

## Time-Efficient Techniques for Improving Student and Instructor Success in Online Courses

Julie R. Newell

Radow College of Humanities and Social Sciences  
Kennesaw State University  
Kennesaw, GA, USA  
[jnewell2@kennesaw.edu](mailto:jnewell2@kennesaw.edu)

Stephen Bartlett

Radow College of Humanities and Social Sciences  
Kennesaw State University  
Kennesaw, GA, USA  
[sbartlet@kennesaw.edu](mailto:sbartlet@kennesaw.edu)

Deborah Mixson-Brookshire

Coles College of Business  
Kennesaw State University  
Kennesaw, GA, USA  
[dmixson@kennesaw.edu](mailto:dmixson@kennesaw.edu)

Julie Moore

Bagwell College of Education  
Kennesaw State University  
Kennesaw, GA, USA  
[jmoor151@kennesaw.edu](mailto:jmoor151@kennesaw.edu)

Tamara Powell

Radow College of Humanities and Social Sciences  
Kennesaw State University  
Kennesaw, GA, USA  
[tpowel25@kennesaw.edu](mailto:tpowel25@kennesaw.edu)

Sam Lee

Radow College of Humanities and Social Sciences  
Kennesaw State University  
Kennesaw, GA, USA  
[slee229@students.kennesaw.edu](mailto:slee229@students.kennesaw.edu)

Tiffani Reardon Tijerina

Affordable Learning GA Program Manager  
University System of Georgia  
Athens, GA, USA  
[tiffani.tijerina@usg.edu](mailto:tiffani.tijerina@usg.edu)

Brayden Milam

Radow College of Humanities and Social Sciences  
Kennesaw State University  
Kennesaw, GA, USA  
[bmilam3@kennesaw.edu](mailto:bmilam3@kennesaw.edu)

Lauren Snider

Radow College of Humanities and Social Sciences  
Kennesaw State University  
Kennesaw, GA, USA  
[lsnider1@students.kennesaw.edu](mailto:lsnider1@students.kennesaw.edu)

Justin Cochran

Coles College of Business  
Kennesaw State University  
Kennesaw, GA, USA  
[jcochr48@kennesaw.edu](mailto:jcochr48@kennesaw.edu)

**Abstract**—Researchers at a public (state-funded) institution in the United States seek to increase student success rates in online courses by encouraging faculty implementation of research-based strategies in their online courses without significantly increasing faculty workloads. This goal was identified partially in response to a survey of faculty at the institution and partially in response to funding priorities. In the first phase of the faculty development project, the researchers created a training program that provided short, research-based, student-success strategy segments to faculty already enrolled in faculty development. These teaching tools were largely based on pedagogical research and methods long understood within traditional education disciplines but not as obviously applied to online course delivery. In this sense, the professional development modules are innovations to traditional online training. After the training program, the researchers analyzed faculty response to the training to improve design principles and

delivery for future development of eLearning materials. In the second phase of the project, the short segments were offered as standalone training modules to anyone who wished to view them. Users were then surveyed regarding their perceptions of the strategies. While the impact of the innovations developed in this student success endeavor are still largely to be determined, preliminary results indicate that faculty find the professional development modules helpful and will be implementing them in their courses.

**Keywords**—student success rates; innovation; feedback; open educational resources; training transfer; social media

### I. INTRODUCTION

This research project, first presented at eLmL 2021: The Thirteenth International Conference on Mobile, Hybrid, and

On-line Learning [1], aims to increase student success in online courses while being mindful of faculty workload as well as lack of time for faculty development and course redesign. Initially focused on courses offered in RCHSS (Radow College of Humanities and Social Sciences) at KSU (Kennesaw State University), the project has moved beyond that to create an OER (Open Educational Resource) available to any interested individual with internet access.

This paper moves beyond that original conference presentation [1] to examine a wide range of published research that both provides context and underpins the resources we continue to develop. It then analyzes previously unpublished data from a fall 2019 faculty survey examining faculty motivations and expectations. Further, the paper describes the first and second phases of a research project seeking to develop faculty development resources that require minimal investments of institutional resources and faculty time and effort while facilitating the implementation of research-based techniques to improve student success in online instruction.

## II. OVERVIEW AND RATIONALE

In the United States, education is supported financially by a complicated combination of federal and state funding. In fact, state by state comparisons reveal huge differences in how much a state contributes to its higher education coffers. Government funding of higher education has dropped substantially in recent decades [2]. For example, overall, higher education state funding per student dropped 27% from 2000-2014. State by state, the numbers vary widely. The state of Michigan cut funding by 53% overall during that time while North Dakota increased funding by 31%. Our own state of Georgia cut funding by 17% [3].

When cuts are substantial, the difference is made up in budget cuts at the institutional level (such as reduction in library holdings and elimination of staff and programs) and tuition increases, among other strategies. But, in the United States' political system, the same politicians who strive to cut funding to education also strive to claim that they keep taxes and other expenses low. Therefore, some states rarely allow public (that is, state-funded) institutions to raise tuition to make up for these budget cuts.

With funding so tight, opportunities to gain additional funding to support faculty and students is highly prized, and competition is fierce when such opportunities are announced. Opportunity sometimes comes in the form of "student success dollars," which is funding that can be awarded for initiatives with the intent of bolstering student success. In this case, student success is defined as decreased DFWI rates (students earning Ds or Fs, withdrawing from courses, or taking incomplete grades) and increased retention (the student stays in individual courses and in the university as a whole), progression (the student progresses through a degree program), and graduation (within a proscribed number of years). This definition is often abbreviated as RPG (Retention, Progression, and Graduation). While student success dollars are not tied directly to RPG, our Executive Director for

Academic & Fiscal Operations at KSU, Dr. Michael Rothlisberger, explained, "Student success dollars are a systemic example of tying resources to strategy" because meeting RPG targets is seen as "a moral imperative" [4].

To compete for these highly prized student success dollars, our college wants to stand ready with research-based support to facilitate faculty implementation of techniques that foster student success. But just as there is a balancing act that goes along with cutting state funding to higher education and refusing to allow tuition to rise, there is also a balancing act with innovating to improve student success and being mindful of innovations that might challenge academic freedom or increase already strained faculty workloads. For example, for the past ten years, the RCHSS ODE (Office of Digital Education) has offered an award-winning "Build a Web Course Workshop" to support RCHSS faculty in creating and teaching online courses using research-based best practices. This workshop is time intensive, moving faculty through at least eight hours of in-person or synchronous virtual training and then at least another eight hours of training in a learning management system. In preparing to apply for student success funding, college administrators recently looked at the DFWI rates of online courses offered pre-pandemic. Surprisingly, it was determined that there was no significant difference in DFWI rates between classes where faculty had been trained to teach online using best practices versus online courses created and taught by faculty who had not received training.

Our administration theorized the lack of discernable difference may stem from the fact that the ODE delivers training focused on best practices in online and hybrid teaching and not specifically on student success. That is, the courses created by trained faculty may have been better designed because the faculty who created and taught them had been trained in research-based best practices, but the courses may not have specifically implemented student success strategies.

## III. THEORY AND CURRENT PRACTICE

In 1970, Paulo Freire first published *Pedagogy of the Oppressed*, taking issue with what he called the "banking method" of education, where a teacher deposits knowledge into the student, as if the student were a bank [5]. Freire called for a partnership between teacher and student to liberate students and recommended "[p]roblem-posing education" [5]. While Freire did not envision the revolution in education that would be digital learning, his ideas are still the foundation of many of the current student success strategies that are modality agnostic, including transparent pedagogy and HIPs (High-Impact Practices).

### A. High-Impact Practices

HIPs were identified by George Kuh in 2008 [6] and lauded throughout academia. Since then, many institutions have made concerted efforts to increase these practices throughout their educational offerings. The practices include "First-Year Seminars and Experiences," "Common

Intellectual Experiences,” “Learning Communities,” “Writing-Intensive Courses,” “Collaborative Assignments and Projects,” “Undergraduate Research,” “Diversity/Global Learning,” “ePortfolios,” “Internships,” and “Capstone Courses and Projects” [6].

