

Experiences and Perceptions of Corequisite Remediation at TBR Colleges

J. Edward Guthrie, Kaitlin Binsted, and Mike Rahimzadeh

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Introduction and Overview

During the 2020-21 academic year, the TBR—the college system of Tennessee— and the Tennessee Education Research Alliance (TERA) partnered together to conduct a mixed-methods study seeking to better understand student and faculty perspectives of corequisite remediation in TBR colleges.¹

TBR and TERA established the following research questions for the qualitative study:

- 1) How are corequisite courses structured, and what variation exists in these structures across campus locations?
- 2) How do instructors, department leaders, and deans define and measure success for corequisite programs?
- 3) How do instructors, department leaders, and deans ensure program cohesion and effectiveness for corequisite programs?
- 4) How do students experience and perceive the alignment, cohesion, rigor, and effectiveness of the corequisite classes?

¹ Given the unprecedented time in which this study was conducted, much of the conversation, especially among students, pertained to issues of remote learning and other instructional disruptions created by the COVID-19 pandemic. Those experiences may make for a separate report, but the report at hand tries to focus on structural issues that will more widely generalize to what we hope to be a more stable, less pandemic-influenced future.

Over the course of 2021, TERA developed interview protocols, worked with TBR member institutions to identify and recruit potential research subjects, and conducted and coded interviews. The following report describes our key findings from interviews conducted with TBR students and faculty.

Methods

Sample

TERA worked with TBR to identify and contact potential research partners. Four sites agreed to participate. Any student who had taken a corequisite remediation math course in the fall of 2020, as well as any instructor of either a corequisite math course or a college-level course taken by students who were also enrolled in a corequisite were eligible to participate. All invitations directed potential participants to a Google form in which they entered their name, provided contact information, and confirmed their involvement with corequisite courses in the fall of 2020. The invitation to students included a \$25 Amazon gift card incentive (faculty were not eligible for incentives due to TBR policy). Partner institutions then emailed all qualifying participants, and TERA researchers used email addresses submitted through the Google forms to contact potential participants and schedule the interviews.

Thirty-eight students and seven faculty completed the Google form sign-up link to agree to be interviewed. Of these, we completed interviews with 13 students and all seven faculty. We secured an eighth faculty interview through snowball sampling on a referral from another participant.

Interviews

We developed separate semi-structured interview protocols for faculty and student participants. Conversations with TBR representatives, items from a prior faculty survey conducted by TBR, and published research findings on corequisite remediation informed the development of questions for these draft protocols. We conducted two pilot interviews with students in early April and made minor revisions to both protocols based on our internal assessment of how the protocols seemed to have performed. Given the small number of faculty participants we did not conduct any pilot interviews with faculty, instead using the student pilots to hone the faculty rubric to ensure that each faculty interview was primed to elicit the most valuable information possible for our research questions. Interviews continued through April and May.

Coding

Interview coding followed a hybrid approach involving both deductive and inductive methods. The team of three TERA researchers used the initial research questions along with our experience conducting the interviews to develop an initial set of coding themes. We then each coded two transcripts from interviews conducted by one of the other team members, noting both what our a priori codes captured and missed, then reassessed our codes based on their initial performance. The researchers repeated this process for both the student and faculty interviews.

Major Themes

Structural variation: Individual institutions vary considerably in their approach to delivering corequisite remediation.

Differences in the structure of corequisite models include binary choices regarding serial compression, paired instruction, and syllabus consolidation. A fourth dimension of variation, course streamlining, varies by degree rather than as a binary decision. We begin by describing these choices in more detail:

- **Serial compression:** For the purposes of this report, “serial compression” describes a structure in which the combined six hours of remediation and college-level courses are divided such that the remedial curriculum is compressed to six hours per week for the first half of a course’s term (e.g., the first half of a semester), and the college-level course material is then compressed to the second half of the term. In effect, it remains a prerequisite-to-intro course sequence compressed from two terms into one. Alternatively, an institution may divide the remedial and college-level courses into two concurrent term-long courses with parallel, complementary curricula.
- **Paired instruction:** “Paired instruction” refers to a structural arrangement in which the instructor for the college-level course also teaches the corequisite remedial course, which may include some or all of the students from the college-level course. Where this occurs, the two courses seem to be typically scheduled in adjacent time slots the instructors refer to as a “back-to-back.” This results in either two hours of continuous class time three days per week or three hours of continuous class time twice per week.

