



Learning to Adapt:
Lessons from the Second Year of
Developmental Education Reform at
Florida College System Institutions

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Executive Summary

The Center for Postsecondary Success (CPS) has been conducting a comprehensive evaluation of developmental education (DE) reform on Florida College System (FCS) institution campuses. Though many FCS institutions had been engaged in DE reform efforts prior to the passage of Florida Senate Bill 1720 (SB1720) in 2013, DE reform in Florida accelerated after the legislation required FCS institutions to implement comprehensive DE reform. The reform designated some Florida high school graduates and military personnel as “exempt” from DE and placement testing. Exempt students are not required to take a placement test and can also opt into or out of DE in math, reading, and writing regardless of prior coursework or academic performance. FCS institutions were also required to offer developmental courses in math, reading, and writing in at least two of the following instructional modalities: modularized, compressed, contextualized, and co-requisite. To facilitate students’ enrollment in the new course offerings, colleges were also required to offer enhanced advising to students and to develop meta-majors, or major-course pathways for students to select based on their interests, academic goals, and career aspirations.

In year two of DE reform implementation across the FCS institutions, CPS researchers conducted two-day site visits to each of eight FCS institutions in fall 2015 and spring 2016. In this report we present findings from our analysis of focus group interviews conducted with college administrators, advisors, and other personnel, faculty members, and students. The key findings from our site visits to FCS institutions answer the research question: *How have the Florida College System institutions implemented developmental education reform?*

Initial perspectives on the legislation have shifted with time and, as a result, implementation practices evolved in the second year of implementation. Deep concern about the possible negative consequences

of the legislation remained among campus personnel across the FCS. However, many campus personnel’s worst fears about SB1720 had not been realized, due in large part to the continuing effort of institutions to focus on the practices most likely to positively impact student success. After the quick implementation timeline following passage of the legislation, campus personnel were able to refine their reform efforts in the second year of implementation.

Our findings identify six themes related to: (1) holistic advising, (2) influences on student choice, (3) instructional modalities, (4) innovative academic support services, (5) students’ intersecting and complex social identities, and (6) helping underprepared students transition to college-level coursework.

- ***In light of SB1720, the advising process has become more complex with institutions implementing more holistic advising processes.*** In the colleges' approach to holistic advising, advisors provide individualized information and advice during the course selection process, but leave many of the decisions up to the students themselves. With so many decisions for students (e.g., college-level versus developmental and one modality versus another), advisors also take into account a student's past academic performance, personal and non-cognitive factors, and course-based factors when recommending classes to students. Advisor training is required to do holistic advising well. Advising sessions often take longer because advisors share more than just course recommendations. At times, advisors also provide guidance on issues related to veteran's affairs, financial aid, and residency, among others during advising sessions.
- ***With many decisions at hand several external influences play a role in students' choices about both DE and college-level coursework.*** While academic advisors constitute one source of support for FCS students' decision-making, students also rely on several other sources of advice, financial considerations, and psychological concerns like math anxiety in order to guide their course decisions. Some students operate independently and plan their own academic program without relying on campus personnel for direction, while others self-advise, or consult transfer students to determine appropriate coursework, and online ratings to choose specific instructors. Costs of courses, as well as reluctance to take math or overconfidence in English drive students to opt-out of DE.
- ***The four modalities were designed and implemented with FCS institutions responding to their specific needs.*** Campus personnel at FCS institutions reported engaging in a variety of DE course redesign processes representing a continuum ranging from less intentional to comprehensive. Some of the variation resulted from campus personnel and students' confusion about the definitions of each of the instructional strategies. Campus personnel and students identified several features, benefits, and challenges, and course design considerations for each modality. While the modalities chosen for implementation were not uniform across the FCS, the lack of clear definitions for the instructional strategies may have allowed institutions to innovate and create solutions that worked with their institutional context to meet the needs of particular student populations on their campus.
- ***Institutional leaders sought to bolster existing academic support systems and create new and innovative measures to meet the need for safety net services for students opting out of DE.*** In some cases, colleges began significant restructuring of academic support departments and services. Many institutions established or modified existing support services, like learning labs or centers, where students could access academic support using online software packages or receive face-to-face tutoring. These restructuring efforts necessitated either the reallocation of funds, external funding sources, or some combination of the two.

- ***Students' intersecting and complex social identities influenced their academic success, including how they sought and used support provided by FCS institutions.*** Using extended vignettes we highlight the ways in which students exhibited agency, motivation, and grit to succeed in the era of DE reform in FCS institutions. Some institutional practices, both institution-initiated and student-initiated, offered social support to diverse student populations, including student veterans, English language learners, and students experiencing homelessness. These practices intended to help students who come to FCS institutions shaped both how students use campus resources and how they interact with campus personnel.
- ***In year two of implementation, some administrators and other campus personnel across the FCS expressed the view that the focus of developmental education reform at their institutions had shifted from the redesign of developmental education to the redesign of gateway courses and other college-level coursework.*** Many focus group participants described the lack of success advisors and others have had in convincing underprepared students to enroll in DE courses. This trend has led to fewer course offerings in DE due to decreasing enrollment and accompanying increases in enrollment in gateway courses, some FCS institutions experimented with institutional practices to address the influx of underprepared students into gateway courses.

Introduction

In year two of DE reform implementation, CPS researchers conducted two-day site visits to eight FCS institutions in fall 2015 and spring 2016. In this report we present key findings related to promising professional practice at each FCS institution based on field notes, institutional documents, and interview and focus groups with college administrators, advisors, faculty members, and students. The key findings from our site visits to FCS institutions answer the research question: *How have the Florida College System institutions implemented developmental education reform?*

SB1720 dramatically affected how students, exempt students in particular, made course enrollment choices. As students began opting out of DE classes in increasing numbers, FCS campus personnel became

concerned about students' maturity levels for making decisions that have potentially long term implications for their college education. In addition, faculty and staff questioned the efficacy of allowing students who were not college ready to take gateway English and math courses, as well as other college-level classes like Psychology and Chemistry. Many faculty members believed that these underprepared students did not possess the prerequisite academic skills to be successful. Administrators received both support and pushback from faculty and staff who candidly spoke along a continuum of perspectives from passionately negative to cautiously optimistic about the foreseeable and unforeseeable consequences of the legislation.

A number of institutional shifts occurred in response to increased student choice and altered enrollment patterns in FCS institutions. In this section, we first consider how some of the initial perspectives on the legislation have changed across the FCS and then examine how implementation practices have evolved over time.

CHANGING PERSPECTIVES

Deep concern about the possible negative consequences of the legislation remained among campus personnel across the FCS. Nonetheless, many campus personnel's worst fears about SB1720 had not been realized, due in large part to the continuing effort of institutions to focus on the practices most likely to positively impact student success. An administrator spoke about this trend:

I was very proud of the way the faculty, dev ed faculty and gateway faculty, the way the administrators, student affairs, and academic affairs, presidents, all really attacked the bill with a true and earnest approach to implementation, even though the undercurrent, and maybe not so often the undercurrent, was one of fear and real anxiety about student impact, which continues.

The second year of implementation also brought with it a greater appreciation for the importance of student agency in educational decisions. An advisor explained:

So the hope is that through this college-wide discussion there has been a shift in sort of appreciating and respecting...a person's choice to be where they are and respecting that they can find and access and use the resources that they need to continue to be successful.

In addition to shifting attitudes on the importance of students' motivation to succeed, some campus personnel were pleasantly surprised to learn that, at least in some instances, exempt students rose to the challenge and succeeded in college-level coursework despite their lack of academic preparation. Two advisors remarked:

Advisor 1: And so I don't know, it's been this push to look at students more holistically because some of the students who do opt out do succeed....

Advisor 2: I'm totally with you on that. I had the same thing happen and when it first happened [the legislation] it – Oh my gosh, this is gonna be horrible, but there's some students that have stepped up to the plate and done what they needed to do to be successful.

In addition to changing perspectives on the legislation, our focus groups revealed subtle changes in institution's approaches to implementation.

CHANGING IMPLEMENTATION

After the quick implementation timeline immediately following passage of the legislation, in 2015-16, campus personnel were able to refine their implementation efforts. An administrator summed up the shift:

And then implemented, at a very quick time, you know, we had to put together that senate bill shell, put it together really fast with a team college-wide, brought it to the table. It's now evolved into a better-edited version.

A few themes, in particular, emerged in the second year of implementation. First, because many exempt

students opted out of developmental coursework, some FCS institutions began to shift their focus to making improvements to the gateway courses that students were now able to enroll in as well as to math courses that created a greater stumbling block to success than English and reading. An administrator remarked: “I think what’s different this year is that the focus this year has been more on our gateway course improvement, particularly in math.”

In addition, several institutions credentialed more gateway faculty and hired more admissions staff, and advisors, which eased to some extent the conditions of overwork that had existed for most campus personnel in the first year of implementation. Now, for instance, some admissions offices had taken over from advisors the task of making the exemption determination. An administrator explained, “But now that we have more staff, admissions is doing that from the beginning because they would have the transcripts anyway. So we’re still transitioning into that, but that’s one of the more recent changes.”

Another trend in the FCS in the second year of implementation was that word had gotten out to high school personnel and students about the legislation and the exemption. Thus, FCS institutions had less need to educate students on their exemption status. Two advisors remarked:

Advisor 1: I was gonna say another change is, as information has come out about the bill and people are more familiar with it, they come in saying, “Well, I don’t have to take, you know, placement testing. I don’t have to have ACT or SAT scores. You know, my advisor said something along those lines.” So the students are aware of it coming in more than they were initially.

Advisor 2: Parents are tellin’ ‘em.

Despite the changing perspectives among campus personnel about the possible unintended consequences of the legislation and changing approaches to implementation, many in the FCS believed that the ultimate long-term effects of SB1720 on student outcomes such as time-to-degree and graduation rates were still to be determined. Summing up this view, an administrator stated:

Well, you know, the jury is still out on whether or not at the end of the day we are moving students quicker through the curriculum. We know if we can get students to finish the college-level math requirement and the college-level reading and writing requirement in the first year, they have a higher likelihood to be successful. The question is outstanding.

While the long term impact of SB 1720 on student outcomes remains in question, this report is intended to answer the more immediate question of how institutions enacted DE reform in the second year of implementation.

This report is organized into seven sections. In section one, we present the research design used to collect and analyze the data followed by key findings on developmental education reform in Florida. In the remaining sections of the report, we discuss our findings related to six themes: holistic advising, influences on student choice, instructional modalities, innovative academic support services, students’ intersecting and complex social identities, and helping underprepared students transition to college-level coursework.

Section One: Research Design

In this report, we present key findings related to promising professional practice at each FCS institution based on field notes, institutional documents, and interview data.

DATA COLLECTION

Email invitations were sent to all FCS institutions requesting participation in the site visit component of the larger study on DE implementation and evaluation in Florida College System (FCS) institutions. Eight institutions accepted our invitation, and two-day site visits to the institutions were completed in fall 2015 and early spring 2016. Each institution assisted CPS researchers with setting up logistics of the visit, including soliciting potential focus group participants, as well as securing on-campus space for the focus group sessions. Data sources included field observations, institutional documents collected prior to and during site visits, and transcripts from focus groups with relevant stakeholders at the institutions.

Field Observations. At least two CPS researchers visited each institution. CPS researchers generated field notes for each site visit, identifying salient, interesting, or illuminating observations from each visit.

Institutional Documents. In phase one of the project, CPS researchers collected and analyzed Implementation Plans from all 28 FCS institutions. The plans from the 8 FCS institutions visited were re-analyzed and used to support the development of the focus group interview protocol and the coding framework used for data analysis.

Focus Groups. We conducted 31 semi-structured focus groups lasting between 20 and 111 minutes.

Focus groups on average involved between 5-10 individuals. In total we spoke with 20 administrators, 45 faculty members, 43 academic advisors, and 44 students, resulting in data from 152 focus group participants. The interview protocol was designed to identify the considerations underlying institutions' choices for the new placement, advising, and DE options. All interviews were audio-recorded with the consent of the participants.

DATA ANALYSIS

A digital recording of each focus group was used to generate a verbatim transcript. Transcripts were then imported into qualitative data analysis software, NVivo 10, for coding and analysis. To establish dependability, multiple analysts coded the data.