Over a decade later, Indiana University’s Center for Postsecondary Research surveyed students regarding HIPs and recommended “three ways educators can assess high-impact practices and ensure high-quality experiences for all students” [7]. The proposed strategies look at which HIPs practices students are being exposed to most and redesign current practices to include more HIPs, evaluate what “high quality” means and ensure that that measure is communicated and upheld, and evaluate student satisfaction with an awareness of critiques of HIPs that “HIPs are centered in the ideology of Whiteness” [7]. It is important to note that the researchers found that satisfaction levels with HIPs practices among students involved in them did not vary with regard to race and ethnic group identification [7].

In a separate study, Kinzie and Kuh specifically analyzed over 15 major contributions to student success literature that covered “college impact, student effort and engagement and importance of the first college year for student success” [8]. Their findings showed that while the information about best practices for student success is widely available, implementation rates are still unacceptably low. “Institutions for various reasons do not faithfully and effectively implement the kinds of promising policies and practices that seem to work elsewhere” [8]. Kinzie and Kuh believe that the failures to effectively implement the strategies and changes to increase student success are due to an approach that is too broad and overwhelming. Schools use the smorgasbord approach for strategies instead of narrowing the options down to the specific strategies that would benefit their particular institutions best. Kinzie and Kuh’s suggestion is for institutions to implement Driver diagrams, to streamline goals as well as “to build and test theories for improvement and to clarify what is needed to achieve student success goals” [8].

In addition, Stewart and Nicolazzo take issue with HIPs practices, pointing out that activities like study abroad and internships may pose dangers to trans students. Overall, HIPs practices are more beneficial to students when those students experience fewer levels of oppression and higher levels of privilege. Stewart and Nicolazzo recommend instead that educators implement “trickle up high impact practices (TUHIPs)” creating practices that “recogniz[e] the central importance of working alongside multiply marginalized populations in higher education praxis” and see TUHIPs “as a process through which educators and redistribute human and financial resources toward those who are most vulnerable” [9].

HIPs practices are well-known and widely recognized, and many of them do rely on institutional support (and funding) and financial resources and physical security on the part of students. But not all strategies for student success are dependent upon such resources.

#### B. Low Resource Strategies

Saundra Yancy McGuire’s revolutionary *Teach Students How to Learn* describes strategies to improve student metacognition, which, in turn, improves student learning across many areas [10]. McGuire’s strategies and examples are accessible to teachers and students and include fostering growth mindsets, providing clear expectations, and increasing student confidence and self-esteem [10]. As one can see, such strategies do not rely heavily on institutional support and student resources.

Moving beyond metacognition, Mary-Ann Winkelmes identified factors “to promote equitable learning experiences” in higher education [11]. Dubbed “transparent teaching,” these practices do not assume that metacognition alone supports increased student learning. Winkelmes concludes practices such as low stakes projects, coaching models, and clear goals and criteria for courses and assignments foster student success [11].

While McGuire and Winkelmes do not address modality directly, Flower Darby looks directly at success in online learning in *Small Teaching Online* [12]. Darby, McGuire, and Winkelmes all recommend smaller changes that individual instructors can implement in courses regardless of modality to support student learning and success. Darby’s explanation of scaffolding content in courses is not original to her, but her explanation and examples and application to online learning are innovative.

In 2010, Anya Kamenetz predicted the disruption that online learning would bring to education. She challenged educators to recognize the necessary changes that must be made for higher education to be relevant. She foresaw institutions needing to be clear about “meaningful objectives” [13], supporting diverse learners, embracing the benefits that technology can bring to education, and moving toward open educational resources [13].

By the end of the decade, however, when Hoyert and O’Dell examined educational practices at universities across the country, they found that most faculty still used the traditional lecture and textbook system [14]. This data shows that modern alternative pedagogical techniques are not being implemented to meet the needs of a wider range of students. “One of the factors limiting the expansion of the techniques is simply a lack of knowledge of the mechanics and the advantages of particular pedagogies on the part of college faculty” [14]. The authors developed a series of faculty communities that they refer to as pedagogical interest groups, and each group was an interdisciplinary team of six to eight faculty. Each of these groups analyzed and implemented different pedagogical techniques in their classes and shared the results. If a technique was found successful, the instructors

redesigned the courses using that technique. “One of the most impressive outcomes of this project is that all the techniques improved aspects of student learning and with some techniques, the change was immediate” [14]. The authors suggest that “linking measures of teaching effectiveness and recognition for innovative teaching are needed to sustain pedagogical transformation” [14]. Also, it seems clear that small changes can support student learning.

### C. Student Expectations

Other factors also challenge efforts toward increased student success. Arum and Roksa studied 2,322 college students “enrolled across a diverse range of campuses” [15]. The researchers found that students don’t have a clear idea of why they are in college, how it might benefit them, or how they might succeed in college. While teaching students to think critically is held as the main goal of college education, “[t]hree semesters of college education . . . have a barely noticeable impact on students’ skills in critical thinking, complex, reasoning, and writing” [15]. This statistic is measured without regard to whether students are succeeding or failing in their courses, meaning that strategies that improve DFWI rates need to also positively impact student learning and critical thinking skills in order to truly make a difference.

What does the research say online students want? Two separate studies, one by Toufaily, Zalan and Lee [16] and one by Magda and Aslanian [17] found that students choose an online program because 1) it is the program they want, 2) it is the least expensive, and 3) it has a good reputation. During their online study, students surveyed in the UAE responded that they value an instructor “who possesses good interpersonal skills, who is a good leader, who is prepared for class, is precise and teaches so that students can understand” [16]. They want responsive instructors. They want functional elearning platforms, and they value the use of social media platforms to gain a sense of belonging [16]. In a 2010 survey conducted by Penn State University, students were asked how they felt about the Quality Matters criteria. The results revealed that students wanted appropriate assessments, clear guidance on how to access resources in the course, and web-based course components or course components that are easy to use offline [18].

Other studies specifically focused research on majors, groups of students, or interventions. One large study conducted by The Learning House, Inc. and Aslanian Market Research in 2018 surveyed 1500 online students to determine what students want once they are enrolled in online courses. In 2018, students’ first concern was for mobile-friendly course materials. Their second priority was for asynchronous, interactive course materials (videos and PowerPoints from the instructor, textbooks, and written assignments). Students were not enthusiastic about synchronous sessions and third-party videos [17]. But, students were very attracted to “textbook free” courses or courses that use OERs (not courses without course materials) [17]. Finally, while a big advantage of online programs is that they are available to anyone,

anywhere, surprisingly, students want their online programs close by. In fact, 78% of students surveyed lived within 100 miles of their campus, with 44% living under 25 miles away. Students may study online, but they prefer the institution to be close [17].

It does seem that one thing that has changed since the 2010 Penn State survey is that now students are more desirous of mobile materials rather than downloadable ones; however, students still value knowledgeable instructors who have a clear presence in their courses.

Muljana and Luo produced a systematic literature review of 40 studies published between 2010 and 2018 related to “the underlying factors that influence the gap between the popularity of online learning and its completion rate” [19]. Student success strategies identified in the study were grouped under common headings referencing early intervention, engagement, course design, and synergy of stakeholders. While the reviewers found significant discussion of “[p]rofessional development, training, and workshops to inform faculty practices associated with online learning theories, student engagement, students’ needs, dynamic dialogue, high quality feedback, appropriate delivery methods and technology,” they also noticed a lack of discussion on efficacy of faculty support, “such as professional development opportunities such as a summer institute, training, and workshop” [19]. Critically, the reviewers noted “while student characteristics are among determinants of student retention in online learning, the results of this study do not include a detailed discussion on suitable instructional strategies for fostering behaviors associated with academic success” [19].

### D. The Criticality of Faculty Development

All of these problems, goals, strategies, interventions, etc. require faculty development if they are to be addressed or implemented effectively. Faculty success in the in-person, online, and hybrid classroom is necessary, although it is not sufficient, to achieve student success. Brinkley conducted research focusing on how participation in a professional development program impacted faculty teaching effectiveness in the online environment and attitudes toward the effectiveness of the training [20]. Brinkley concluded “that instructors demonstrated (a) statistically significant changes in the incorporation of elements into the redesign of their syllabi, and (b) improvements in their teaching abilities, [but] there were no statistically significant differences in student evaluation scores of teaching pre- and post-training. Overall, the findings to the first research question revealed only modest improvements to the instructors’ teaching effectiveness.” As to the faculty attitude toward the training, “prior to the training, instructors were highly optimistic about their course redesign plans and the skills and knowledge they would develop in the training” and were “generally satisfied with the program” after the training. “However, after delivering their newly redesigned course online, participants were less optimistic and satisfied with their training experience than they had been prior to and following it, and multiple

instructors cited a need for additional or continued training and support” [20]. Brinkley notes it is important we use multiple data sources, spanning greater periods of time to gain a better understanding of the impact of professional development.