- **Syllabus consolidation:** We use the term “syllabus consolidation” to refer to the structural decision to combine the remedial and college-level curricula into one syllabus representing a single, comprehensive and aligned body of course material through which students then progress over six hours of course time for the course term.
- **Course streamlining:** Course streamlining refers to how a corequisite course fits within a specific course sequence or set of sequences. A fully streamlined sequence exists when a corequisite course sequences a single college-level course. In contrast, some institutions let a single corequisite course sequence to one of several college-level courses, e.g. a “general math studies” corequisite in which some of the students are concurrently enrolled in college algebra, statistics, calculus, or even chemistry.

Serial compression: Accelerating the learning support-to-college level course sequence rather than teaching them simultaneously may undercut the spirit of the “corequisite model,” but instructors and students understand the logic behind serial compression while also expressing concerns about how quickly the courses move through content.

Half the institutions participating in the study explain their implementation of corequisite remediation in terms of serial compression. One more is shifting to serial compression beginning with the 2021-22 school year. In each case, this design is implemented out of a belief that students indicated for remediation cannot engage with the more advanced material of the college-level course until after completing a program of more fundamental concepts.

As one instructor explains:

“It doesn’t make sense. I mean, you can’t be factoring polynomials before you’ve even learned about adding and subtracting polynomials. [Remedial students] start in this class, they can’t even deal with sign numbers. They can’t deal with fractions. They can’t deal with decimals, so there is no way they can do anything that would be algebra-based. So, if they don’t have the skills with the concrete, they sure can’t go to the abstract.”

This concept was echoed in almost identical language by a more junior instructor at another institution:

“How do you teach algebra when these kids cannot do basic arithmetic? They can’t add fractions. They don’t understand the order of operations. A good portion of my students don’t even have their times tables memorized. How do you teach someone how to read when they don’t know the alphabet yet?”

A course coordinator at a third institution expressed similar concerns while hinting at the logic behind serial compression:

“When you’re in a corequisite class, the first 12 weeks, they’re not functioning at a college level, and yet they’re enrolled in a college level class, so it’s a little bit of a – I call it a shell game. Because they’re not functioning at the level they should be performing at, so then they’re spending the first 12 weeks in [a college-level course], and they’re not passing because they’re not at that level to be able to earn a passing grade. So as a coordinator of the department, I had to be very, very thoughtful and careful in constructing a corequisite course, because how do you pass a class if you failed the first 12 weeks?”

To these educators, the scaffolded approach of completing the remedial curriculum before moving on to the college-level material then makes sense. From the instructor who used the analogy of learning the alphabet before learning to read:

“But in practice, instead of a true coreq, we kind of do [remediation] for all four days for the first part of the semester and then do the [college-level] material. Even though it’s scheduled for the full semester both courses, but we kind of cheat and don’t do it that way. We do it more seven week, seven week.”

Given that students are nominally enrolled in both courses for the entire semester, however, this necessarily means that the remedial program must borrow time scheduled for the college-level course early in the semester, while in the back half of the semester it is the college-level course that takes both its own time slot as well as the time block scheduled for remediation. This typically means students spending two hours in the same class three days per week or three hours in the same class twice per week.

“You have to be on your game for three hours on Tuesday, Thursday, or two hours on Monday, Wednesday, and Friday. And you just have to really wrap your head around being able to keep the class moving so the students don’t get bored out of their minds, but you also have to pace yourself so you don’t wear yourself out. I try to make sure I’ve got some carbs nearby and some water so I can refuel a bit while they’re doing an assignment for me or something, but it requires on the instructor side, as it does on the students’, just a tremendous amount of flexibility and endurance. It’s tough. It’s tough... the six hour combo course is – it’s a killer.”