We used pattern coding of the focus group transcripts to identify central ideas and properties in the data (Corbin & Strauss, 2015; Miles, Huberman, & Saldana, 2014). We employed a three-phase approach to guide data coding and analysis. In the first phase, we read through the field notes, institutional documents, and focus group data to synthesize the policy implementation processes at each institution. During the initial phase of open coding, we began with the coding framework from year one that included 202 codes.

Coding in phase two involved a subset of eight data files across participant types. During this process the coding team of five researchers engaged in a reliability-building process. Each researcher coded the four files individually. We then ran the Kappa coefficient function in NVivo 10, and met as a team to discuss and compare the coded text. Using our coding

framework established in year one of site visits, our goal was to identify new themes or remove themes that were no longer relevant for year two data.

Researchers also wrote analytic memos throughout the coding and analysis process. Written memos in this project were used to identify emergent themes in the data (Corbin & Strauss, 2015). These themes were used to create codes, including broad codes like *students* and more detailed codes like *student perceptions of faculty and staff*. We modified the coding framework from year one, adding, merging, or deleting codes, resulting in a total of 208 codes.

After we achieved inter-coder reliability, in phase three, members of the team used the revised framework to code the remaining files, and to re-code and analyze the data coded in the second phase. The entire coding team met weekly to share findings and discuss issues arising from data analysis.

Trustworthiness was established through data source triangulation (field notes, institutional documents, and focus groups), and peer debriefing with three researchers who acted as “devil’s advocates” in questioning the group’s interpretations (Patton, 2002). Member-checking is currently being conducted with administrators from the institutions we visited.

Section Two: Implementing Holistic Advising

In this section we present findings from analysis of data related to holistic advising practices. We first identify the features of holistic advising, discuss resources advisors identified to assist in the advising process, and then enumerate the implications of this advising process for FCS institutions and the students they serve.

DEFINITION OF HOLISTIC ADVISING

The term “holistic advising” describes an advising process that takes into consideration a student’s personal, professional, and academic situation during course selection (Grites, 2013; Heisserer & Parette, 2002). In contrast to other, more advisor-centered

methods of advising, such as “prescriptive advising” (Crookston, 1972), holistic advising is student-centered. Advisors provide individualized information and advice during the course selection process, but leave many of the decisions up to the students themselves.

FEATURES OF HOLISTIC ADVISING IN THE FCS

In light of SB1720, the advising process has become more complex. With so many decisions to consider (e.g., college-level versus developmental and one modality versus another), advisors must take into account more factors when recommending classes

to students. These considerations include: multiple measures of a student's past academic performance, personal and non-cognitive factors, and course-based factors. We present some of the benefits and challenges of using these additional considerations, as described to us by advisors in the FCS.

Multiple Measures of Academic Performance.

SB1720 stipulates that colleges can no longer require the Postsecondary Education Readiness Test (PERT, the DE placement test previously used throughout Florida), and to consider more than only standardized test scores— like, PERT, SAT, or ACT— when recommending coursework. The rationale for this change is that placement tests do not always give a complete picture of a student's skills and abilities. A few of the measures institutions reported using most frequently included: high school grade point average (GPA) and classes completed, work history, military experience, participation in extracurricular activities, and career interests. To this point, one advisor said, "it's been this push to look at students more holistically because some of the students who do opt out do succeed."

While this approach is more holistic, it also presents additional challenges, student self-reporting being one in particular. For instance, one advisor described advising sessions in this way:

The first thing is I always ask them do they have any test scores, 'cause what we're finding because we're not requiring it, they don't even bother to send in anything. And so a lot of times they have taken an SAT or ACT, so I'll at least have them pull those up and try and get some kind of baseline... In the absence of the test, then I'll start asking well, how did you do in high school, what types of grades did you get, and just basically going off

self-reporting more so, which for me, as an advisor, is a lot harder to go off self-reporting than to have some kind of a concrete test score.

As the advisor noted, without placement test scores, advisors must rely on students' self-reports of ability. Fortunately, when self-reports are combined with test scores (as applicable), high school transcripts, career interests, and other indicators of academic preparation, advisors can form a more complete picture of the student sitting across from them during an advising session.

Personal and Non-Cognitive Factors. In addition to discussing academic preparation, it is typical for advisors to ask students about their other commitments, including family and work. In doing so, advisors can start to get a sense of the time, energy, and resources students can optimally dedicate to their studies. One advisor explained:

And the other thing is also part of being a good academic advisor is listening to the student and asking a lot of questions besides just what's your major, what classes are you taking? And diving a little deeper into asking questions like "Are you tired? Do you have a job? What kind of job is it? Are you eating lunch? Are you hungry when you're in class?"

In addition to other commitments, some students find themselves in precarious situations that clearly impact academic success. For instance, an advisor reported that, "some are homeless. One of my students just this semester just got kicked out of her house." Another advisor described the challenge of working with a student aging out of the foster care system. Still another advisor recounted the story of a

student who was under federal investigation for drug charges while also enrolled in college. While these scenarios are unique to particular individuals, they highlight an important theme: that students enrolled at FCS institutions have much more than just school to consider. When determining which classes to recommend, advisors must include these circumstances and other personal factors.

Course-Based Characteristics. With colleges now offering DE classes in up to four different formats (i.e., compressed, co-requisite, contextualize, and modularized), advisors find themselves having to give more advice than ever. After considering a student's academic preparation and personal situation, advisors also help students weigh course-specific characteristics to determine for which course they are better suited. A few of the more important course-based characteristics include: the level of remediation, the modality, the day and time of the class, and the instructor. For example, one advisor shared the following story about helping a student choose a compressed, developmental math course:

I had someone just today that was two points away from college-level... It was a compressed course I recommended though because... they just need a little bit more honing in on what am I missing, as opposed to A to Z, I need all of this math.

Other advisors acknowledged that many students prefer to attend class only on Monday/Wednesday or Tuesday/Thursday to accommodate other commitments. Redesigned DE classes also vary in whether they count for three, four, six, or even eight credit hours. Depending on the other courses a student is taking, an advisor may be more inclined to recommend a three credit hour class than a six credit hour class.

ADVISING RESOURCES

In order to create these complex recommendations, many advisors have a toolkit from which to draw. While this toolkit is institution-specific, it often includes some combination of established academic plans, sample math and English assessments, and learning objectives from college-level classes, among other tools. These resources, particularly the academic assessments, can be eye-opening for students. For instance, one advisor explained that: "Our math person gave us some questions... Some of them [students] take that and they're like, 'Whoa.'" An advisor at another college reported a similar experience: "We have samples of the math and the English that we show them that if you're going to exempt yourself from the dev courses you need to be at this level... Sometimes it scares them."

Although placement tests are no longer required for exempt students, some advisors admit using test scores as another resource. One advisor explains optional placement tests to students in this way:

I'd like to say the placement test is for placement purposes. You're not passing or failing anything. We just don't wanna start you in something that's too easy for you that's wasting your time, or too hard for you that... you're not able to pass it, but you're gonna be unhappy at the end and not want to come back. So I mentioned that to try and make the placement test sound really useful.

Other advisors emphasized the fact that placement tests can open up more advanced options for students, depending on how students score. If a student scores high enough in math, for example, they are able to bypass intermediate algebra and enroll in other, more challenging courses. While not

a common outcome, it is a useful way for advisors to sell students on taking an optional test. An advisor observed that once students take the placement test, they commonly find that they are less prepared than they thought:

And I really try to sell the placement test as a really good positive... "If you take the placement test, you can score higher. You can get out of this class." And then when they take the placement test, then they see, "Oh, crap, I tested into prep math 1. Maybe I should really think about it." Or especially when they're taking the PERT test and they're like, "I have never seen any of this." Then hopefully that kind of acts as an impetus to really do some self-reflection.

Despite all of these resources, students are still free to make their own decisions regarding course registration. One advisor recounted an example of a student who should have enrolled in DE, but chose to ignore the resources provided to him, "We had that math test... the first year, but they – I had a student look at it and he said, 'It looks like Greek to me, but I don't care, I still want to go into that class.'" In order to ensure that students do not blame advisors later for their poor decisions, most advisors report speaking frankly with students about jumping unprepared into college-level coursework. Consequences of failure, developmental or gateway, commonly discussed by advisors include: low GPA, academic warning, and probation. One advisor explains to students the financial consequences of failure in this way:

They [students] don't wanna spend time and money on courses that aren't gonna count... I tell 'em, "You know what, it may not count, but it's less expensive to take this one course and be

successful than to get into a [college-level] course for the third time and have to pay the full cost of instruction."

In the wake of SB1720, many colleges now require that students sign a waiver. An advisor explained, "there's a form that you sign if you're a dev. ed. exempt student and I make it sound like that form is you saying that you've heard all the downside to this and you're still choosing to do this." Advisors hope that by emphasizing the downsides of opting in to college-level classes, underprepared students will take the decision making process more seriously.

IMPLICATIONS OF HOLISTIC ADVISING

The impact of this state-wide move to holistic advising is far reaching. In focus group sessions, advisors readily identified the following challenges and opportunities. On the one hand, holistic advising is beneficial because it opens the door for advisors and advisees to have more in depth conversations with one another. On the other hand, holistic advising requires additional time and training.

Advisors appreciate that the new, holistic advising system provides the opportunity for "conversations" with their advisees. In contrast to the "prescribed" exchanges many were used to, numerous advisors welcome the newfound chance to engage with students about their academic strengths, weaknesses, fears, and dreams. One advisor in particular reported:

Talking to the students and having those upfront conversations with the advisement, and really getting the students to pay attention to the reality of their skillset and making sure that they were onboard with what – you know, to have those conversations... was a positive [of SB1720], I would say.

Of course, these conversations take time. Not surprisingly, another result of a comprehensive holistic advising process is that advising sessions now last much longer than they used to. Whereas advising sessions used to take an average of 10 to 15 minutes, advisors reported that they now last between 30 minutes and one hour. One advisor explained: “Well, it [advising] doesn’t take 20 minutes anymore... It’s an hour, at least.”

Another advisor pointed out that the increased workload is due to the many choices available to students under SB1720:

The increase in options has made advising sessions considerably longer walking through all the different options and the pros and the cons and trying to personalize your – how would it work best for the way you learn and your financial situation and funding situation. So it has definitely had an impact on advising and the length of time it takes to talk to a student and the length of time you’re waiting in line to talk to a student.

Sessions also take longer because advisors share more than just course recommendations. Oftentimes, advisors are asked to speak with students about issues related to veteran’s affairs, financial aid, and residency, among others. In the words of one advisor, “We’re a one stop shop.”

Some colleges have tried to mediate the pressure of an increased workload by introducing group advising and online advising, with varying degrees of success. Other colleges have hired additional advisors to share the workload. Despite these efforts, advisors report that “it would be nice if we had more help, especially at peak times.”

Advisor training is required to do holistic advising well. Most FCS institutions have intentionally provided training for advisors, both prior to and following implementation of SB1720. At some colleges, advisors are now cross-trained to speak knowledgeably on DE and particular programs of study. Previously, on some campuses, students would have seen different advisors based on their placement test scores. Another college has focused their efforts on training advisors around alternate math pathways so that they can help non-STEM student bypass unnecessary roadblocks like intermediate algebra.

Literature suggests that holistic advising plays a crucial role in facilitating student success (Heisserer & Parette, 2002). Although holistic advising can be labor and training intensive, our focus group participants argued that it was a worthwhile investment. By spending dedicated one-on-one time together, advisors are able to sift through multiple measures of performance, personal and non-cognitive factors, and course-based characteristics to help students craft a course schedule that best fits their personal circumstances and education goals.

Section Three:

Influencing Student Choice

Students are now faced with myriad choices in selecting courses. In our first year of site visits we found that course scheduling and convenience are important considerations for FCS students (Hu et al, 2015). In this section, we identify several other influencers of how students make their choices about both DE and college-level coursework, including their sources of advice and financial considerations. Math anxiety also plays an important role in guiding student choice surround their course choices that can result in delay of the math course sequence.

SOURCES OF ADVICE

While academic advisors constitute one source of support for FCS students' decision-making, students also rely on several other sources of advice in order to guide their course decisions. Some students operate independently and plan their own academic program without relying on campus personnel for direction, while others strictly adhere to their advisor's recommendations without question.

Advisor & Other Recommendations. In contrast, another student noted a complete reliance on the recommendation of their advisor stating that "I just kind of pick whatever they tell me to pick, and whatever I think interests me." In addition to their advisors, some students also specifically named their mothers as a key source of advice:

Researcher: So when you guys are choosing a course, how do you make that decision? Who do you listen to?