Daly analyzes grant-funded faculty learning communities at seven different institutions of higher education after determining a need for scholarship that analyzed why faculty learning communities are generally successful [21]. The research is grounded in social cognitive theory, which was chosen to “examine the relationship between faculty needs and the conditions for learning that are provided by the colleges and universities in which they work” [21]. Each learning community met weekly to “engage in professional reflection and initiate changes” over one semester, then met weekly over a second semester to implement projects that would address campus-wide diversity needs [21]. The learning communities were considered a success by the researchers, and the exit interviews of the participants aligned with “Deci and Ryan’s (2000) self-determination theory, which focuses on the needs of individuals for autonomy, competence, and relatedness,” and boosted self-confidence [21]. Ultimately, Daly indicated that topic-based learning communities “promote[d] specific types of pedagogical change” [21].

After analyzing 47 published studies on best practices in online learning and studying the rapid advancements of technology in the past century, Sun and Chen determined “that most online faculty have not received adequate training and support from their institutions” [22]. They define adequate training to include the following topics: “how to promote effective online collaboration for students, how to set high expectations, how to adjust instructors’ teaching to conform to the online environment, and how to create proper online teaching strategies,... [along with] adequate training in the technologies applicable to online teaching” [22]. Sun and Chen, like Daly, stressed the success of a learning community approach for both student learning and faculty development [22].

The Canadian Digital Learning Research Association (CLDRA) found that the most reported challenges in provision of digital education professional development were “culture change, work security, and unclear expectations” [23]. That is, there may be underlying factors beyond lack of training or lack of understanding of technology that hamper professional development efforts at the institutional level. In addition to analyzing faculty development programs themselves, it is important to realize that when we discuss faculty development, we may not mean “all faculty” at a particular institution. Brady studied the impact of professional development for adjuncts on student success, noting “adjunct instructors have not always been afforded the same training and development opportunities” as full-time faculty. [24]. It is also important to note that in the current teaching climate, with the popularity of online courses, faculty may now be asked to teach courses designed by others—colleagues, subject matter

experts, and/or instructional designers. Implementing student success strategies into a course that one did not initially create can pose its own challenges.

Another strategy regarding faculty professional development is rooted in asking the faculty member to share the student’s experience. Utah Valley University created professional development for the teaching of its online English language program courses, based on parallel design, to mirror the educational experience of online students. This design incorporated three theories for developing learner autonomy – transactional distance, self-regulated learning, and collaborative control. Through the professional development, faculty learned the importance of decreasing transaction distance through the establishment of effective and timely communication and positive student-teacher relationships. Faculty learned to approach the course through phases of self-regulated learning - including forethought, performance, and self-reflection – to understand the factors affecting learning online. Lastly, faculty practiced encouragement of community building and learner autonomy through giving students more collaborative control of discussion boards. A key component in the training was helping instructors “recognize how they can incorporate their own voice through response to learners in order to make a course that may have been authored by someone else their own.” [25]. Results highlight the importance of “implementing the elements of goal-setting, learning and applying new teaching strategies or adapting known strategies, and reflection on the effectiveness of these strategies parallels effective student learning processes based on the theory of self-regulated learning,” and that “online learning is not an isolated activity. Socialization, support, team-building, and problem-solving can be developed through well-designed online course activities. These can result in ownership of learning, self-direction, and autonomy” [25].

In Southern Oregon University’s 2015-2016 Faculty Writing Fellows Seminar, eight instructors of first-year foundational courses across diverse disciplines learned about methods and implementation of various pedagogical techniques to strengthen their students’ writing abilities [26]. The seminar, structured similarly to a professional learning community, aimed to remedy the lack of faculty expertise in teaching writing skills to students by assigning faculty with readings and discussions, encouraging them to position themselves as learners. Researchers then compared fifty student compositions written in five participating instructors’ subsequent courses with those of students in courses taught by five non-participating instructors, noting that the former substantially outscored the latter. In addition, researchers surveyed participating instructors and observed an increase in “confidence as a writing instructor, ... empathy for students, ... knowledge about writing instruction, and ... instructional practices that support students’ success” [26]. As the research shows, there is a thick web of complication surrounding the

relationships among student learning, student success, and faculty development,

A cornerstone to the effort to support student success is faculty development. A common refrain is “[s]tudent success is faculty success.” The work to increase student retention in college, progression through an academic program, and graduation from an academic program must include both effort toward pieces that support student success and pieces that provide faculty the support they need to support student success. This axiom is true in online courses as well as face to face and hybrid courses. The Student Success Minutes training was created to help gently nudge faculty in the direction of the research and take into account faculty conceptions and needs as well as research-based student success findings.

#### IV. FACULTY SURVEY

Our Build a Web Course training program is peppered with student success research from well-known experts like Sandra McGuire [10], Jessamyn Neuhaus [27], Flower Darby [12], Anya Kamenetz [13], and Richard Arum and Josipa Roksa [15], which we couple with advice and examples of successful strategies employed by our own faculty. However, research conducted by Karen Brinkley on the effectiveness of faculty development training [20] caused us to consider the effectiveness of our own training. Brinkley found that “prior to the [faculty development] training, instructors were highly optimistic about their course redesign plans and the skills and knowledge they would develop in the training” and were “generally satisfied with the program” after the training. “However, after delivering their newly redesigned course online, participants were less optimistic and satisfied with their training experience than they had been prior to and following it, and multiple instructors cited a need for additional or continued training and support” [20]. With this need for more training and support in mind, we conducted an informal survey in the spring 2021 of former Build a Web Course workshop participants and found that none of them remembered those aspects of the workshop that addressed student success in online courses. It seems that the focus of the faculty had been on the technology and general design of their courses rather than the details related to student success.

Next, we combined our informal survey findings with those of a formal survey of 177 Kennesaw State University faculty conducted at the end of 2019. A team of college-level online coordinators at KSU surveyed faculty regarding aspects of online teaching valued by higher education faculty in an effort to ascertain what students found to be the valuable part of an online course vs. what faculty found to be the valuable part of an online course. The purpose of the survey was to determine the similarities between what the research said students valued and what faculty valued. We then used that information to shape faculty development in a way that better responded to faculty assumptions and current faculty practices and preferences.

KSU is made up of 11 different colleges, but over 80% of the survey respondents came from only three colleges: Coles College of Business (13%), Bagwell College of Education (16%), and RCHSS (55%). The online teaching experience of the survey’s participants varied, with 22.35% having no online teaching experience in the past two years, and 22.35% having taught nine or more online sections in the past two years. The majority of respondents, 53.53%, had taught no blended or hybrid sections in the past two years, with the next largest group, 28.82%, having taught 1-3 blended/hybrid sections in the past two years. Thirty percent of respondents had taught 1-3 years online, and 58.82% had developed 1-3 online/hybrid/blended courses to teach.

We asked faculty in the survey to identify the five items that they believe are most valuable in their online courses with regard to making a class better for them as the instructors (i.e., easier to manage, easier to teach) and for the students (i.e., learning effectiveness).

The top five items that faculty felt made the course easier to teach and manage were

1. Peer reviews of the online course by colleagues or instructional designers (90.32%)
2. A course quality rubric such as Quality Matters (86.67%)
3. Publisher course packs (76.74%)
4. Proctoring tools such as Respondus and/or proctoring services such as the KSU Testing Center and ProctorU (76.47%)
5. Tools such as SoftChalk and Kaltura/MediaSpace (71.76%)

The top five items faculty felt were important for student learning were

1. Clear guidance on how to access resources in a course (78.95%)
2. Clear "start here" information (75.86%)
3. Clear grading information (71.43%)
4. Quick response time to emails and grading (67.21%)
5. Mobile friendly (65.57%)

As one can see (Fig. 1), there is little overlap between the two groups from the faculty perspective, which means faculty feel they must choose, as they design their courses, whether to focus on things that make the course easier to teach (such as publisher packs) versus things that they believe are important for student learning (such as clear guidance on how to access resources in a course).