Some institutions, ostensibly in anticipation of the extended class periods created by the “shell game” mentioned earlier, even adopt a four-day class schedule to limit individual sessions to 90 minutes while still offering six hours of course time per week:

“We had set it up previously at one time so that you met for like three hours on two days, but that was just too overwhelming. So we’re doing it an hour and a half for four days a week continually through the semester; the first seven weeks would be [corequisite], this seven weeks would be the [college-level].”

Students generally expressed favorable experiences with the serially compressed sequence, especially those who were aware of the alternative full-semester concurrent model:

“But then as [the semester progressed] and I started hearing more and learning more and understanding it more, the learning support became useless, just more work. There’s a way you could just cut it off like halfway through or something.”

“Normally the [corequisite] were 15 weeks, so now they’re giving us the option to take seven week classes. So instead of cramming everything into those seven weeks, they’re only taking the stuff that we need to learn and taking those fillers that were put in the 15 weeks out, so we just learned the basics of class, and stuff that we need to know, which I thought that was a brilliant idea.”

“I think the seven week course with the corequisite prepared me so much to complete the rest of the seven weeks, the [college-level course] to where I felt more confident in myself to finish out the semester.”

Yet multiple faculty respondents spoke to a belief that total course time was not equally beneficial to students when compressed.

As one instructor said:

“From my own personal experience, I do not process new math material quickly. I am extremely slow. In fact, most of the time it will be somewhere in the middle of the next semester. Like when I was in grad school, it’ll be spring semester and all of a sudden something from the fall semester would click. A lot of my students tell me that is true for them also, and so combining everything into one semester sometimes I think does not give them that opportunity for it to marinate in their brains and click.”

Others agreed:

“It takes time. We’re talking about [academic] skills that have evaded our students for the first 12 years of their education, K-12. Sometimes the adult learners, even longer. And it is not an instant process. It takes time. I mean, any of the research from the last 50 years will show you it’s very achievable, and we can actually make huge gains, but it takes time. Can it be done? Yes. Can it be done in five or seven weeks? No. No, no. Nuh uh.”

Other instructors spoke of the positives of the extended course time in the development of faculty-student alliance and rapport, beyond the added instructional time:

“You know, it becomes a safe place. With the other students in the class and with me, for people to ask the questions that they might not feel confident [to otherwise]. And reinforcing that that’s a good thing to ask questions, and I don’t mind how many times the same person or different people would ask the same question. Somebody needs to hear it and somebody will hear it.”

The specifics of the implementation of the serial compression approach vary by institution, in many ways dictated or at least impacted by the other two main areas of structural variation highlighted in this report, paired instruction and syllabus consolidation. Without paired instruction, the two separate courses compressed into one semester each represent a short but intense sprint for two instructors who complete a semester’s worth of course material in just seven weeks. With paired instruction, however, that same intensity continues for one instructor for the duration of the semester.

Notably, however, the general concept of serial compression is both inherent to syllabus consolidation, but also negated by syllabus consolidation. That is, consolidating the six hours of course time into one syllabus necessarily creates the continuity and sequencing that is the

intended goal of serial compression, but it also largely abandons the notion of there being two distinct courses to be serially linked. Further research comparing the syllabi of serially compressed courses to the consolidated syllabi of other institutions may illuminate how this trade-off is implemented. Specifically, such analysis could determine whether the content of the consolidated syllabus is, in effect, the same content and sequencing of the compressed courses merely repackaged without the nominal division at the midpoint, or if the consolidated syllabus instead more closely resembles the syllabus of the college-level course with only the registrar's records to show that the students and their instructor have twice the time allocated to spend on each individual lesson or assignment.