Student: They [the advisors] pick it.

Student: My mom and my counselors.

Student: They [the advisors] pick it, and we see if that's what we want.

Researcher: Who's "they"?

Student: The advisors.

Students may also rely heavily on family, friends, or social media to decide which instructor's course to take. Several students at the institutions we visited identified relying on familial advice, maternal advice in particular. A student at another FCS institution also described her reliance on maternal advice:

Well, my mom currently is in college, she's about to graduate. Before I enrolled here, she gave me advice on how to pick my classes, and she told me what exactly to do. Until this day she still helps me out on picking my classes and what teacher to choose and so on and so forth.

Advisors also pointed out that students were often being directed away from developmental coursework by their parents who expressed concern that the courses would not count towards any credit towards their degree. One state college advisor noted that "...a lot of times it's from the parents too who are like, "Oh, he's not going to get credit toward it." Other advisors shared a similar sentiment in one of the focus groups:

Advisor One: Or, 'She's not gonna get credit towards it.' So if –

Advisor Two: Yes. I've had parents in my office that say – yeah.

Advisor One: Yeah. If we've gotta pay for it, we want them to get credit for it...

Self-Advising. In addition to guidance from advisors and family members, students also advise themselves. One student described self-advising with no contact from campus personnel, citing a concern that they may be coerced into taking courses that were not required or desired:

I'm just doing a general AA. I actually don't use the advisors at all...I really never go to the advisors because I feel like they're gonna try to push me into classes that I either don't want to take, or I don't need to take.

Self-advising appears to accompany a level of self-awareness and self-examination that is not present in students who rely solely on the advice of their advisors. One male student stated:

So I'm just doing my research, picking out the classes, and knowing how much time I want to spend at [institution], and then I also look at do I want to take the science and the math at the same time, or do I want to do all of the hard stuff now while I'm excited about college so I can get through it and do all the easy stuff at the end, which is what I chose to do...But yeah, so just like really looking at myself and my strengths and my weaknesses, and looking at my goals and what I need to do in working it.

Online Ratings. Combining advisor or peer recommendations with online professor ratings is also a popular approach that several students described:

No, I pick...we'll see like what they [the advisors] advise us for, but then to me, it matters who's instructing it. So I really rely on Rate My Professor. That's how – that's the only way I would do it.

So...my advisor, and we basically mapped it out also. And I guess I just chose my classes to...fill my schedule also and see, just to make sure it wasn't gonna be too hard, but yeah. And then obviously I use Rate My Professor when choosing classes...

Well, most of the students here they use a website that is called Rate My Professor, and what we do is look for the name of the teacher and see what reviews they have from previous classes from other students. All those testimonies are anonymous, so most people rely on that, and also they also look for someone who took the class before and ask them, 'Was this professor good? Was this class worth it to take it?'

...I use Rate My Professor to pick which of those classes I'm gonna take. I will not pick a professor unless I check them out on Rate My Professor first.

This approach to making course choices shows students' trust of technology, social media, and peer reviews in their decision making process. Whether this approach is limited to traditional aged millennial students is worth further research and examination but was not clear in our data.

Transfer Students. Students who intend to transfer from a FCS institution to a four-year university often rely on information from the four-year institution as a guide in course selection. One student observed:

So I took it upon myself to say, hey, I'm just gonna pick out my own classes. And I really – I rely on [four year institution's] advising and the information on the website because that's where I want to go to know what classes I need to take, and the GPA and whatnot. And I kind of just kind of like schedule all of my classes for my time to be here when I first got here in the summer of 2014. So like I knew I was gonna take next spring like a year ago or a year and a half ago.

Interestingly, potential transfer students may also use their peers who have already transferred to advise them on what courses to take to facilitate a smooth transfer process. Another student explained:

And then I ask my teammates at [name of university] that's been here already, "What did you take this year that's gonna get you there? Is the credits gonna transfer to this school?" 'Cause if it's not, then, I mean, it's a waste of time. So that's mainly what I be trying to figure out. 'Cause I don't wanna get to end and thinking that I'm on course, on the right track, and then end up having to take a step back.

Students in our study who have a clear intent to complete an AA in order to transfer to a specific university appear to be very independent, displaying agency in sourcing and acting on information. One student shared his plans of transferring to a four-year institution and how he chose his courses:

So for me, how I pick those, because for the science classes with a lab, there's all kinds of different ones you can pick from, but I know that I'm going to be transferring to [four year institution] for their exercise science program.

So I really just base my classes that I take here off of the prerequisites I need to get into that course, and there's a couple fill in here and there, so I just kinda go with whatever suits my interest more. For the science classes, I'm gonna take anatomy because that's more like what I'm gonna do in the future, but I really never go to the advisors because I feel like they're gonna try to push me into classes that I either don't want to take, or I don't need to take. So I pretty much just go off of the USF prerequisites...

FINANCIAL CONSIDERATIONS

Students on Scholarship. Though the legislation sought to give students more choice in whether and/or how they take developmental coursework, some student populations have very little choice when selecting their courses. Students on scholarship are included in this category. At one state college in the study, students who were awarded a scholarship funded by the college and the local community complete coursework as a cohort, and class schedules in their first year especially are pre-defined. Students are enrolled in a full load of college-level classes and that are designed to keep them on track to complete their AA degree and transfer to a four-year state university in two years. In order to maintain this timeline, there is little room for deviation from the scheduled coursework. One student noted, "other than the fact that we have to kind of have a regimen schedule, I'd say that it's good. But we can't really pick our classes..."

Waste/Worth the Investment. Several advisors and faculty shared the view that DE is regarded as a waste of money by students. One faculty member said, "You know, it's a money issue with the students a lot, too, and they have high hopes and they think they can get in the gateway classes despite what you

advise them to do.” An advisor explained the issue of receiving college credit as a deciding factor for some students. He said:

I think the driving part is they don’t receive college credit for it. They don’t wanna spend time and money on courses that aren’t gonna count when, you know – ‘cause I tell ‘em, you know what, it may not count, but it’s less expensive to take this one course and be successful than to get into a course for the third time and have to pay the full cost of instruction.

Similarly, an advisor stressed the conflict sometimes created by students not receiving college credit for DE course and students’ own expected timeline for completion.

Which sometimes that falls on deaf ears ‘cause it’s really about the money. Yeah, and it’s, like, what – I’m payin’ for a class and I’m not gonna earn any college credit for it. I need to get outta here in two years. What do you mean? So yeah, they have, like, a time schedule. We just kinda, well, it’s not the 13th grade. You’re on a schedule, you’re on your own timeframe, so – but yeah.

The belief that DE was worth the extra cost because of the preparation for more advanced academic work was decidedly less prevalent but one student did note DE’s worth the money to her:

I thought I was gonna fail comp, but I went through that class and Professor [name redacted for confidentiality] was awesome. And she basically brought home all the questions that I had about writing and made it really easy with her technique and things like that. So I found it really

beneficial for me, but I mean the \$300.00 some odd dollars that you have to pay for a credit that’s not gonna count towards your degree or anything, yeah, it’s not very satisfying but in a sense that it will prepare you for later, I guess it’s like a double edged sword.

Parental Financial Support. Enrolling in developmental coursework may also cost some students their parent’s financial support. One student shared the conditions her father placed on his financial support of her college education that did not include any DE coursework:

Student: And then I’m also taking math and liberal arts one. They told me to take developmental, whatever that word is, math, but since I graduated high school, I opted out of it because my dad always said if you take one, you’re not gonna do good in the rest of your college years, and I’m not gonna pay for your college. And so like I’m relying on my dad to like pay for the rest of my college, so it’s like I’m still doing what he says.

Moderator: So he told you if you take that class, he wouldn’t pay for it?

Student: Yeah, he wouldn’t pay for all of my college at all if I ever take one of those classes.

MATH ANXIETY/OVERCONFIDENCE IN ENGLISH

Math is a ‘use it or lose it’ skill and math anxiety may be contributing to students delaying math classes to the end of their academic program often to their own detriment. One developmental math student when asked how they decided to delay taking math replied,

Because math isn't really my strong suit, I am not that good at math. I don't like math. I can't stand it...Now I have to take math because my degree orders me to take college algebra and I need dev math 1& 2, which I'm going to take now to move on to college algebra.

A faculty member corroborated the idea that developmental math student often let their anxiety guide their course selection and contribute to delaying their math sequence noting that:

And not only that, for those of us who are familiar with developmental students, we understand it's not just content; it's also issues like anxiety. So someone may pass a course, but may not feel confident enough to take the second course in the sequence since they're thinking I prayed a lot, and I passed a course. So now am I ready for the next course? And that might be a reason why such as student might wait also.

An advisor at another FCS institution also pointed out that students often delay their math classes until the end of their academic program:

But usually a lot of these students, they come to me when they've taken all these courses, and the math they've left for last. So they kind of reach me at some point, and I can't help but advise them there, not only because of the kind of major they have, but also because, you know, I mean I can see that they have those problems in math.

The data suggest that while it is important that students acquire content knowledge, developing self-efficacy is also critical in ensuring that they move through developmental math sequence promptly.

However, in contrast it appears that students may be overconfident in their English skills. In one of the faculty focus groups a participant shared that students "think they're super people that they don't need this extra help. They've got it under control...They've been speaking English for years, they don't need help with English." One advisor from another state college also supported this view observing that students are more likely reluctant to opt out of developmental math "... but they all feel like well, grammar-wise, they'll take their chances on it" choosing to enroll directly into gateway English courses.

An advisor described a scenario that perfectly captures the phenomenon of math anxiety versus overconfidence in English where a student who missed placing into college-level math by one point opted to take developmental math, but chose to enroll in gateway English even though they had previously attempted and failed developmental English:

They were looking into opting out. I don't remember – test scores had expired or something. And when I looked up their information, you know, they were a little off on, I think, the reading and/or writing to go into college-level English, but they missed the math by one point and, you know, we were having the discussion of where they placed, what would be involved in the course, and I was expecting them to want to opt out of the math because they missed it by one point, but they opted to stay in the math and then go into ENC 1101 for English, even though those placements – and I think they had attempted either English one before or one of the developmental reading and writing courses or were gonna be retaking them. But they wanted to jump out of that and over to English and do the math. So they said math is their weakest subject.

Section Four: Instructional Modalities for Remediation

In this section, we present findings from analysis of data related to instructional modalities used for remediation. First, we consider overall themes for all of the instructional strategies and then highlight issues specific to each modality. For each modality, we define the modality according to SB1720, enumerate features of the modality, highlight benefits and challenges associated with the modality, and discuss course design considerations as identified by our focus group participants.

COURSE REDESIGN

In our analysis, two overall themes emerged related to design of the DE instructional modalities, including variations in the course redesign process and confusion over the definitions of the modalities.

Variation in Course Redesign Processes. Campus personnel at FCS institutions reported engaging in a variety of DE course redesign processes representing a continuum ranging from less intentional to comprehensive. An administrator at one FCS institution that adopted a very comprehensive instructional redesign explained their highly collaborative process:

We did conduct extensive research, produced a white paper, to gather a sense of what some of the current themes, patterns, trends in developmental education more at the time. What did it mean to compress? What did it mean to accelerate? What did it mean to modularize? What did it mean to contextualize? And in addition to the research and data informed elements of our methodology. I would say that we take a very collegial and every collaborative approach. We knew that we had a mandate, a directive...This is what we're working with, now how do we do it as best as we possibly can? We worked with

multiple discipline councils in the gen-ed area, as well as in developmental education. We worked with our data colleagues and experts. We worked with student affairs. We tried to be as broad based as we possibly could by getting out to the groups, getting out to faculty senate, and soliciting input, and really taking the time to think through, gather input, but ultimately make those decisions in terms of how to modify the curriculum, the instructional methodologies, and craft the plan.

Conversely, some institutions were less intentional in their redesign efforts. Several campus administrators observed that modularized and compressed options were the most frequently adopted in the FCS because they were easiest to implement on a short timeline. An administrator remarked:

For the contextualized and the co-requisite there was going to be a lot more work that it's going to take and was going to be a little late for the implementation. So we decided to go with the modularized and compressed.

Campus personnel regarded modularized instruction as less labor intensive to create because of commercially available computerized curriculum. The redesign process for compressed instruction was also regarded as less exhaustive because it often involved eliminating the least essential course content.