In addition, there is little overlap between what the research says students find valuable and what faculty believe students value (Fig. 2). As discussed above, students emphasize responsive instructors, functional e-learning platforms, use of social media to create a sense of belonging appropriate assessments, clear guidance on how to use resources in the course, instructor interaction, mobile friendly courses, asynchronous and interactive course materials, and open educational resources.

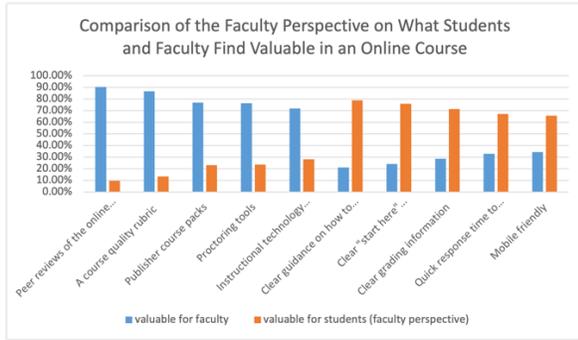


Figure 1. A comparison of the faculty perspective on what students and faculty find valuable in an online course. This information is from the 2019 survey of KSU faculty.

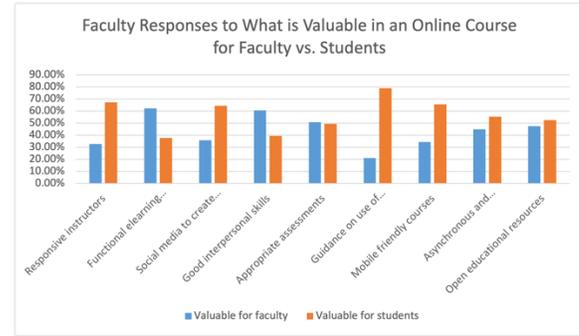


Figure 2. A comparison of faculty responses to what is valuable in an online course from 2019 survey of KSU faculty vs. Student responses to what is valuable in an online course [16] [17] [18] [19].

Of course, these differences in preferences do not mean that techniques that make teaching easier and those that support student success are mutually exclusive. For example, faculty do not appear to have made the connection that a course quality rubric such as Quality Matters supports faculty providing clear grading information in a course. It is worth noting that while faculty did not generally perceive items such as responsive instructors and guidance on how to access resources in the class as things that would be valuable to the instructor, clear guidance on how to use resources would cut down on email to instructors and explanations from instructors regarding how to use such resources.

Additionally, while neither research on what students wanted nor the survey on what faculty value rated a clear course schedule very highly, such a tool would also both ease the burden on faculty regarding student emails and scheduling and support student success. Clearly, this discrepancy between research and perception merits further exploration.

Fig. 3 includes the full set of responses to the question “Identify the five items that you believe are most valuable in your online courses with regard to making a class better for you as the instructor (i.e., easier to manage, easier to teach) and for the student (i.e., learning effectiveness)” on the original survey.

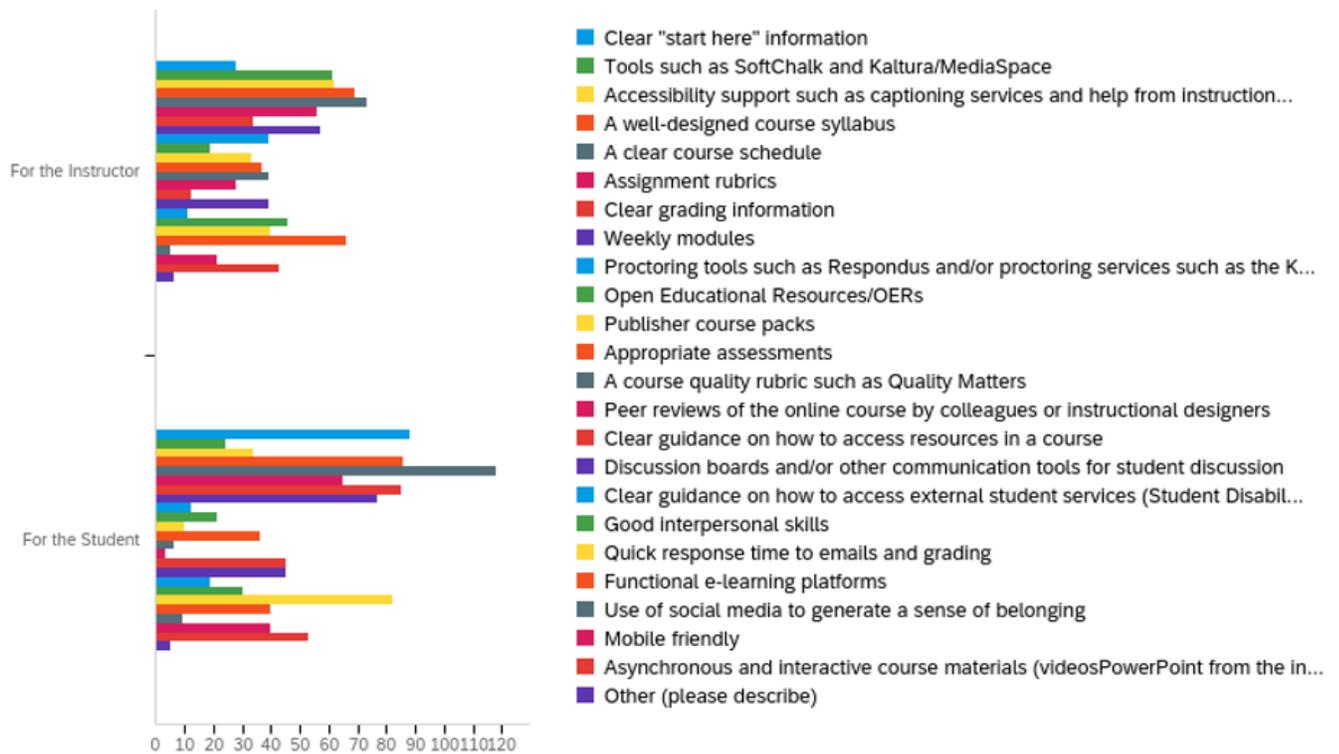


Figure 3. Overall results of the survey question asking faculty to identify five items that they believe are most valuable for them in their online courses (with regard to making a class better for the instructor) and five items that are most valuable to the student.

The survey also showed that students are the reason faculty take steps to improve their courses. One question in the study asked faculty, "What motivates you to make improvements to your online courses?" As shown in Table 1, the responses overwhelmingly stated students were the key motivator for course improvements along with learning and teaching. Feedback through student evaluations is also a motivator for improvement with course materials. The desire to improve the experience for students within the online environment can result in further professional development. The survey demonstrates there is no lack of desire on the part of faculty to improve online courses for students. Clearly, then, the fact that faculty assumptions regarding what students value in an online course do not equate to what students actually value is most likely the result of a lack of information. Furthermore, faculty were asked within the survey, "Is there anything preventing you from participating in distance education efforts (teaching, training, etc.) as a faculty member?" With the other obligations faculty are required to engage in on an annual basis, time is the number one reason preventing further training/education and/or teaching in the online environment. Faculty are concerned about the time it takes to train, create, and teach within the online environment, which causes them to discount the opportunity (Table 2). Additionally, faculty are concerned about the teaching workload and believe it takes a substantial amount of time to grade and offer continuous updating of materials etc. Faculty concern about time is reflected in Table II.

We concluded from this survey that, while their motivations for participating in faculty development and updating their online courses were inspiring, faculty ideas about what supported student learning were sometimes at odds with the research, and their ideas about what faculty need to create effective online courses were sometimes at odds with what students needed (for example, OERS) or not even on student radar (mobile-friendly—although perhaps students take this for granted). Instructors want to help students succeed, but there is an incongruous response pattern in the survey. What is important to the student and what is important to the instructor are not always in alignment. It seems clear, then, that providing faculty with information regarding what students value and what strategies support

TABLE I. WORD FREQUENCY IN THE RESPONSES TO THE 2019 KSU FACULTY SURVEY QUESTION "WHAT MOTIVATES YOU TO MAKE IMPROVEMENTS IN YOUR ONLINE COURSE?"

