com/the-online-vs-in-person-learning-debate-is-missing-the-point/

APPENDIX A: EXAMPLE OF COURSE STRUCTURE IN LMS

The faculty training seminar content is offered as text document that may be uploaded and structured within any learning management system (LMS). Kellogg Community College utilizes Moodle as the primary institutional LMS. The following examples illustrate ways in which the content might be organized with notations on the tools leveraged within the LMS.

Figure 2. Course Home Page
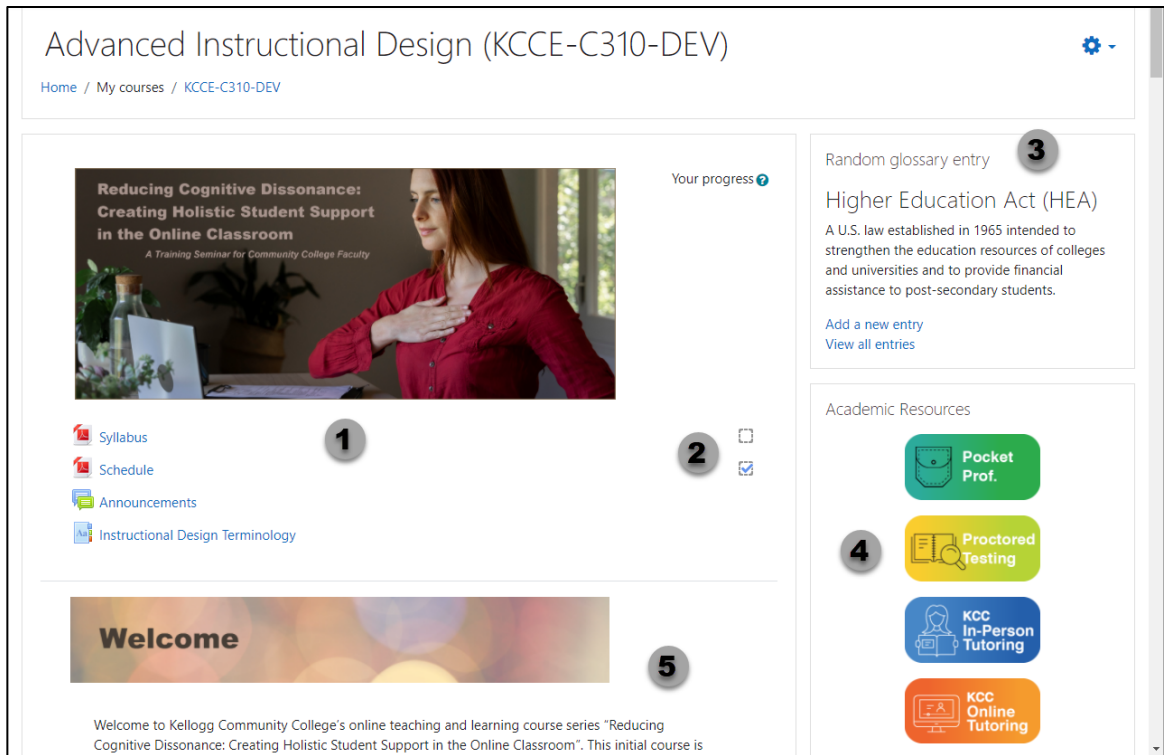
Features of the Moodle layout in Figure 2 include:

1. Course header area: always visible to participants. Contains vital course information such as the syllabus, course calendar, and announcements.

2. Activity completion: checkboxes are automated to display a check mark when specific criteria is satisfied, marking the item as completed.

3. Random Glossary Entry Block: A block along the right side of the course template that is programmed to randomly display one definition from the course glossary each time a participant enters the course. In this specific instance, participants are allowed to add their own terms and definitions to be viewed by all course participants.

4. The Academic Resources Block: This template block is visible in all Moodle courses throughout the institution. The images within this block are linked to institutional support resources such as writing support (The Pocket Prof), proctored testing (KCC's Center for Student Success), option to set up an appointment for in-person tutoring, and 24/7/365 online tutoring (through a third-party vendor).

5. The Welcome Topic Area: This area contains all the items used for the initial Welcome week. Subsequent topics follow in a linear structure.

Figure 3. Weekly Topic

Features of the Moodle topic layout in Figure 3 include:

1. Topic Banner: Each topic banner contains the week and the overall topic along with a brief summary of the important points to be covered.

2. Outcomes and Objectives: Each weekly topic contains a list of the week's Course Learning Objectives and the Participant Learning Outcomes.

3. Synchronous Meeting Link: This particular iteration of the seminar has a synchronous meeting with a persistent link, meeting ID, and passcode. These

credentials remain the same for each synchronous meeting throughout the course. The link is repeated within each topic during which a synchronous meeting is scheduled, preventing participants from scrolling to previous topics to locate access.

4. Lessons: The Lesson Moodle tools allows text, images, and quiz questions to be threaded together in a series of pages. The lesson tool also offers a branching option to allow participants to be routed through information based upon criteria. As an example, a participant may read some content, then answer some comprehension questions. If the participant successfully answers the comprehension check, they are moved forward in the content. If the student does not successfully pass the comprehension check, they may be routed back through the content or to another area where the content is explained in a alternative format.

5. Activity completion: checkboxes are automated to display a check mark when specific criteria is satisfied, marking the item as completed. Criteria may differ depending upon the activity (e.g., discussion forum completion may require one post and two replies, an assignment submission may require an uploaded document or a grade entry).

6. Activities are collected under a heading indicating course requirements.

7. Additional activities are collected under a heading indicating participants are to complete any two from the list. This choice allows participants to engage in those activities that are of interest. This specific seminar is structured such that participants have opportunities to submit their activities in a private manner (only visible to instructor and participant) or publicly (visible to all seminar participants with either public and/or private feedback available).

Figure 4. Discussion Forum Assignment Detail

Features of this Moodle discussion forum in Figure 4 include:

1. Instructions: All expectations for the discussion forum activity are clearly presented to participants. Additional items might be linked within the text such as a grading rubric, word count, pacing expectations, etc.

2. The Academic Resources Block: This template block is visible in all Moodle courses throughout the institution. The images within this block are linked to institutional support resources such as writing support (The Pocket Prof), proctored testing (KCC's Center for Student Success), option to set up an appointment for in-person tutoring, 24/7/365 online tutoring (through a third-party vendor), and a link to a third-party vendor virtual student community app.

3. Personal Touch: As part of the student engagement best practices in online teaching, Moodle allows for flexibility in formatting activity instructions such as including a personal photo, video, or other visual imagery.

4. How To Tip: Additional support is available for participants who might not be familiar with using a discussion forum. A video link walks participants through reading instructions, creating a post, and adding replies to other participant posts. This information may only appear on the first activity.