Confusion over Definitions. Campus personnel and students reported significant confusion about the definitions of each of the instructional strategies. A faculty member described her concern about multiple definitions used at different institutions:

We did a lit review that's included in our plan. And if you look at some of the organizations that talk about co-requisite models, for example, it's very different from what the research says a co-requisite model is. So I agree with you that one the problems we're having not only in the state, but other colleges around the country that are doing some of what we're doing – not all of it, but some of these pieces, is their definition of – we're not all on the same page.

Similarly, an administrator at another institution explained the confusion about definitions, particularly for co-requisite instruction, following the passage of SB1720:

There were some questions, a lot of questions relating to the modalities of developmental education and the definitions, and in particular the – I think that while we didn't have a whole lot of conversation in trainings because there were a lot more, I think, more confusing parts, but on the ground at the institutions really trying to tease out what that co-requisite meant.

A faculty member, who was tasked with writing DE curriculum, expressed a similar sentiment:

...I guess the information that we get has become more focused over time. Like in the beginning, the modalities didn't really even have definitions. So we created stuff thinking – using our definitions or what we thought were the definitions with some guidance. And I was on a webinar about two weeks ago, and it was from the Florida College System folks, and they flashed up a PowerPoint slide that had actual definitions of the modalities....And I was like, well, there are definitions now two years in, and we've designed all this stuff [developmental education curriculum]. And, oh, by the way, none of the stuff

that we have actually fits those definitions. But I'm sorry, we're not redesigning it all again. We're done here, so stuff like that. And I don't think they [Division of Florida Colleges staff] meant to be loose and obtuse with guidance, I just think they didn't know what was going on either.

Therefore, because of the lack of clear definitions from the outset, there was not a uniform adoption of specific instructional strategies across all institutions. A faculty member explained:

And I said, "You know, you've got it listed as modular and co-requisite, but there's 28 different definitions of what modular is, what accelerated is, and what co-req is....I don't think any one of us is doing it the same way.

Nonetheless, the lack of clear definitions for the instructional strategies may have allowed institutions to innovate and create solutions that worked with their particular student populations. We now consider each of the four instructional modalities in greater detail.

CO-REQUISITE INSTRUCTION

Co-requisite instruction, according to SB1720, is "instruction or tutoring that supplements credit instruction while a student is concurrently enrolled in a credit-bearing course" (p. 28). Co-requisite instruction may involve concurrent enrollment in developmental and gateway courses, or supplementing a gateway course with additional tutoring. In both cases, the additional assistance is intended to improve academic outcomes in the *gateway* course.

When co-requisite instruction is designed effectively, it is intended not merely to supplement college-level instruction, but to be integrated with gateway courses in ways that reinforce specific academic skills that will help students succeed. An administrator described co-requisite instruction as "co-requisite

support...that is infused within the curriculum for enhanced, we call it enhanced learning support.”

Similarly, another administrator described the philosophy of co-requisite instruction:

Our co-requisite model has them enrolling in MAT 0029 and MGF 1106 at the same time. But they're not – it's hard to explain – they're not two different courses. It's basically that the student is enrolled in six hours of math during that week, and so the MAT 00 – it's not like, okay, all right, students, open your books. We're doing MAT 0029 now. Okay, now put them away. Now we're gonna do MGF 1106.

Features of Co-requisite Instruction. Institutions have identified several features of co-requisite instruction, including:

- Provides tutoring or an additional course to supplement college-level instruction while a student is concurrently enrolled in a credit-bearing course.
- Accelerates the developmental education sequence.
- May be especially beneficial in math, which can present significant barriers to earning a credential or transferring to a four-year institution for academically underprepared students.
- Co-requisite courses should be linked so that students earn the same course grade in both segments of the class.

We now describe some of the benefits of co-requisite instruction for both students and institutions.

Benefits. One of the primary benefits of co-requisite courses is that they can accelerate the often lengthy DE course sequence. An administrator commented that co-requisite instruction “creates an acceleration

mechanism and it provides them additional time to deal with the material.” Therefore, academically underprepared students can enroll in college-level coursework and progress towards earning credentials or transferring to a four-year institution more quickly than the traditional DE to gateway course sequence. An administrator remarked that the co-requisite instructional strategy is:

One model that's holding promise for both the exempt and the non-exempt students, because at the end of the day it's a wash in terms of the number of credits that they're taking, and it allows them to complete that math in first semester.

Because math can be a significant barrier to success for developmental students, co-requisite instruction may be especially beneficial in accelerating the math sequence in community colleges. At the FCS institutions we visited where co-requisite instruction was offered, math was the most frequent course offered in this modality.

When co-requisite instruction offers the DE material as a second class instead of merely additional tutoring, it provides the most underprepared students with additional class time to focus on the skills they lack. An administrator describes the benefits of providing students with extra time to focus on academic skills, “It's really a just-in-time sort of remediation, but that extended timeframe allows the students to really develop at the same time that they're completing the MGF 1106.”

Co-requisite instruction may be especially effective with students who are nearly ready for college-level coursework. An administrator describes how this works at her institution:

What the faculty did do was develop a co-requisite course for ENC 1101, and it's not a required

co-requisite, but similar to the math faculty, they are now providing first week diagnostics to the students, and if it looks like a student is gonna require some additional support in writing or reading comprehension then they will recommend that they enroll in this co-requisite course. And they structured it so that the co-requisite course I think is either a 14 or a 12-week course, so it starts after the 16-week course has already begun, to give the students an opportunity to not miss any classes at the beginning.

In this case, students who realize they need additional academic support to succeed in a college-level course are able to get extra assistance after the class has started.

Co-requisite instruction can also be effective when combined with math pathways that offer alternatives to the algebra track. An administrator explains:

This is our Math to Stats Pathway, and we're really trying to encourage students who are not on an algebra track, whether or not they're exempt, to enroll in this co-requisite course. So even for the exempt students we're recommending it.

This alternate math pathway can be especially beneficial for developmental math students because algebra courses traditionally have high failure rates. The same administrator continues:

Math, the co-requisite model that I just described is one of them [alternate math pathways], and that, as I said, more and more has become a point of focus in the advisement area, particularly to really try and identify up front those students who do not need algebra and putting them on this track, because we're starting to see a lot of success with them. So that one is one that we've worked on quite a bit. The pass rates in algebra,

just in general and traditional at the institution, when you look at what we consider our high-risk courses, which are courses where less than 60 percent of the students pass, there's ten of them on that list, and the last time I looked at it, nine of them were mathematics courses. So it's an issue for the students, and so if they don't need to do the algebra track and there is a way of allowing them to develop quantitative reasoning in a different format, then we should really pursue that. And this [co-requisite instruction] seems to be a promising area, so we've been focusing on that.

Data from one institution that has adopted this model suggests that co-requisite instruction coupled with the alternate math to stats pathway, has improved student success rates. An administrator describes the improvement in pass rate noting, "So we've had some success there. It [co-requisite instruction] seems to have the highest pass rates of any of our math modalities, so that one has a lot of promise."

While co-requisite instruction holds great promise for improved student success, there are also several challenges related to this course modality.

Challenges. While co-requisite instruction has proven effective at some institutions, several challenges remain. The different versions of co-requisite instruction at different campuses present challenges in isolating what features of the modality are most effective. For instance, is the additional credit hours and contact hours with instructors, the influence of college-level instructors, or in the case of math, alternate math to stats pathway most effective?

Perhaps also due to the initial lack of clarity about the definition of co-requisite instruction, students were not always eager to enroll in co-requisite courses. An administrator described their reluctance:

It was a little bit of a challenge because if a student doesn't have the placement criteria to get in [MAT]1106 directly here today at [institution], they have to take a co-requisite [MAT]29-1106, and that's a difficult course to explain.

At another institution, an administrator described falling enrollments in co-requisite courses:

But we had 20-something students the first time we ran it [the co-requisite course] in the fall of 2014, and then I did the course myself in the spring of 2015, and we had about seven. And then we did it again in the fall with about maybe nine. End of semester, it has seven again. So it's a challenge to get the course to make.

Another administrator described why she believed co-requisite courses may have had lower enrollments:

We've not gained a lot of traction with that course [co-requisite class]. We haven't been able to gather a lot of student interest of course taking, but from a curricular and instructional point of view, it makes a lot of sense. MAT 1033 at this institution is a four-credit class, so there really wasn't a lot of value anyhow in having a co-requisite addition that gives a student extra hours, and could ultimately ding against their excess hour concerns upon university transfer.

Thus, while higher credit hour co-requisite courses offer the benefit of extra class time, the additional credits may result in students earning excess credit hours. In addition, an administrator pointed out that co-requisite courses require experienced advisors who understand co-requisite instruction sufficiently to explain the modality effectively to students:

One thing that I want to point out about the co-requisite course and the modularized [MAT]56

course...That's gonna take, you know, a period of time, years, to get to where an advisor would know how to discuss the modularized course, would know how to discuss the co-requisite course. It's not getting discussed enough to where the students know of its existence.

At one institution, a faculty member explained that the co-requisite option was offered as separate courses with separate course grades, noting, "And so we believe that there are some inherent challenges to the co-requisite, especially if paired with the modularized course because you can pass one, but not the other."

Offering co-requisite courses as separate courses with separate grades presents challenges when students must repeat only one of the courses in order to earn a passing grade. Our findings suggest that the benefits of co-requisite instruction far outweigh the challenges, and lead to questions for further study.

Co-requisite Course Design Considerations. Since the almost two years since implementation began, FCS institutions have identified several considerations for co-requisite course design.

- Well-designed co-requisite instruction integrates additional support with college-level coursework in ways that reinforce specific academic skills that help students succeed.
- Clear definitions of co-requisite instruction assist institutions in designing instruction that is consistent across colleges yet flexible enough to meet specific campus needs.
- Co-requisite instruction can be staggered to begin after a college-level course has started for students whose academic deficits are identified during the semester.

- Co-requisite instruction can be beneficial when combined with alternate math to stats pathways for algebra because algebra courses traditionally have high failure rates.
- Co-requisite instruction that involves concurrent enrollment in developmental and gateway courses may be best suited to students who are the most academically underprepared because these courses provide more class time for students to focus on the academic skills they lack.
- Co-requisite instruction that provides supplemental tutoring can be especially beneficial for students who are nearly college-ready.

MODULARIZED INSTRUCTION

SB1720 defines modularized instruction as “instruction that is customized and targeted to address specific skills gaps” (p. 27). While the legislation does not provide many details or requirements, FCS institutions tend to offer modularized coursework in similar ways. Classes often begin with a diagnostic assessment to identify the areas in which students are strong and weak in a particular subject. Then, computer software is utilized to help students address their specific knowledge gaps and prepare for college-level coursework. One advisor we spoke with described the modularized courses offered by her college in this way:

The way it’s put together is that students go to a particular computer lab or classroom set up with computers, and then there are certain sections, certain areas that they dedicate themselves to working on. Then when they fulfill that, then they pass the course.

Features of Modularized Instruction. Campus personnel have identified three main features of modularized instruction, including:

- Modularized courses rely heavily on programs like McGraw Hill’s Assessment and Learning in Knowledge Spaces (ALEKS) and Pearson’s MyMathLab and MyWritingLab.
- Modularized instruction can allow for “early exit.” When students successfully pass all of their assigned modules, they are considered done with the course and are allowed to move on to other, more challenging courses in the sequence. In other cases, students remain enrolled in their developmental course for the entire semester, but are allowed to work ahead in order to prepare for the next math or English course in the sequence.
- Two or more modalities can be combined within one course. At one institution, for example, modularized courses also involved co-requisite features.

We now identify some of the benefits and challenges of modularized instruction for students and institutions.

Benefits. The most obvious benefit of modularized instruction is that courses are presented as a collection of modules. By completing the diagnostic assessment, students can then receive personalized instruction on the course material that addresses the gaps in their skill set. In other words, students only spend time on subject areas in which they are weak. One faculty member pointed out that this tactic especially helps those who are the most underprepared:

So I assumed what was going on in education [with SB1720] was they were drawing a line and saying the ones close to this line and up deserve an education, and the ones below that go to vocational. You shouldn’t be here, nor do we want to pay for you. And I felt that was very judgmental and unfair. So we decided... to do modules. Because, see, at least with the modules, you could start wherever you fell. If you were in

basic math, or in elementary, and you could work to the skill level needed, and you could actually target the objectives and say, okay, this student is weak on this set of objectives.