<b>Word</b>	<b>Frequency</b>
Student(s)	188
Learn(ing)	77
Teaching (material updates)	33
Feedback (from students)	27
Experience (better for students)	21
Desire (to improve)	15
Professional (development)	15

student success would help faculty achieve their goals. Additionally, training and opportunities to further faculty development and support faculty in planning online courses and reflecting on course design and delivery can be advantageous for the student and the instructor.

## V. RESEARCH PROJECT

We realized that we needed a more focused strategy to supply faculty with information regarding implementing strategies for student success in their own online courses. We initially sought to emphasize student success information within the existing training without adding significant time and work for the faculty participants. We then realized that by embedding the information within a larger faculty development workshop, we were creating barriers to faculty adoption of the techniques and limiting the audience. That realization led us to develop phase two of the project.

We already included a wealth of student success strategies in the workshop. However, the information was provided along with information on research-based best practices in course design and technology tutorials for creating course materials. Student success strategy information was not prioritized or emphasized for faculty participants.

Especially for faculty new to online teaching, we could see how workshop participants would prioritize "how do I create the class," "how do I make it accessible to students who use screen readers or who need captioning," and "what software do I use to create course materials" over "how do I strategize for student success." The faculty participants had finite time and energy to complete the training and create the course. But could we also call attention to student success strategies in hopes of encouraging faculty participants to add a few of those to their courses, as well?

### A. Research Project

As mentioned earlier, the chief impetus of this research was to prepare the college for successful request of student success funding. Beyond that, we wanted to be able to demonstrate that we had identified a way to increase and support student success. And of course, the heart of our motivation was to assist our students in achieving their academic goals.

TABLE II. WORD FREQUENCY IN THE RESPONSES TO THE 2019 KSU FACULTY SURVEY QUESTION "IS THERE ANYTHING PREVENTING YOU FROM PARTICIPATING IN DISTANCE EDUCATION EFFORTS (TEACHING, TRAINING, ETC.) AS A FACULTY MEMBER?"

<b>Word</b>	<b>Frequency</b>
Time (teaching, training, creating)	71
Online/distance (challenge)	37
Training/education (effort)	29
Teach(ing)	27

The researchers designed a two-phase research project. Phase 1 (completed) involved creating stand-alone student success content, sharing it with faculty within an existing professional development workshop, and following up with a survey to measure their intent to adopt student success strategies into their courses. In phase two (ongoing), we extracted the student success modules from the faculty development workshop and created a standalone faculty development training available as an open educational resource. This training is available online and on demand to anyone who wishes to access it through Affordable Learning Georgia's *Open Educational Resources: ALG Repository*. Throughout this phase of the research, we are asking participants to complete a survey to measure their intent to adopt student success strategies into their courses.

#### B. Phase I: Lower Barriers to Adoption

To begin phase one, the researchers did three things: 1) isolated the research-based, student-success content from the general content of the faculty training modules and emphasized it in highlighted segments of the training called Student Success Minutes; 2) added an activity to each of the Student Success Minutes to support the faculty in remembering the content; 3) surveyed faculty at the end of the training to see if they recall and plan to use the Student Success Minutes information (intent to transfer) [28].

The researchers designed each Student Success Minutes segment to be less than 10 minutes, including the activity, so as not to overburden the faculty with more training content. In this initial, pilot phase of the project, our goals were to create the segments and present them to the faculty participating in the spring 2021 "Build a Web Course Workshop" and then survey faculty participants, as described above, regarding intent to transfer. We started with a small number of faculty participants (8). Because of low faculty enrollments, in this first phase of the project we were able to gather little more than a handful of initial reactions.

#### C. Phase II: Lower Barriers to Access

Phase two shifted the content to a second, shorter, asynchronous training using the Student Success Minutes segments. This training initially targeted faculty who had previously completed the "Build a Web Course" Workshop but did not receive the redesigned content on research-based strategies for student success.

The redesigned six-module, asynchronous, self-paced training takes participants less than two hours to complete. Other workshops focusing on student success strategies at the institution take more time and/or lack the flexibility and interaction of our Student Success Minutes training, which is hosted on the internet and freely available. The redesigned training and the accompanying survey of intent to transfer will be available indefinitely as we continue to refine the training content and collect data from users. The success of this project

will be measured in the survey results and findings on intent to transfer techniques discussed in the training.

#### D. Next Steps

While measuring DFWI rates at our institution might also be helpful in determining impact of a singular initiative, the truth is that we have so many student success efforts ongoing that it would be impossible to tell which one or ones had what impact. In addition, the researchers are cognizant that students drop courses for many reasons that may have nothing to do with the professor or the course content. Use of DFWI rates is also sensitive due to the potential for professors to feel targeted by attention to such information. For this reason, we chose not to measure individual DFWI rates in this research. At the end of the project, we will gather aggregate data on DFWI rates as a measure of overall student success trends within the College.

After the two phases of the project, the researchers plan to use the information gathered to assess whether highlighting student success strategies in faculty development training can encourage faculty to implement these strategies. If we find we have a successful strategy, we will be able to use this information to better position our college to receive student success funding when future opportunities arise.

### VI. RESEARCH-BASED MODULES ON STUDENT SUCCESS

In the first phase of this project, the research team created six Student Success Minutes segments. This section will describe each segment, provide the research it is based on, and describe the activity provided with it and faculty participant results, if available.

#### A. Student Success Minutes 1: Scaffolding

This Student Success Minutes segment was based on the work of Flower Darby (Fig. 4). Darby explains scaffolding through her experience teaching jazz dance. She writes,

[B]eginning dancers get frustrated and demotivated if I constantly throw new things at them. Better to practice one new step for a while, get feedback from me on their progress, and build confidence and self-efficacy before introducing a slightly more complex step or one that requires greater skill. [12]

Darby extrapolates this idea to other academic realms. While scaffolding in college classes is not a brand-new idea, Darby provides an excellent explanation and rationale for the practice. For example, in a research paper assignment, instead of assigning a 10-page research essay, ask students to turn in a topic early in the course; a few weeks later, ask students to turn in an annotated bibliography with a tentative thesis; and two weeks before the paper is due, ask students to turn in (or share on a discussion board) a PowerPoint with the title and thesis on slide 1 and the topic sentence and paragraph supporting points for each paragraph in the paper.

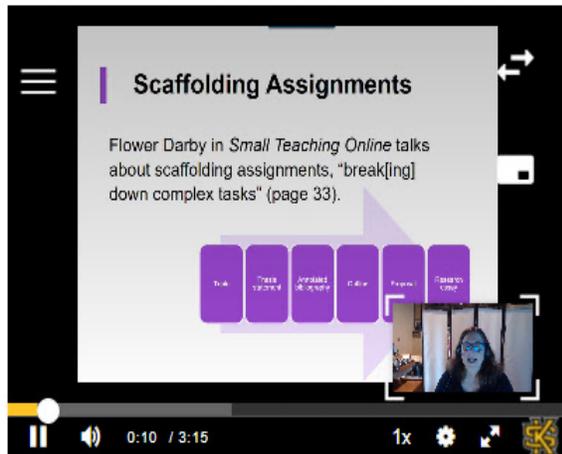


Figure 4. Student Success Minutes 1: a video explaining Flower Darby's approach to scaffolding.

Of course, the faculty member would be expected to provide timely and helpful feedback on each phase before the next phase is due. To introduce (or remind) faculty of this student success strategy, in a three-minute video, Tamara Powell, Director of the RCHSS ODE, explained the concept of scaffolding and asked participants to share a reflection on when they might use the strategy to support student success in a class. In the reflection assignment, 100% of faculty participants in phase one indicated that they already used scaffolding strategies in their courses to some degree.