Another commonly cited benefit to modularized instruction was that it gives underprepared students adequate time to catch up with their peers. SB1720 places a heavy emphasis on acceleration of DE coursework. As such, compressed instruction has become common at FCS institutions. The trouble is that the pace of compressed instruction is often unmanageable for many students. Modularized courses are unique, in that they give students the ability to work at their own pace. An advisor at one college explained,

[We're] offering a full semester modular because the fast track just doesn't seem to work for students that are so low in their math... I used to hear students when they were in the math classes who when they were the full semester, they said, "They go too fast. They go too fast." So then you give them half the time. So this [modularized class]... [MAT] 157, at least it's a full semester. Now, some students don't feel comfortable working on the computer... but the length of the program is better.

Not only does modularized instruction accommodate those who need more time, but also those who need less time. As previously noted, some colleges offer the option of "early exit" and to others the chance to work ahead on course material from other classes. These features are beneficial because they give students with just a few knowledge gaps the chance to progress more quickly. One administrator explained the strengths of early exit in this way:

It gives them the advantage that if they can get through the modules more rapidly... Not only

can they learn the developmental mathematics content, but when they get to the point where they've mastered the modules and the developmental mathematics content, they can actually move in and begin working on some intermediate algebra content. That could... give them a big head start because intermediate algebra is our gateway class, and it is a very big challenge for us. It can give the students in the developmental mathematics a good head start on that. There are some students who will make it through all of the modules in the MAT 0157, and begin working on the intermediate algebra content. And if they have several weeks to spend on that before the end of the course, they can actually retest and test out of the intermediate algebra course. And a few students will move directly into the college algebra.

Challenges. While self-paced instruction is perceived to be a strength of modularized courses, it can create challenges. Faculty and staff expressed great frustration at keeping students on track in modularized courses. One administrator explained:

But the completely do-it-on-your-own-pace – like what we do is we said, "Well, you should be done with unit one on January 31st, and you should be done with unit two on February 28th. But if you're not, you can keep working. These are just sort of guidelines that, if you wanna be finished by the end of the semester, this is where you should be." Well, they were not.

Even more difficult was the challenge of teaching students developmental material in a computerized environment. Focus group participants commonly felt that underprepared students needed more, rather than less, individualized help from instructors than their peers. An administrator at one college pointed out, "Obviously they were in there [a developmental

course] because math was not their strong point. So, for them to get their complete instruction from watching the computer did not work.” To this point, an advisor at another college said:

I’ve gotten more than one amount of feedback saying ‘The computer doesn’t work for me...’ For some of these students this isn’t a refresher. This is information they’re being taught because they never had that level of math in high school. And so now it’s being taught on a computer and even though the teacher’s there to answer questions, since it’s not review these aren’t questions. This is ‘Teach me, I need to learn this.’

In addition to struggling with course material, many students also have issues with access to and comfort with using computers. Faculty members at one college were particularly concerned about the disproportionate, negative impact of modularized instruction on low-income, racially and ethnically diverse students, and veterans. One faculty member lamented:

In order to make it modularized, it has to be on a computer. What we’re now doing is disenfranchising a whole group of people who don’t have the Internet access. Even though they can come do the work in class time on the computer..., it oftentimes requires work outside of class. And if they are a commuter student at a community college, they do that drive, come to class, turn off, leave campus, and go back. But when they go back home, they don’t have the ability to do their homework. They don’t have the ability to prepare themselves for the next test because their only access to the computer is when they’re in the class. But we’re forcing them into that situation... And so I don’t think that was an expected consequence.

These perspectives are not limited to campus personnel. Students commonly reported struggling with

the technology aspect of their modularized courses, especially when it came to mathematics. For instance, one student reflected:

What killed me the most was sitting in that class and learning math on a computer... I just don’t think those two things mix because the whole time I was sitting there it’s like, you know, you have this one little video clip while you’re in the classroom, this is how you do the problem. And you just have this one question up there. You can constantly get it wrong, and it’ll tell you, but it’s not like a physical teacher. And it’s only one professor in the class... When I was there, it was at least 30 kids in that one class, and that one professor could not go to every student to see that they’re doing. So that’s why I [was] honestly constantly failing that prep math course... I’d rather do math on a board and a piece of paper than actually on a computer because I don’t – any other subject but math because it’s a little bit complicated, and I don’t think you get enough attention... I could’ve passed that course if I had somebody over me saying, ‘This is what you – this is wrong, this is how you do it, this is how you do that.’ I didn’t get that from a computer, so that was my big issue.

This digital divide has resulted in an increased workload for support staff. Because some students lack computer skills, they require more one-on-one assistance from tutors and learning lab staff. One faculty member explained:

The skills that they don’t have with the computer, then just come right here to the learning centers. And we have one full-time person for computers, and a few part-time people. They support, we measured it out one time, like 46 different classes. I mean they’re not just doing CGS 1070 [computer basics course], they’re supporting the fact that

somebody in the biology class is doing a scatter plot, or something like that. Similarly, ALEKS, I mean we have to figure out every single thing, and they become these very nuanced programs you use in MyWritingLab, or MyIT lab, or ALEKS. You need to figure those out on top of it. That's more work you have to do as instructional support.

Modularized Course Design Considerations. Having considered some of the benefits and challenges associated with modularized instruction, we now examine course design considerations.

- When implementing modularized instruction, colleges have the option of using different kinds of software (e.g., ALEKS and MyLab). Faculty and staff must determine which program(s) best suit the educational needs of their particular student population.
- Modularized instruction isn't successful at all institutions. Several FCS institutions reported trying modularized instruction for a time and then abandoning it for another modality. Others report that it is their most successful redesigned class.
- Modularized instruction may be better suited for particular subjects or particular groups of students (e.g., those who only need a small amount of remediation in preparation for college-level work).

COMPRESSED INSTRUCTION

Compressed instruction, according to SB1720, accelerates student progress through the developmental sequence to college-level coursework. Compressed instruction involves fast-tracked developmental courses typically eight weeks long that allow students to complete two three-credit DE courses in a typical 16-week semester.

Compressed instruction is designed to progress students through the developmental course sequence more quickly to help them avoid the "DE quagmire."

This DE dilemma was a major impetus for policymakers to legislate DE reform according to one faculty member in the study:

I think the intent, maybe, of the beginning process of the legislation was to do something about the exceedingly high failure rate of students who began college in dev ed ...And the high number of people who started in dev ed never completed. So let's do something to help that. I think the idea of the compressed courses to make a student able not to have to be in dev ed for quite so long, like a whole year without ever earning credits.

Features of Compressed Instruction. Institutions have identified several features of compressed instruction, including:

- Allows students to accelerate through the DE sequence and begin earning college credits sooner
- May be especially beneficial for students who just need a refresher
- Well-suited to students close to college-ready who are highly motivated
- Not ideal for students who need extra support and time, or students who have limited technical access or ability.
- Sequential compressed courses can be taught by the same faculty member for continuity of instruction

We now describe some of the benefits of compressed instruction for students and institutions.

Benefits. The compressed modality option offers students the opportunity to accelerate their DE coursework and appears to be particularly popular for reading and writing courses. At one of the FCS institutions, an administrator remarked on similar student outcomes before and after the implementation of SB1720:

Accelerated is the predominant modality that students choose for college prep reading and writing, and they'll typically do it in the same semester...and the IR folks can confirm this later, but we didn't see any significant drops or increases in student success in those courses pre- and post-SB1720. We already had a really robust accelerated program in college prep reading and writing.

One institution in the study reported such a significant difference in the success rate of their combined compressed math course that allows student to take both levels one and two of DE in one semester that they have decided to discontinue offering the first level of developmental math:

Actually, we launched that at all the campuses but on a pilot basis. We wanted to see what the success rate of that was, and basically that's a combined developmental math class where students could satisfy the developmental math requirements in one semester. And over time, we've noticed that success rates of that combined course actually was higher than the singleton courses, the Developmental Math 1 and the Developmental Math 2. And so because of that success we've been tracking it over the last few semesters. In the fall, that combined course is going to be offered more and we're actually not going...to offer the Developmental Math 1 course any longer.

Another faculty member remarked that because the compressed course was offered for two hour class periods, students appreciated the extra time to delve into course content:

One of the positives of that [the compressed course] is that we have a more concentrated period of time in one class. Like, my class yesterday was 50 minutes. If it's a Monday-Wednesday-Friday class. They're two hours long, and oddly enough, the

students stay with it and they're not packing up at the end of – for a 50-minute class, they're not packing up at 40 minutes after the hour.

For students prepared for the intensity and pace of compressed coursework, this modality can be ideal for quickly moving on to credit-bearing coursework.

Challenges. While compressed instruction can be a good fit for some students, it also presents several challenges. Financial aid continues to be an issue for both institutions and students. More than one faculty member in the study pointed out that due to the accelerated nature of the course, if students are not successful in their DE course in the first half of the semester then they are unable to enroll in another course for the latter half of the full semester, which may have implications for financial aid:

... they can load their schedule with this Fall A, Fall B, and if something goes wrong Fall A, they're just – it's all messed up 'cause of financial aid and because of pre-reqs and technicalities that they can't foresee and they're just so confusing, even for us.

The other thing, too, is that some students would say, "Okay, do I want to take a class for eight weeks or 16? Well, duh, let me take in eight and get it over with." You know, they do that. And then they find out they really can't make it eight, or like you said, life happens in the eight weeks. What happens is we can't say to them, well, no worries, just repeat the course, and you'll get it in 16. You do get the 26. But what happens is they have to pay for it again. Their financial aid won't cover it.

The compressed schedule also means less total instruction time over the course of the entire semester. One faculty member reported feeling conflicted about being able to cover the material adequately in the allotted time for her compressed DE course:

The strength, I think, is that I can keep the students' attention because it is such a short amount of time. So I feel that that is a benefit. However, I think an obvious drawback is that we have a very short amount of time, and so then I feel as though – as proactive as I always try to be every semester, it feels like those last couple of weeks we are – I mean, I'm in it right now, so I feel like we are just struggling to make sure we cover everything in the pacing schedule – and not just cover it. ... not just cover it, but cover it well so I'm not just checking the box, you know, and I think I'm being successful, but it doesn't feel good. So the students are with me.

The compressed modality along with modularized options are the most popular DE modalities offered at FCS institutions. However both faculty and administrators were quick to point out that compressed instruction is often not a good fit for some student populations, including older, returning students, veterans, students with disabilities, and "math-phobes." An advisor shared that one adult returning student had attempted a compressed DE course twice without success:

I think one of the areas where a big challenge is our older students and knowing how to support them. And this older gentleman was really – I think he was on his third attempt, and in fact, I was helping him with his third attempt petition to get the fees dropped.

Concerns about the mismatch between compressed coursework and students who have math anxiety or learning disabilities was also highlighted by campus personnel. One advisor observed:

... any student that was at-risk mathematically, has now been even disenfranchised more for the reasons that I've already mentioned. If I need additional assistance. If I'm a disability student who

needs extended time, and now you're telling me you're only gonna give me the developmental math that I need in a shortened timeframe, or I have to do it in a modality with which I'm not comfortable.

Often the students who need the most support are left with a difficult choice. Those who do not want computer-assisted instruction are left with the option of face to face instruction at an accelerated pace. Neither choice may be ideal. One advisor noted her concern and also highlighted that this issue particularly affected student veterans at her institution:

But we're forcing them into that situation, unless we tell them, well, if you don't like the computer-based modularized version, you can get a traditional lecture, but now you're gonna have to do it in a compacted amount of time. So now I need help, [laughter] but I have to do twice as much in the amount of time that I would have normally been able to take for a course.

And so I have a specific group of students in particular, my veterans that come in, that are really, really struggling, who are in the developmental courses. But because we've been forced to teach them in particular types of modalities, they're still struggling in the developmental courses because they can't get what it is that they need from that as well.

As a result there has been pushback related to compressed courses from some FCS students. One faculty member noted:

We have a lot of students that truly want the dev ed but they don't want the accelerated and so they're pushing back, and time and time again they're saying, "Why can't I just take it over the entire semester? Why am I being forced to compress it?"

Having considered some of the benefits and challenges associated with compressed instruction, we now examine course design considerations.

Compressed Course Design Considerations. FCS institutions have identified several considerations for compressed course design:

- Diagnostics to assess student readiness for compressed coursework can help identify students nearly ready for college-level work who may succeed in compressed courses.
- One size does not fit all. Older, returning students who have been out of the college environment may not be ideally suited for compressed coursework.
- While compressed and modularized courses can be combined, some students appreciate having the option of taking a compressed course in a face-to-face format.
- Sequential compressed courses can be taught by the same instructor for greater continuity.