#### B. Student Success Minutes 2: GroupMe

The second Student Success Minutes segment was based on a need within the institution. At Kennesaw State University, student culture results in the creation of a GroupMe (Fig. 5) for each class in which students are enrolled—bypassing the professor. This student-created classroom community harkens back to Kamenetz' prediction that faculty and institutions will need to change and adapt to the disruptions that technology brings. Kamenetz told us there would be “rough spots” [13], and the “do it yourself” approach to community building in online courses that students have taken with GroupMe certainly can be one of those rough spots. But faculty can work to lessen the negative impact and increase the positive through knowledge and deliberate action.

GroupMe is a social media application that allows a group to chat via mobile app or website without exchanging personal information [29]. On the one hand, GroupMe is excellent for creating community and support in an online course. On the other hand, some students with the best intentions have been tempted to use GroupMe to commit breaches of academic integrity.

In response to these problems, Sam Lee, a student at Kennesaw State University as well as a teaching assistant in the Spanish and French programs and an assistant instructional designer in the RCHSS ODE, created an interactive presentation using Articulate Storyline 360.



Figure 5. Student Success Minutes 2: a short, self-paced, interactive presentation on the social media tool GroupMe.

The presentation walked faculty participants through an overview of GroupMe and provided suggestions to faculty regarding how to minimize student cheating with it and how to use it with students to support student success.

This presentation concluded with a short quiz to support comprehension of the main ideas. Faculty participants were allowed to attempt the quiz multiple times, and all faculty participants in phase one scored 100% on their final attempts.

#### C. Student Success Minutes 3: Open Educational Resources and Creative Commons

In the past five years, a great deal of research has been done on the impact of OERs—or no-cost or low-cost course materials—upon student success efforts. In the United States, textbook prices have risen astronomically. In the last 10 years, the “average cost of college textbooks has risen four times faster than the rate of inflation,” and “65 percent of students . . . skip buying required texts” to save money or simply because they cannot afford them [30].

As an alternative to expensive textbooks, many faculty members turn to OERs. Research into OERs has shown that OERs increase student participation, satisfaction, learning, retention, and course and program completion. They reduce student debt not only by lowering textbook costs in individual classes but also by allowing students to take more courses in a term, thereby graduating more quickly and accruing less student loan debt [31]. Kamenetz predicted the rise of OERs in her 2010 work *DIY U: Edupunks, Edupreneurs, and the Coming Transformation of Higher Education* [13]. Kamenetz did not predict the power with which for-profit publishing houses would attempt to subvert OERs and even try to monetize them. It can be difficult, now, for some faculty to envision teaching without high-priced publisher supplements to their instructional materials. But for many students, OERs are one of the most important factors a faculty member can implement into a course. And, OERs become a social justice issue as textbook prices climb.



Figure 6. Student Success Minutes 3: a short video and quiz on Open Educational Resources.

Tiffani (Reardon) Tijerina (Fig. 6), the Program Director for the Affordable Learning Georgia initiative, created a Student Success Minutes segment on OERs for this project. In the two minute and 37 second video, Tijerina defines open educational resources and explains their benefits as well as Creative Commons licensing. The Creative Commons licensing explanation is provided to support understanding of the types of resources that can be used as OERs in classes.

Tijerina's Student Success Minutes segment concludes with an ungraded self-assessment on the terms and concepts presented in the segment and then a graded quiz on the same terms and concepts. Faculty participants were invited to practice with the ungraded self-assessment as much as desired before taking the graded quiz on the same information. Every faculty participant in phase one scored 100% on the graded quiz. Ungraded self-assessments [32] will be the topic of a future Student Success Minutes segment.

#### D. Student Success Minutes 4: The Quick Write

Saundra McGuire recommends a reflection activity as part of a class to engage students and enhance self-esteem [10]. It is hard to imagine that something so simple to implement can be such a powerful tool for student success. Stephen Bartlett, Associate Director of the ODE, created a short video on a type of reflection assignment called "The Quick Write" (Fig. 7).

As Bartlett explains, McGuire uses the Quick Write as a confidence booster. She asks students to remember a thing they learned that was hard and recall how they learned it [10]. Bartlett also recommends using the Quick Write as a reflection assignment to help cement information students have learned in a class period and to "check in" on students regarding to their progress in the class.

Asking students to take just one to three minutes to write about an aspect of the material that was just presented is a great way to support learning and engagement, and it also allows the professor to see whether students are paying attention or "getting the material" in an online class.



Figure 7. Student Success Minutes 4: a short video on the power of reflection.

#### E. Student Success Minutes 5: Weekly Modules

Universal Design for Learning Theory states that consistency is a key component for supporting increased success as it lightens cognitive load, freeing up more time and mental energy to assist the student in learning the course content [33].

It is important to be consistent in scheduling expectations for students in online courses. Students are used to organizing their college schedules by weeks in in-person classes, and it makes sense to use that structure in online courses as well. It also makes sense to create folders, organized by weeks, with everything a student needs in that folder to complete that week of class.

When faculty instead create modules of random lengths (module 1 is three weeks, module 2 is four days, module 3 is seven weeks, etc.), students who already struggle with time management can suffer severely. When faculty create overly long modules (one 16-week course with only four, four-week-long modules), students who wait until the last minute find out four weeks into the course that they have fallen too far behind to succeed.

Student Success Minutes 5: Weekly Modules (Fig. 8) provides the rationale for organizing the online course in a weekly fashion and examples of why it is the easiest way to support student success in an online course.

Weekly organization of online classes supports student success by providing consistency, reducing cognitive load, and helping students to organize their time [34]. This segment, created by Tamara Powell, ended with a quiz over the material presented in the short video. All faculty participants in phase one scored 100% on the quiz.



Figure 8. Student Success Minutes 5: a short video on weekly modules.

#### F. Student Success Minutes 6: Timely and Effective Feedback

A great deal of research on student success supports not only feedback, but timely and effective feedback [12], [27] [35]. For our last Student Success Minutes segment in the pilot, Sam Lee created a website that included an interactive presentation on the importance of timely and effective feedback.

As Darby points out, “It’s easy for online students to feel isolated and unsupported” [12]. Feedback, even small notes about low or no stakes assignments, can motivate students to invest more time in the course. Such feedback can also alert students that they are not doing enough to succeed in the class—or are on the wrong track—long before they fail a high stakes assignment. In this way, timely and effective feedback promotes student success.

As the reader may remember, this project was inspired partly as a way to provide student success strategies to faculty who were already strapped for time. And, as we know very well, suggesting faculty take time to provide more feedback is not a timesaver. However, in the age of technology, faculty can often use the learning management system to “work smarter, not harder.” Specifically, many learning management systems have automated feedback tools to allow faculty to set up bots to, for example, send out a congratulatory email to students who did well on a test or send study tips to students who did not do so well on a test.

Solutions that support student success and reduce faculty workload are not always possible, but in this case, the student success strategy was able to support both positive outcomes

This module included the interactive presentation, mentioned above, along with a practice quiz that allowed participants to check their understanding of the material. After the practice quiz, participants in phase one took a graded quiz with the same questions. The quiz was worth 20 points, total, and the average grade was 75%. This information suggests that the presentation on timely and effective feedback needs adjustment to increase participant retention of the information.

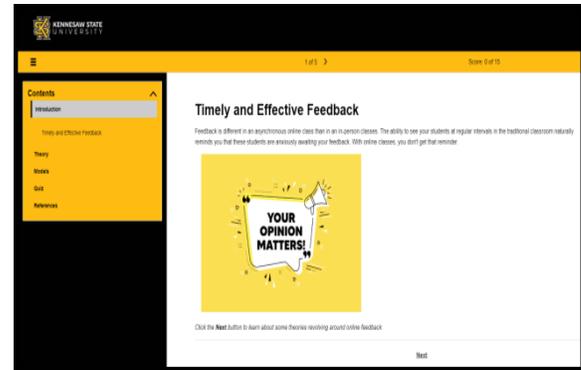


Figure 9. Student Success Minutes 6: a website with interactive exercises and a quiz that provide information about the importance of timely and effective feedback.