CONTEXTUALIZED INSTRUCTION

Contextualized instruction, according to SB1720, is developmental instruction related to meta-majors. An administrator explained, for instance, that “the contextualized option...might be math for engineers or math for x-ray techs.” As the least frequently adopted modality, campus personnel had the least experience with this instructional strategy. Consequently, an administrator remarked that “we haven’t had the in-depth conversation that we’d like to see with contextualized.”

Features of Contextualized Instruction. Campus personnel have identified three main features of contextualized instruction, including:

- Contextualized instruction is developmental curriculum that is contextualized within educational content for specific academic majors.

- Contextualized instruction is typically offered in a full-semester format.
- Contextualized instruction was the least commonly adopted of the four instructional modalities in the FCS. Therefore, it has been the least explored of the instructional strategies.

Benefits. While contextualized instruction was infrequently adopted in the FCS, campus personnel identified a number of benefits. First, contextualized instruction can be beneficial for students seeking traditional instruction with a strong instructor presence and a full semester-length course. An administrator remarked, “It’s most like the traditional class that they’re used to...It’s about the same number of credit hours as a normal class. It’s a lot of direct instruction like a normal class. I think it’s just what they’re used to.” A faculty member teaching a contextualized course noted that both she and the students appreciated having sufficient time for course material in order to move systematically through the content, “We have the extra time and we’re progressing through the material.”

An administrator observed that contextualized instruction can work well in institutions with sufficient enrollment to attract enough developmental students to the courses, which must be offered in specific academic subject areas. She stated, “So basically what we’ve had make it [have sufficient student enrollment] in the areas of reading and writing are the compressed and the contextualized.”

Another benefit of contextualized instruction is that it functions as an essential introduction and bridge to the academic content students will soon take in college-level coursework. She remarked, “I personally think it’s a great idea. That’s how it functions from the world, like the last level is usually within your academic area of interest.” In addition, the contextualization of the course content within the

meta-major, can help to spark students' interest in the developmental material.

Indeed, one faculty member observed that contextualized instruction can be designed in a learning community model by pairing up faculty in DE and academic disciplines:

There was a lot of energy around that one [contextualized courses], particularly with the English faculty initially, and we do have some pockets where faculty are doing contextualized, but informally where they just partner up with a faculty in a discipline and sort of almost do like a learning community kind of model.

Despite the benefits of contextualized instruction, campus personnel identified a number of challenges.

Challenges. Two primary reasons were given by campus personnel for not adopting contextualized instruction: 1) the labor-intensive course redesign process, and 2) insufficient student enrollments in developmental coursework. Several administrators expressed optimism about the contextualized instruction's potential but ultimately decided that the course design process would be too time consuming and labor intensive given the rapid implementation timeline required under SB1720. The time-consuming nature of curriculum design for contextualized instruction was compounded by the fact that several courses might have to be designed (e.g., developmental math for nursing, developmental math for business, or developmental math for law enforcement). One institution sought to decrease this burden by creating one standard contextualized course, but faculty were disinclined to design the course that way. An administrator remarked:

Contextualization, I thought was a fabulous idea, and it would have also allowed for us not to have

everything accelerated or everything compressed. However, the way the campus set it up was that everyone had to teach the same contextualized course. They put out a bid or a proposal for people to design the contextualized course. I think based on what our communities of interest, they call, different pathways, so a business pathway, a healthcare pathway...It was told me to me that no one applied to design the course, so we couldn't teach the course...And people thought that they would be able to just contextualize based on using their own instructor-made materials, but that wasn't the case.

Another administrator explained that not only did she have faculty workload concerns, but the investment in curriculum design seemed unjustified for a course that was likely to see declining enrollments:

But we haven't done anything really structured or formal around that [contextualized]. The faculty felt that there was a lot of effort involved in doing that at scale and that with the declining enrollments – it was only ever considered in English. With the declining enrollments anyway in college prep English leading into SB1720, they felt that probably not worth the time and energy.

Similarly, another administrator remarked, "There may be some resistance there [with contextualized] in terms of how do you get students with similar interests, or how do you divide the classroom."

A faculty member at a small institution explained that having sufficient enrollment in DE was already problematic at her institution, and dividing courses by meta-major would only worsen the already low enrollment:

There, again, you're talking a small institution. I cannot imagine that [contextualized] working

here because of the range of – we might could do a dev ed for nursing because we have a lotta nursing students. But otherwise we'd have one section of this and one section of this and one section of this. And manpower would be very difficult.

For those institutions that did adopt contextualized instruction, campus personnel cited the semester-long format of contextualized instruction as beneficial for in-depth coverage of the material. Yet at least one institution reported that attendance had become an issue in the longer format. A faculty member remarked:

Because it [the contextualized course] is the main term, that 12-week term, I do struggle more trying to get students to attend regularly. I find that that is a problem, I think on a regular basis every semester every year with that term....But that, to me, is the biggest challenge. I feel like I have – I feel like I have the time with them, so that's nice, but I do struggle with them because even though I have the time, if I have 10 percent of my students who are not regularly attending, I feel like that 10 or 15 percent, let's say, I'm having to, you know, get them caught up. They come in and they say, "Well, you know, I didn't know I was supposed to turn that in." ...Regardless of how much technology you have to sort of catch them when they're not there, they don't always use it.

Despite instructors and advisors attempts to use technology to contact students with poor attendance in contextualized courses, this problem created other issues for instructors when students returned to class significantly behind in their assigned work.

Perhaps due to curriculum design and attendance problems, an administrator observed that contextualized instruction had relatively poor student outcomes at the state level:

If you look at our dev ed accountability from the state, it's the one with the lowest success rate. I think it was something like – it was less than 40 percent of the students were getting an S. We have for developmental ed, we have three grades that you could potentially earn: an S, which is satisfactory; a P, which means you're making progress but did not successfully complete the course; and then a U which is that you failed the course.

Contextualized Course Design Considerations.

Campus personnel at FCS institutions have identified some considerations for contextualized course design:

- Instructional design for contextualized courses can be facilitated when a DE instructor pairs with an instructor in an academic discipline to create the curriculum.
- Because contextualized instruction can be offered for specific meta-majors, a learning community model could be adopted in which students in a discipline (e.g., nursing, engineering, or law enforcement) move through the coursework as a cohort.
- Students who can benefit most from contextualized instruction are those looking for a traditional course format with direct instruction and a semester-long format.

Section Five: Innovations in Support Services for Underprepared Students

In this section, we identify specific innovative practices and accommodations in academic support services that were intentionally designed to encourage and scaffold learning opportunities for vulnerable populations as described by our participants. While these academic support programs and accommodations were not without their challenges, campus personnel believed they held strong potential for supporting student success and we highlight them for possible adoption departments and services. Many institutions established or modified existing support services, like learning labs or centers, where students could access academic support using online software packages or receive face-to-face tutoring. At one institution an administrator said, “the focus of [the] model for DE [at that college] was to have primarily a lab-enhanced and lab-based approach to DE that would allow for student access, to meaningful time on task, in a computerized setting, and to individualize instruction that had elements of modularization.” Given that SB1720 was an unfunded mandate, these restructuring efforts necessitated either the reallocation of funds in institutional budgets, an infusion of capital through federal and external grant opportunities, or a combination of both strategies.

STUDENT USE OF ACADEMIC SUPPORT

Campus personnel hoped that by providing increased academic support, students would use the services more frequently to strengthen weak skills. FCS institutions saw, however, both declines and increases in the use of academic support services. A faculty member at a college that observed a noticeable decline in students using academic support services said, “They don’t necessarily want to go back for the extra help. And then some of them are still not going to the learning commons also. So, you know, they’re not

seeking the help that they need on campus necessarily.” Conversely, other institutions were experiencing marked increases in student use of academic support services. Under Title III, institutions were now required to provide academic support services for all students regardless of developmental status. One Title III college in particular was overwhelmed by student response. An administrator explained:

If you want proof or statistics, go check out our learning support center, and how many students are visiting them every day in unbelievable numbers. There’s 40,000 students that will visit solely for writing. Forty thousand. Across the column. Just writing. It’s 172,000 visits a year.

ACADEMIC SUPPORT SERVICES

As community colleges across the nation continue to fulfill their mission to provide open admissions and an opportunity for tertiary education, institutions have implemented programs and strategies to improve student persistence, retention, and academic success. In our previous phase of evaluation and reporting about how FCS institutions implemented DE reform, CPS researchers documented promising institutional practices related to academic support. These promising practices included early alert systems, tutoring –both face-to-face and online, embedded tutors, learning communities, emporium-styled courses and supplemental instruction. (Hu et al., 2015). During our second year of site visits we found that new colleges we visited also offered similar academic support services. While many of the academic support services mentioned were widely adopted in the FCS, some were modified for institutional contexts to reach particular student populations most in need of these services.

Next, we highlight new and additional academic support services that campus personnel identified as innovative practices and accommodations for academic support specifically for vulnerable populations. In order to identify the foundations and tenets of innovative practices we examined exemplars of national award winning or nationally recognized academic support services at community colleges. We then used the programs' goals and objectives as criteria for identifying similar innovations at FCS institutions. In our investigation we discovered that one of the programs highlighted in this report was nationally recognized twice for innovation in academic support services practices.

More than one institution made changes to existing academic support services programs available to the entire student population in order to better assist vulnerable student populations. Some changes were time-based modifications while others focused on the physical setting of academic support services in order to encourage increased student use of facilities. Academic support staff anticipated that these changes would result in increased student achievement.

Location of Academic Support Services. Support staff were mindful of the factors influencing student use of academic support services. Some institutions placed all academic support services in one location creating a Learning Commons. Other colleges placed services in high traffic areas. An advisor at one institution shared:

[It's in a] very obvious location because the bookstore also has a Starbucks and the Student Life Center's there where there's a TV set, so I think most students go in that building and it's right there. It's not like it's in a cave or basement somewhere.

Extended Lab, Academic Center, and Library Hours. Administrators, faculty, and staff alike at FCS institutions acknowledged the ways their student populations differed from those found at traditional four-year institutions. Some colleges had high numbers of commuter, part-time, and non-traditional aged students. Conventional hours of service, 8am-5pm, for academic support facilities were not meeting students' needs and contributed to low student usage. An advisor described students' difficulties in using academic support:

And the students who use [academic support] are successful, but it's getting them to use them that – again, to see the benefit of you need to spend this extra time when you've got two kids and a dog and all that kinda stuff, you need to spend three hours in the math lab. I don't have three hours to spend in the math lab. So sometimes you just have to make the time to get into these labs, and it's difficult for a lot of people 'cause their time is so crunched.

A number of institutions responded by extending hours of operation to include both early morning academic support sessions, as well as late evening sessions, and some even offered Saturday hours. According to academic support staff students seemed pleased with these changes. An advisor shared what he heard from students:

And I've heard that a lot of the older students love the Saturday hours because a lot of them, the ones that are working. And to try to get in during the week just doesn't work for them... And I think we're offering like five or six. I think it might be about six hours on Saturday.

Individualized Tutoring. A few institutions recognized students' preference for one-on-one tutoring and reallocated resources to provide individualized face-to-face tutoring. Students enrolled in math courses, especially developmental math students, took advantage of this offering. A faculty member explained:

And the lower level math students, we have a couple of tutors that are just experts at dealing with the developmental math students, and they're booked solid. Our developmental math students that come through you, they like to have the one on one. Because people have been trying to get them into groups, and they just want that one on one. They can get their own in the Academic Success Center. I tell them tutoring is very expensive. The fact that we offer it to you here on a silver platter for nothing, take advantage.

Early Alerts. Early alert systems are a widespread practice at institutions in the FCS (Hu et. al, 2015). When students showed signs of academic failure, or had increased instances of absenteeism, faculty sent alerts to advisors or learning centers. Depending on the institution, an advisor or learning center representative then reached out via email, letter or phone to encourage students to either make contact with the faculty member, the advisor or the learning center staff. Early alert programs have received mixed coverage in the research literature regarding their effectiveness at improving student academic outcomes. During our site visits this year, we found that seven of the eight institutions we visited used an early alert system, but none of the faculty nor staff thought the system to be effective. Additionally, the one college that was not currently using an early alert system had abandoned the program because of

perceived ineffectiveness prior to our study. Campus personnel considered early alert work intensive and while there were small pockets of success with individual students, overall the programs showed little if any sign of increasing broader student outcomes or persistence rates.

While early alert systems can be an important intervention for students struggling in college-level coursework, our data suggest that the effectiveness of early alert systems varied greatly across the FCS. Several campus personnel highlighted problems, which included the inability to adequately address student problems due to the overwhelming volume of early alert messages, a lack of coordination and communication between faculty and advisors about how best to address early alert concerns, and sometimes a "them" versus "us" dynamic around who retained responsibility for resolving student issues. A group of advisors explained some of the difficulties inherent in the early alert system at their institution:

Advisor 1: It has issues and also the parameters and how it's set up, because there's no clear-cut definition of what constitutes an early alert. I think it changes between departments, and even then, I think sometimes it's a requirement for teachers to send the flag up, but if the teachers aren't willing to do anything, so basically they'll say, "Contact the student because he's failing." I contact the student. I say, "Hey, you need to talk to your instructor, man. You're not doing well in class." He calls me back and goes, "Well, the instructor said he's not gonna take any of that work late and I have an F and there's nothing I can do about it." Well, then why did I reach out to this student and tell him he needs to talk to the instructor? That's ridiculous.... To me, the juice

isn't worth the squeeze on it, because a lot of times we're working really hard to get ahold of these students. And we're working with a lot of students to try to get ahold of him, and it's not moving the needle much in any direction.

Advisor 2: And sometimes, like we said, there's a pressure on faculty that if they have students failing, well, how come you didn't send an early alert?...

Advisor 3: It feels like the buck's being passed because basically they're failing, so it's like I'll put up an early alert. Not on me. Not on me. Not my fault. Now it's the advising's. So the advising's like, "Well, I got ahold of him and I'm sending him back to you." And it's like hot potato. Like, no, go to tutoring. And everyone's just passing the student around like it's not my fault that they're

failing. Like it's your fault. I put up an early alert. What more could I have done?

While early alerts seemed ineffective at some institutions we acknowledge the tenacity and resourcefulness of advisors, faculty, and staff in reaching students using the early alert system at their institutions. Because the early alert system identified a student of concern, faculty and advisors were also notified. Faculty members described themselves as 'hounds' and advisors went to great lengths to contact students who were on the academic precipice for one reason or another. An advisor shared, "We've used phone, email, Facebook. Facebook works! If we find out a class they're going to, we will go to that class and wait for them to come out and say, I need to see you. Any means necessary." Another advisor admitted, "We're very assertive. Even at Walmart when we see them. That is the truth....Where have you been?"

Section Six: Student Success and Social Identity

In this section, we first explore how students' intersecting and complex social identities influence their academic success in extended vignettes. These vignettes highlight the ways in which students exhibited agency, motivation, and grit to succeed in the era of DE reform in FCS institutions. We then examine some institutional practices offering social support to diverse student populations. These practices, both institution-initiated and student-initiated, are intended to help students who come to FCS institutions with a multitude of identities and life circumstances. We emphasize that these

intersecting identities shape both how students use campus resources and how they interact with campus personnel.

INTERSECTING SOCIAL IDENTITIES

FCS students' on-campus commitments represent but a fraction of their lives, with factors such as family, work, and personal finances figuring prominently in their educational choices. A faculty member explains:

And along with that too are the other challenges that this population [developmental

students] tends to have... We know all college students carry baggage... But our population, which is over-represented by students of color and economically disadvantaged students, they have many external factors that influence their attendance in class, their ability to focus on the material at hand. And it's not necessarily that they can't rise to the occasion, but it's having things like no one to care for their children, no transportation when their car is broken down, or no car at all. Work schedule changes. Numerous other things that happen that influence their ability to be as successful in these courses as we'd like them to be. And having said that, having the time to provide that kind of support for them is extremely important.

In the extended vignettes that follow, we consider some of the most salient student statuses and identities, many of them intersecting, which influence educational success following DE reform in the FCS. Some of these identities include non-traditional student status (25 years and older), racial and ethnic diversity, sexual orientation, military status, and homelessness. The ways that gender and low-income status shape student success are prominent themes woven throughout the vignettes.

Non-traditional Students – “We’ll Work It Out”.

Because students exempt under SB1720 included those who had entered the 9th grade at a public high school in Florida in the 2003-2004 academic year, students classified as exempt were more likely to be traditional-aged college students. Nonetheless, some exempt students who opted to bypass DE were non-traditional or adult students. Many of these non-traditional students were also working mothers. A faculty member described one such female non-traditional student who had bypassed developmental math:

It's an intermediate algebra student: an intermediate algebra student that was pregnant and was concerned that she may not go full term. I mean, she was just really panicking: “What if I deliver the baby and I can't come back?” And I said, “We can give you an incomplete. Don't worry. We'll work it out.” Anyway, we struggled all – “Oh, you're here again today,” you know? So, she made it full term.

Despite her pregnancy being a source of concern for her while she was enrolled in intermediate algebra, she applied herself to the course material and took full advantage of support services offered by the college as well as her instructor's office hours.

[She] really, really struggled with math. And we worked hard. She worked hard on the homework. She did come by the office some. Really struggled with math, made it full term, passed intermediate algebra.

After the class ended, the instructor heard back from the student in an e-mail thanking her for her help and informing her that the student's son had been born healthy.

I got an e-mail from her yesterday saying, “My baby was born on January 22nd and I'm so excited and he's beautiful. Here's a picture. And I'll bring him by.” And I e-mailed her back and said, “January 22nd is my birthday.” So yeah. And obviously she's a little bit older student. She's going in the nursing program. And it wasn't her first child.

This student's story was not unlike many working mothers who enroll in community college after a long hiatus from education spent raising children and working.

But we do have a lotta students who are really working hard like her to better – make a better life for themselves and their children. And she’s married and her husband was helping with the children and everything so that she could now return to school and accomplish her goals and dreams. So that was real special.

While some of these returning students may initially lack the academic skills necessary for college-level work, they often overcome this challenge through dogged persistence and a strong motivation to improve the lives of their families.

English Language Learners (ELL) – “Things Aligned”. As one of the most diverse populations in the US, Florida has a large immigrant population whose first language is not English. As a result, FSC institutions often see students who immigrated to the US and completed their high school education in FL with a standard high school diploma, but who still struggle with the English language. An advisor noted:

...a lot of those students are exempt using the SB1720 because they may have come over in the ninth grade and graduated with a standard high school diploma, but our standard high school diplomas, there’s an array of different diplomas where they could have had an alternative assessment where it’s not the same. And these students are not doing well in English Composition 1 that I’ve seen. The ones that do end up there usually do not have a high pass rate. These students should be taking – we give them Compass exam and the follow a different course taking English for academic purposes courses. So, I’ve seen that as a problem where the SB1720 has really hurt these students because although it says standard high school diploma, we do have several different

diploma types that fall into that category to give them that exemption.

Prior to the passage of SB1720, ELL students were required to complete English for Academic Purposes (EAP) coursework depending on their placement exam scores. They then typically completed the DE English course sequence before enrolling in college-level coursework. After SB1720, however, “once they finish with the EAP program, they go into college-level classes”, an administrator stated.

For students who are still trying to master the language, SB1720 may lead to failure in the gateway English class but for students who are doing well and have a good grasp of the English language, SB1720 has allowed them to accelerate their progress from EAP to college-level coursework without spending extra time and money completing unnecessary DE coursework, an administrator noted:

Before they had to test, so it would take a very, very long time until they got into college-level classes and sometimes they didn’t. But, with the changes in financial aid and the restructuring, they all came together kind of, so things aligned. That was a good outcome.

LGBTQA – “She Was Awesome”. An advisor at one college shared a story about his advisee, who was an older Latina student and lesbian:

Probably one of my favorite students of all time was this lady. I tell my students that if this person can graduate considering her circumstance that none of you little 18-year kids have any excuse to not be passing your classes. This lady..., when she started seeing me, she was like in her mid-50s pushing 60.

The advisor believed that because this non-exempt student had succeeded in college with so many life challenges, younger exempt students who opted out of DE courses with fewer personal responsibilities and fewer barriers to success had no excuse for failing their gateway courses. The advisor went on to describe the student's economic situation. It seems she was returning to school to improve her chances of finding a new job with better pay and working conditions.

And her thing is that she was having trouble finding any employment other than being a construction worker. And she was at the point where she was too old to keep doing construction work. Her knees and back and everything were giving out, and so she wanted a degree to do something that wasn't so physically tough.

Community college students, in particular, juggle many different identities in addition to their status as students. Not only did this student face the challenges associated with being a non-traditional student, formerly-incarcerated, and low-income, but she was also Latina and a member of the LGBTQA community. The advisor described how others on campus reacted to her non-gender-conforming appearance:

When she would come to the office, people were terrified of her because she had a shaved head, she was covered from her neck down in tattoos. I mean she was built like a linebacker. She was huge. But she was really sweet.

Regardless of her challenging circumstances, the student went on to successfully complete her degree. The advisor concluded his story with the following positive resolution:

And then she graduated with a really high GPA... And she was awesome... And I remember when I saw her again right after she graduated, I ran into her in the parking garage and I was talking to her and I got all emotional... You know, those people I remember more than the students who are like the honors [students] who are doing well from the get go.

Active Duty Military and Veterans – “Knock on Wood, He’s Gonna Be Successful”. Students who identify as veterans or active-duty military may also present with disabilities including PTSD, which can be a factor in their academic success. In addition to suffering from PTSD, these exempt students are also faced with the decision of whether to pay for DE courses out-of-pocket because they are no longer covered by the VA or enroll directly in college-level coursework. An advisor described one such veteran with this dilemma:

I mean here on this campus; you have veterans who have PTSD. We have 700 students with disabilities, and accommodations, and we're supposed to somehow figure out how to get through all that. And we know that those folks often times are the one who are put into originally [prior to the legislation] into developmental courses. On top of that, you have advisors, who cannot do a PERT test for a student. Most of the time, they're [the students are] not required to. They don't do it. So they're [advisors are] trying to fumble through transcripts to figure out what in the world they're supposed to put them into.

I've got this one guy right now, he's a veteran. He's had some issues, some PTSD-type issues, struggling, you know, and he's been in and out,

withdrew, failed, had some passing grades, but now his issue is he's got almost everything completed for his program except for like Spanish 2 to graduate with the AA degree and he took Spanish 1 in 2009.

So now he's gonna have to basically start over with another language sequence and then prep math 2, intermediate algebra, and then the two college credit math classes. So he's at best three semesters away from graduating because he could take college algebra instead in the same semester or something, but hopefully, fingers crossed, knock on wood, he's gonna be successful.

In this vignette, the advisor expressed hope that the student would ultimately succeed, though the outcome of his situation remained unresolved.

Homelessness – “And They Didn't Give Up Because I Didn't Give Up”. In our final vignette, we highlight the efforts of campus personnel to offer social support to a formerly homeless student. This student expressed the view that younger exempt students who had opted out of DE might not be making the best decision for their future. The student discussed his positive interactions with DE faculty and other support staff:

I mean my first semester I was juggling two jobs, I was living at a shelter and I had just kinda came back up here and took me like six or seven months to get to a place where I could consider college. So I mean and the staff here, the teachers – I just said, “Look, like, you know, I'm not a typical student. I need some extra help, like.” They were more than willing. They would push

back dates [for assignments]...They would always work out something and in a typical class you will not get that kind of help. But I think because the teachers knew, hey, this is developmental ed... Students are a little older as well, that we [faculty] need to be a little more understanding to begin with because people are actually bringing in baggage and experience...

It was very difficult because I started to get to a point where I had no more time for work and I was – you know, financial obligations were taking over...but they understood that...I didn't give up. And they didn't give up because I didn't give up. And I was able to pass these classes with like a B versus a D, where I was headed. So the teachers made all the world of difference.

That, and like everyone in this entire department, you could just go to somebody – like, I'd be totally broken one day and just, no matter what...[They'd] just nurse you back to health and get you right back on track. And like, nobody will let you fall. So without that it would have been impossible.

This student emphasized, as did many in our focus groups, the crucial role that campus personnel play in motivating students to persist in pursuing their educational goals. Having explored student success in the FCS in extended vignettes that provide in-depth context for students' intersecting social identities, we turn to institutional practices that promote student agency and academic success.