## VII. OER STUDENT SUCCESS RESOURCE

In the literature review, it was noted that faculty often did not have access to professional development [22] or professional development was limited to full time faculty [24]. Additionally, in the survey of KSU faculty, time was the number one reason preventing further training/education and/or teaching in the online environment. To address these concerns, phase two of the project was created. As referenced previously, phase two of the project included offering the modules described above in a standalone format in SoftChalk and hosted on the internet. This training is called “Student Success Workshop” [36]. These modules were available online to anyone, anywhere, and users were asked to complete a survey at the end. The survey measured, among other things, intent to transfer. The SoftChalk ScoreCenter showed that 51 people accessed the open, online training. However, only five persons completed the cumulative assessment and received a certificate by December 2021. Clearly, at this point, we need to examine why the training is not engaging users and moving them to completion of the certificate requirements.

### A. Survey Results

Of the 51 people who accessed the training, only eight completed the survey linked to phase two of the training. All of this information was reported anonymously. Of those eight, four indicated they were faculty at Kennesaw State University, and two indicated that they were not. Two did not respond to that question. Six respondents indicated that they remembered all six topics presented to them in the training, and two did not respond. This result indicated that moving the training into a standalone format seemed to make it easier for participants to recall the topics.

The segment that respondents indicated they found most helpful was the “Timely and Effective Feedback” segment created by Sam Lee. All six participants who were still responding to the survey found that segment helpful. Four found the “GroupMe” segment helpful—also by Lee.

Participants were queried regarding their intent to transfer the information presented in training using this survey question: “The following are the titles of the six strategies. Select any you plan to incorporate into your own course(s). In addition, please share your ideas regarding implementing these strategies in your course(s).” Of the four participants who responded to this question, at least one person found each strategy helpful and intended to incorporate it in a course. While “Timely and Effective Feedback” and “GroupMe” were deemed the strategies participants would use the most, “OER and Creative Commons” had only one user indicate that that information would be used in future courses.

Participants were also asked to share their ideas regarding implementing these strategies in their courses. With regard to “GroupMe,” participants shared that they would start to make their own GroupMe in line with the workshop suggestion to try to deter student cheating with the social media tool. One participant wrote, “I have been largely ignoring GroupMe until this semester and one class. In the future, I will try using the create my own GroupMe strategy.” Responses to the “Timely and Effective Feedback” segment indicated that participants engaged with the material. One participant wrote, “I like the rubric method, and it does reduce grading time. Maybe I should create lower stakes activities to provide more beneficial feedback.” Another shared, “I will specifically separate out a ‘for next time’ in my feedback.” And a third response was very enthusiastic: “I’m re-working office hours to gain more attendance—love the Doodle survey idea!”

As might logically follow, the “OER and Creative Commons” had very few responses. One respondent wrote, “I was not aware of the various types, and I would like to become more familiar to prevent misusing OER material.” This response might indicate that the segment was too packed with information for users to easily digest. Alternately, inclusion of OER may be seen as a larger, more systematic change than the incremental adjustments needed to incorporate the other techniques presented.

“Scaffolding,” “The Quick Write,” and “Weekly Modules” were also moderately popular. The written responses to the survey that addressed scaffolding and weekly modules indicated that these were familiar strategies that were already widely used in online classes. However, the “Quick Write” or reflection segment seemed to also spur participants to consider this small change in a course. One participant responded, “I have heard of this method, but I have not tried it yet. I plan to use it in my upper-level courses.” Another respondent shared, “Small reading sections could really benefit from quick writes.”

An additional survey question asked, “If you are not going to use any of these strategies, please share your reasons.” One answer referenced content, that the OER material wasn’t relevant to that instructor’s courses because the instructor taught ancient languages and the material was already out of copyright. Another shared that the strategies were already familiar. A third shared that some were already in use in that

instructor’s course, concluding that “If this were new to me, I’d be plugging in everything you taught and be excited about it!”

When asked if we should continue the workshop in this format, three participants answered, “Yes,” and two answered, “Other.” No one answered, “No.” The two persons who marked, “Other” provided explanations. One wrote, “I think they should be part of a series covering each strategy more in depth and providing assistance in creating them.” A second shared, “It would depend on that person’s level of familiarity with the pedagogy,” which we interpreted as the person thought we were asking if the workshop should be recommended to another person.

## VIII. CONCLUSION AND FUTURE WORK

The project was borne of several motivations: a foundation for securing student success funding, a desire to increase student success, and a desire to provide easily accessible and time-efficient faculty development. The execution of the project was facilitated by the fact that faculty surveyed showed that they were intrinsically motivated to engage in professional development to improve their courses. The survey from KSU faculty also showed that faculty needed guidance regarding what students want in online courses. In addition, faculty did not always recognize what key elements of an online course support student success. The team’s work resulted in an openly available faculty development resource that attempts to support faculty development needs while respecting faculty workloads. The team used information gleaned from both primary and secondary research to deliver a product that served a wide range of needs.

In phase one of the project, the summaries of each Student Success Minutes segment showed that faculty participants did engage with the materials—although they were least successful with the assessment included in segment 6. Four faculty members completed the survey regarding intent to transfer. (The survey is anonymous.) The faculty members remembered all of the Student Success Minutes and liked segments 2, 5, and 6 (GroupMe, weekly modules, and feedback) the best. All faculty members indicated that they intended to implement at least one of the strategies in the course they were building. When asked if these three segments should be included in future trainings, three of the respondents answered “yes.” The fourth shared that it depended. Even respondents with previous training made comments such as “This was good—well put-together. Thanks! It added a few small changes that I think will have big effects to my class, so it was worth the time.”

In phase two, the segments were isolated and offered as a freely available, online, asynchronous faculty training on student success, and participants were surveyed in those trainings as well. While we would have liked for the 51 persons who accessed the training to have completed the training and the survey, user feedback to date has been constructive and positive. For instance, when asked, “Is there anything else you would like to share regarding the ‘Strategies for Student Success’ workshop?” one participant responded, “I think the short sessions are fantastic. It would be nice to have these minute sessions posted on the faculty information

website,” in reference to the training segments. The team appreciated that feedback and promptly did so. Another respondent wrote, “I really liked multiple styles of feedback to really reach different learning styles.” With the limited feedback that we were able to obtain, we did see that those who participated in the survey intended to transfer the information to their teaching practice. While that is heartening, it is also clear that there is a need for extended research into application of these student success initiatives across time.

In the future, we will make the survey more prominent and include an explanation of how we will use the information in hopes of enticing more people to participate. Our goal is to have a set of strategies all faculty can easily incorporate into their courses to support student success and to gather data showing a reduction in DFWI rates. Preliminary results indicate that faculty who engage with the Student Success Minutes find them helpful and will be implementing them in their courses. However, we will continue to work to collect more data to create a stronger argument with regard to the effectiveness of this project across time. We will also incorporate user suggestions into our revision strategies for future offerings. At the end of the next several semesters, we will collect DFWI information for the entire college to see if the needle moves in a positive direction with regard to student success. To reiterate our earlier statements, many student success efforts are ongoing at KSU, and a moving needle would not indicate that this project alone made a difference. To determine whether our work is making a difference directly, we will need to solicit volunteers to allow us to survey students in classes where these specific strategies are being applied. With that information, we will have a clearer picture whether to continue in this direction with follow-up success strategies or pursue another path.