INSTITUTIONAL PRACTICES TO PROMOTE SOCIAL SUPPORT AND ACADEMIC SUCCESS

Campus personnel at FCS institutions were cognizant of the fact that some incoming students from diverse

student populations did not have all of the prerequisite skills for college-level work. Faculty and staff were also aware that particular groups within the under-prepared student population often faced additional academic challenges. Innovative programs were established specifically to promote their academic success. We also found that campus personnel were not the only ones developing innovative practices. In some instances, students initiated support groups both to improve academic outcomes among their peers and to provide social support.

INSTITUTION-INITIATED SUPPORT GROUPS FOR DIVERSE POPULATIONS

In an effort to better support educational opportunity for diverse student populations, some institutions created student support group for underrepresented students, foster youth, immigrants, economically disadvantaged, and non-traditional students. Students who used these services explained how these innovative practices supported their success. One student said:

[Name of program], they actually have foster kids that grew up, but that's a little bit older than me that help mentor us if we need help in school. Like, if we slacking or anything or if they can call somebody to help us or find a tutor, like anything, if we have an issue to come to them because they try to make sure that we are being – achieving our goals and not slacking off.

Other institutions provided specialized support groups for students with disabilities, veterans, underrepresented racial/ethnic populations, and Black males in particular. Another student shared how the specialized academic support group at the college helped:

I joined [program redacted for confidentiality]. It's just for students who are returning back to school

after a period of time or have received the GED, you know, didn't receive a traditional diploma. 'Cause usually that entails some – there is a story behind that so there comes a little extra weight. But I joined that and everyone [the participants] kinda banded together.

Notably, a few institutions provided mental health support groups and services to students. Campus personnel observed that students were sometimes reluctant to join these groups because of stigma and negative preconceptions about mental health services. Nevertheless, faculty and staff often encouraged students who showed signs of distress to participate in group sessions to learn coping strategies and develop social support networks.

STUDENT-INITIATED PEER SUPPORT GROUPS

Many students formed informal academic support groups to support each other during times of academic or personal stress. When faced with academic challenges, students took the initiative to organize new groups or work within existing structures to help their peers achieve academic success. Faculty members noted several instances in which students came together to form study groups and informal academic support groups to help each other pass courses. Students in these groups felt responsible for their learning and exhibited agency in their own success. Students reported meeting in the library, in classrooms, and the learning center labs and relied on fellow students instead of academic support staff to learn course material. A student described how he started one such group:

So I just took it upon myself – I just tell myself I'm not gonna fail. It's just not my motto. So I stood

in front of the class, and it's like, hey, I don't know who all took this first test, but I ain't doing so well. I think we all need to come together in the class. We're all here for the same reason, to pass this class if nothing else. And so I made a study group of like 35 people on a paper to meet at the [name of location], but only five showed up.

Student leaders at one college coalesced around common goals to ensure that every member of their group was experiencing success. One student shared:

...so just that reinforcement and having people around you that can correct you when you're doing wrong, and you can't understand that, 'Oh yeah, maybe I am kind of slacking.' Just surrounding yourself around those type of people is really helping me because I feel like if I didn't have them, and I was trying to do it all on my own, then I would struggle. But I can't say that I'm not doing this on my own. I'm not being as successful in like managing a tight schedule by myself. I have a lot of people supporting me.

Section Seven: Institutional Practices to Help Underprepared Students Transition to College-Level Coursework

In this section, we first highlight the need to focus greater attention on the needs of academically underprepared students transitioning to college-level and gateway coursework (i.e., the first credit-bearing college-level class in a course sequence). We define underprepared students as those who are at high risk for drop out because they lack many of the academic skills necessary to succeed in college-level coursework. We then enumerate some innovative policies and practices for assisting students with the transition to college-level course content. We also highlight some of the challenges campus personnel have identified in adopting these promising practices in institutions across the FCS.

THE NEED TO FOCUS ON SUCCESS IN GATEWAY COURSES

Administrators and other campus personnel across the FCS have expressed the view that the focus in the second year of DE reform has shifted from the redesign of DE to the redesign of gateway courses and other college-level coursework. Many focus group participants described the lack of success advisors and others have had in convincing underprepared students to enroll in DE courses. This trend has led to fewer course offerings in DE due to decreasing enrollment and accompanying increases in enrollment in gateway courses (Hu et al., 2016). An administrator summarized his perspective on the increasing importance of gateway courses and the need to focus on the entire educational path of underprepared FCS students:

Fewer and fewer of our students are going to take our recommendations. At some point dev ed's dead. Whether we wanted it to or not, it's going to go away, because we as institutions aren't going to be able to sustain the enrollment. It's going to just die. And why are we spending our energy talking about better and better ways to do dev ed when we should be spending our energy talking about better and better ways to do gateway classes...Taking those competencies in dev ed and moving them, expanding the competencies that are in gateway. Because obviously we're not set up in this manner, but really, I'm much more inclined to think about developmental education as a college initiative for the entire tenure of a student. A student should have a support system from the time they start to the time they stop. We shouldn't just say, "Oh, you're a dev ed student, let's just focus you on the first semester and now you're good and you don't need any more help." Because we know that's not the case.

Given the increasingly central role of gateway courses to student success in the FCS, we highlight practices identified by focus group participants as particularly beneficial for underprepared students enrolled in gateway courses. These practices include early diagnostics to identify underprepared students, standardized gateway curriculum, effective early alert systems, and learning lab usage tracking.

EARLY DIAGNOSTICS TO IDENTIFY UNDERPREPARED STUDENTS

In the absence of a single measure, such as the PERT to identify students who are academically at risk, many institutions highlighted the need to identify underprepared students through alternative mea-

asures. One frequently adopted alternative measure in the FCS was a diagnostic test designed by faculty that incorporated the academic skills required for college-level coursework and was administered the first day of class in gateway courses. An administrator describes the concept of first-day diagnostics at her institution, "And then we have a new progress reporting system, where we're collecting data on whether the students have repeated or not, first-day diagnostics. So we have more in-class intervention, so day one diagnostic." The early identification of underprepared students in gateway courses also allowed institutions to target campus services to the students who needed them most.

STANDARDIZED GATEWAY CURRICULUM

Another practice that some institutions in the FCS had adopted was a high level of standardization across the gateway curriculum in both math and English. This practice was particularly beneficial at large institutions with many sections of gateway courses. An administrator described the standardized MAT 1033 curriculum at her institution:

We have a common syllabus, across the whole college. We have common worksheets for the mastery math practice, common tests, common rubric for creating, common assessment of how much each component of the course is worth, and so the instructor is required to report data from day one; day one, day two, week three.

Standardization of the curriculum allowed for more accurate early identification of underprepared students, coordinated the curriculum at institutions where large numbers of adjuncts taught the gateway course on a rolling basis, and helped faculty coordi-

nate with academic support staff who always knew what lesson and concepts were being presented in the gateway courses.

THREE-TIER EARLY ALERT SYSTEMS

Several institutions identified practices to improve their early alert systems to help underprepared students succeed in college-level coursework. One institution, for instance, was piloting a three-tiered early alert system that paired early alert messages with increasing levels of intervention by campus personnel. The institution developed the system to help retain students when they are experiencing challenges, or before they occur. An administrator explained:

[W]hat we find lots of times is students withdraw because – not because of academic reasons, but because of something going on in their lives, which if you can solve that problem, we can keep them in the classroom. And so it's a really nice model that the team came up with. It's very comprehensive. It's systematic. It really is – it's everybody's job to do, to do alerts or interventions to drive student success longer-term.

The first tier of early alert goes out to all students across their academic pathway, the second tier of alerts are general course alerts from the instructor, and the third tier of alerts are specifically for the 15 courses at the institution with the highest withdrawal and dropout rates. At the first tier of alert are emails about financial aid, registration, lowering GPA, failure to register, etc... At the second tier of alert, instructors in conjunction with other campus personnel determine when to trigger alerts to students and what the interventions should be. At the third tier of alert, specific interventions are recommended such as sepa-

rate course sections with supplemental instruction for repeaters and more intrusive advising practices.

While this institution's three-tiers of early alert are tied to courses, the three tiers of alert could also be targeted to students identified by campus personnel as experiencing moderate and high levels of academic and non-cognitive challenge. Another promising practice at one institution identified by CPS researchers during observations of advising sessions, was a comprehensive advising and early alert software system developed by campus IT staff.

COMPREHENSIVE E-ADVISING

During the advising observation sessions, advisors at one institution demonstrated their institution's comprehensive e-advising system. Course pathways and transfer requirements for most 4-year institutions across the state of Florida have been programmed into the online system. These features greatly simplify and facilitate the advising process by reducing information overload during the advising conversation between students and advisors. This allows the advisor to engage in a conversation that is less technical, more holistic, and more focused on a handful of important topics such as students' long-term life goals, and the specific actions and commitment that will be required of students to achieve their goals.

In addition, the e-advising system has an early alert feature that allows for careful documentation of students' challenges as well as the interventions that have been attempted by campus personnel to address these challenges. The software contains a case history for each student with columns that can be completed by advisors or faculty. The columns document the date of each early alert entry, a text box for the reasons for the alert, the classes students

are enrolled in and course grades, the instructors and advisor's names, a text box for further comments about the student, and a yes/no "At Risk" designation.

In effect, this comprehensive early alert system gives faculty and advisors the opportunity to read the case history of each student and collaborate more effectively with other campus personnel to find solutions for the challenges students face. In addition to the importance of coordination between advisors and faculty, we also highlight an effective practice related to coordination between faculty and academic support staff, lab usage tracking.

LAB USAGE TRACKING

Another promising practice to assist underprepared students in transitioning to gateway courses, is for better data related to learning labs and learning commons usage. Specifically, some institutions have begun to examine the number of hours students spend in the labs, the academic backgrounds of the

students in the labs, and whether there is a relationship between lab usage and academic outcomes.

[W]e're also tracing usage in the labs, which is incremental to what goes in the classroom with the academic system, so we're now able to see for the first time – we always were able to track academic usage, and compare it to grade distribution, but you never could tell whether it was the kids who are gonna get As and Bs who were using the labs anyway. Now we actually know because we have these detailed progress reports, who are the kids who are at risk, and whether or not they're going to the labs.

Indeed, at institutions that have begun to collect this data, lab usage appears to be positively associated with better academic performance, particularly for students who have been identified as underprepared by college personnel.

Conclusion

The implementation of DE reform in the state colleges in Florida has brought an abundance of changes both to the lives of students and to the ways that FCS institutions meet the needs of these students. In the second year of our comprehensive policy evaluation, our data suggest that initial perspectives on the legislation have shifted with time and, as a result, implementation practices evolved in the second year of implementation. After the quick implementation timeline following passage of the legislation in the first year, campus personnel have refined their efforts.

Our analysis focused on the ongoing changes in FCS institutions as well as the institutional practices that hold the greatest promise for improving educational outcomes for academically underprepared students. In this report, we have highlighted some of the initiatives FCS institutions have adopted to assist students as they choose courses that best suit their professional, personal and academic needs to successfully transition to college. The key themes in the report are related to: (1) holistic advising, (2) student choice, (3) instructional modalities, (4) academic support

services, (5) students' intersecting and complex social identities, and (6) underprepared students' transition to college-level coursework.

- Adopting a holistic approach to academic advising acknowledges that students' lives outside of their academic pursuits and sources outside of campus personnel often guide students' course decisions. Holistic advising adds time to advising sessions, and requires that advisors receive training to implement this approach competently.
- We identified several influences on students' educational decision making processes in the FCS not previously explored in previous reports. This includes students' attitudes towards advisor recommendations, self-advisement, online sources of information, and students' self-perceptions of their academic ability in math and English.
- The institutional context was the major determinant of which modalities were chosen for implementation at each FCS institution. Campus personnel identified several features, benefits, challenges, and course design considerations for each modality.
- Likewise, institutions also made choices about academic support services based on student enrollment patterns. Many institutions established or modified existing support services, like learning labs or centers, where students could access academic support using online software packages or receive face-to-face tutoring.
- Students at FCS institutions exhibited agency, motivation, and grit to succeed in the era of DE reform. Some institutional practices, both institution-initiated and student-initiated, offered social support to diverse student populations, including student veterans, English language learners, and students experiencing homelessness.
- Campus personnel at several institutions expressed the view that the focus of developmental education reform at their institutions had shifted from the redesign of DE to the redesign of gateway courses and other college-level coursework. Due to fewer students enrolling in DE, FCS institutions offer fewer DE courses and accompanying increases in enrollment in gateway courses has encouraged some FCS institutions to experiment with institutional practices to address the influx of underprepared students into these gateway courses.

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