#### REFERENCES

- [1] T. Powell, J. Newell, S. Bartlett, S. Lee, B. Milam, L. Snider, “Student Success Innovations vs. Faculty Workload Concerns: How to Find a Balance for Success,” eLmL 2021: The Thirteenth International Conference on Mobile, Hybrid, and On-line Learning. Conference Proceedings, Nice, France, pp. 15-20, July 18-22, 2021. Available from: [https://www.thinkmind.org/download\\_full.php?instance=eLmL+2021](https://www.thinkmind.org/download_full.php?instance=eLmL+2021) 2021.12.08
- [2] Pew Trusts Foundation, “Two decades of change in federal and state higher education funding: Recent trends across levels of government,” October 15, 2019. Available from: <https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/10/two-decades-of-change-in-federal-and-state-higher-education-funding> 2021.12.08
- [3] S. Baum and M. Johnson, “Financing public higher education: the evolution of state funding,” Research Report. The Urban Institute. pp. 1-24, 2015. Available from: [https://www.urban.org/research/publication/financing-public-higher-education-evolution-state-funding/view/full\\_report](https://www.urban.org/research/publication/financing-public-higher-education-evolution-state-funding/view/full_report) 2021.12.08.
- [4] M. Rothlisberger. Executive Director for Academic & Fiscal Operations at Kennesaw State University. Personal Interview, 2021.05.02.
- [5] P. Freire. Pedagogy of the Oppressed. 30th anniversary edition. Translated by Myra Bergman Ramos. Continuum. New York, 2005. Available from: <https://envs.ucsc.edu/internships/internship-readings/freire-pedagogy-of-the-oppressed.pdf> 2021.12.08
- [6] G. D. Kuh, “High-Impact Educational Practices: What They Are, Who Has Access to Them, and Why They Matter.” Qtd in “High Impact Educational Practices: A Brief Overview.” Association of American Colleges and Universities. Available from: <https://www.aacu.org/node/4084> 2021.12.08
- [7] J. Kinzie, A. C. McCormick, R. M. Gonyea, B. Dugan, and S. Silberstein. “Assessing Quality and Equity in High-Impact Practices.” Center for Postsecondary Research.” Indiana School of Education. Available from: <https://nsse.indiana.edu/research/special-projects/hip-quality/index.html> 2021.12.08
- [8] J. Kinzie and G. Kuh. “Reframing student success in college: Advancing know-what and know-how,” *Change*, vol. 49, no. 3, pp. 19–27, May 2017, doi:10.1080/00091383.2017.1321429.
- [9] D. Stewart and Z. Nicolazzo, “High impact of [whiteness] on trans\* students in postsecondary education,” *Equity & Excellence in Education*, vol. 51, no.2, pp. 132-145, 2018, doi:10.1080/10665684.2018.1496046.
- [10] S. McGuire. Teach Students How to Learn: Strategies You Can Incorporate Into Any Course to Improve Student Metacognition, Study Skills, and Motivation. Sterling, VA: Stylus, 2015.
- [11] M. Winkelman, “The National Teaching and Learning Forum.” National Teaching and Learning Forum, vol. 24, no. 2, pp. 1-4, Feb. 2015, doi:10.1002/ntlf.20019.
- [12] F. Darby. Small Teaching Online. San Francisco, CA: John Wiley and Sons, 2019.
- [13] A. Kamenetz, DIY U: Edupunks, Edupreneurs, and the Coming Transformation of Higher Education. Hartford, VT: Chelsea Green Publishing, 2010.
- [14] M. S. Hoyert and C. D. O’Dell, “Developing faculty communities of practice to expand the use of effective pedagogical techniques,” *Journal of the Scholarship of Teaching and Learning*, vol. 19, no. 1, pp. 80–85, Feb. 2019.
- [15] R. Arum and J. Roksa, Academically Adrift: Limited Learning on College Campuses. Chicago, IL: University of Chicago Press, 2011.
- [16] E. Toufaily, T. Zalan, and D. Lee. “What do learners value in online education? An emerging market perspective,” *E-Journal of Business Education and Scholarship of Teaching*, vol. 12, no. 2, pp. 24-39, 2018.
- [17] A. J. Magda and C. B. Aslanian, “Online College Students 2018: Comprehensive Data on Demands and Preferences,” Louisville, KY: The Learning House Inc. Available from: <https://distance-educator.com/online-college-students-2018-comprehensive-data-on-demands-and-preferences/> 2021.12.08
- [18] P. Ralston-Berg, “What Makes a Quality Online Course? A Student Perspective,” Presented at Distance Teaching and Learning 2009, Madison, Wisconsin. August 7, 2009. Available from: <https://www.slideshare.net/plr15/what-makes-a-quality-online-course-the-student-perspective-18294402> 2021.12.08
- [19] P. S. Muljana and T. Luo, “Factors contributing to student retention in online learning and recommended strategies for improvement: A systematic literature review,” *Journal of Information Technology Education: Research*, vol. 18, pp. 19-57, 2019, doi:10.28945/4182.
- [20] K. E. Brinkley, “Learning to Teach Online: An Investigation of the Impacts of Faculty Development Training on Teaching Effectiveness and Attitudes toward Online Instruction,” PhD diss., University of Tennessee, 2016. Available from: [https://trace.tennessee.edu/utk\\_graddiss/4127](https://trace.tennessee.edu/utk_graddiss/4127) 2021.12.08

- [21] C. J. Daly, "Faculty learning communities: Addressing the professional development needs of faculty and the learning needs of students," *Currents in Teaching & Learning* vol. 4, no. 1, pp. 3-16, 2011.
- [22] A. Sun and X. Chen, "Online education and its effective practice: A research review," *Journal of Information Technology Education* vol. 15, pp. 157-190, 2016, doi:10.28945/3502.
- [23] C. A. VanLeeuwen, G. Veletsianos, O. Belikov, and N. Johnson, "Institutional Perspectives on Faculty Development for Digital Education in Canada," *Canadian Journal of Learning & Technology*, vol. 46, no. 2, pp. 1-19, Dec. 2020, doi:10.21432/cjlt27944.
- [24] T. L. Brady, *Implementing an Adjunct Training and Development Model to Increase Student Success A Mixed Method Study*, PhD Diss., William Howard Taft University, April 2020.
- [25] M. S. Andrade, "Teaching online: A theory-based approach to student success," *Journal of Education and Training Studies*, vol. 3, no. 5, pp. 1-9, September 2015, doi:10.11114/jets.v3i5.904.
- [26] M. Perrow, "Designing professional learning to support student success: Lessons from the Faculty Writing Fellows Seminar," *College Teaching*, vol. 66, no. 4, pp. 190-198, Oct. 2018.
- [27] J. Neuhaus. *Geeky Pedagogy*. Morgantown, WV; West Virginia University Press, 2019.
- [28] K. Hye-Sook and S. Yu. "Structural relationship among environment, motivation, engagement and transfer of training of teachers in distance education." *KEDI Journal of Educational Policy*, vol. 17, no. 2, pp. 221-245, Dec. 2020, doi:10.22804/kjep.2020.17.2.004.
- [29] GroupMe, *Homepage*, 2021. Available from: <https://groupme.com/> 2021.12.08
- [30] K. Kristoff, "What's behind the soaring cost of college textbooks," *Moneywatch*, CBSNews, January 26, 2018. Available from: <https://www.cbsnews.com/news/whats-behind-the-soaring-cost-of-college-textbooks/> 2021.12.08
- [31] N. B. Colvard, C. E. Watson, and H. Park, "The impact of open educational resources on various student success metrics," *International Journal of Teaching and Learning in Higher Education*, vol. 30, no. 2, pp. 262-276, 2018. Available from: <https://files.eric.ed.gov/fulltext/EJ1184998.pdf> 2021.06.10
- [32] J. Eustace and P. Pathak, "Retrieval practice, enhancing learning in electrical Science," *Proceedings of the 11th International Conference on Computer Supported Education (CSEDU 2019)*, vol. 1, pp. 262-270, May 2019, doi:10.5220/0007674102620270. Available from: [https://www.researchgate.net/publication/332858972\\_Retrieval\\_Practice\\_Enhancing\\_Learning\\_in\\_Electrical\\_Science](https://www.researchgate.net/publication/332858972_Retrieval_Practice_Enhancing_Learning_in_Electrical_Science) 2021.12.08
- [33] S. Johnson, "Design, consistency, access," *Online Course Development Resources*. Vanderbilt University. Available from: <https://www.vanderbilt.edu/cdr/module1/design-consistency-and-access/> 2021.12.08
- [34] S. Negash and T. Powell. "What if We Put Best Practices into Practice?: A Report on Course Design Beyond Quality Matters," *Proceedings, Learner Conference (2013) University of the Aegean, Rhodes, Greece*. Available from: <https://radow.kennesaw.edu/ode/docs/BestPractices.Powell.Negash.2013.doc> 2021.06.10.
- [35] S. Laato, E. Lipponen, H. Salmento, H. Vilppu, and M. Murtonen. "Minimizing the Number of Dropouts in University Pedagogy Online Courses." *CSEDU 2019 11<sup>th</sup> International Conference on Computer Supported Education*. Heraklion, Crete, Greece. May 2-4, 2019. *Proceedings, Volume 1*. Edited H. Lane, Susan Zvacek, and James Uhomoibhi. pp. 587-596
- [36] *Student Success Workshop, Homepage*, 2021. <https://alg.manifoldapp.org/projects/student-success-workshop> 2021.12.08