Paired Instruction: Instructors who teach both the learning support and college-level courses generally appreciate the seamlessness and flexibility of adapting the courses to each other but noted fatigue issues associated with teaching both courses back-to-back. Where courses are not paired with one instructor, close communication and collaboration between faculty members becomes key.

Another point of structural variation is whether institutions pair the corequisite remedial course and its corresponding college-level course with the same roster of students meeting with the same instructor for both sections. Where institutions have a consolidated syllabus, paired instruction is almost necessary². Where courses are less streamlined and one corequisite course supports multiple college-level courses, such pairing is impossible.

One theoretical advantage of the paired model is that the coordination of the “two” classes can be much easier to achieve; as one instructor charged with both the corequisite and college-level courses put it, “I get to talk to myself!” To illustrate the advantages of paired instruction for course alignment:

“And obviously with me teaching the combination, if I need to spend a little extra time today [on remediation], let's put the [college-level course] off and spend an extra 30 minutes on this class, and then we'll start the [college-level course]. I can do that. Or vice versa. So I've got that extra special thing I can say well, you know what? We need to really focus on this thing, we've got to really get this down, so let's spend some extra time on this. ...And having that extra time is valuable for them.”

² One faculty participant did note that their institution had previously used two instructors with a consolidated syllabus, but this was no longer the case.

Despite being relatively new to the school, a junior faculty member at another institution felt more isolated due to the paired instruction format, as she had no natural collaborative partner:

“We’ve had a lot of turnover in the math department recently. So it got passed from one professor as the coordinator to another and then she passed it onto me. The one who was the coordinator before me, she is not good at making plans for adjuncts, so there was not a set plan sent to me, and it was passed off to me so quickly that I didn’t have time to do anything about it, honestly.”

Where the remedial and college-level courses are taught by different instructors, respondents were also mixed in their appraisal of coordination and communication between faculty members. At one institution, culture, structures, and long tenures seemed to support strong communication and tight feedback loops:

“So many of us have been here so long that we just normally talk to each other. I mean, we’re very close. We’re committed to what we’re doing. And so that’s our topic. We may go to lunch together and talk math. We can have call meetings. For instance, usually at the beginning of the semester we will have a time where we can meet and talk to each other on a more formal level, but I would say really a lot of times more is done informally than it is formally.”

These close communication networks then have real benefits for student support:

“If I have a student that seems to really be struggling, I will oftentimes reach out to the college level teacher to find out, you know, well, how is the student doing in your class? And are you seeing some of the same issues that I’m seeing there? So yes, through the semester I find myself in close contact with those teachers as well.”

As well as for course development and alignment:

“We talk about it. Her office is next door to mine. So we do a lot of talking about where there are holes, how we can fix those holes. We do a lot of communication. Primarily I go to the course coordinator. If we make any changes in the syllabus, we have meetings where we talk about things throughout the semester, and that gives the coordinator information [regarding] if we do need to make some changes. So the course coordinator is usually the first person that I go to. The math department chairman also is very accessible and our math department chairman has two assistants that help. So we have lots of folks that we can go to to get our questions answered.”

Finally, at another institution without paired instruction, a department leader expressed skepticism about the coordination between instructors of corequisite and college-level courses:

“If I had to guess, I would say the learning support faculty members are mainly concerned with getting the students through the learning support course and the college level faculty member is trying to get the students through the college level course.”

Syllabus consolidation: Instructors and students noted benefits of syllabus consolidation, including content cohesion the ability to carry out the course at a slower pace.

The third area of structural variation relates to syllabus consolidation, in which the total course material for both the corequisite and college-level course are synthesized and presented as one comprehensive curriculum. As noted in a prior section, further research and analysis would be necessary to determine whether these consolidated syllabi more closely resemble the combined curriculum of a remedial and college-level course combined, but with no arbitrary midpoint defined, or more closely resemble the syllabus for the college-level course alone, with the extra time given to covering the lessons more slowly, offering more examples, and giving students more individualized support.

In some institutions, it is clear that not only is there not a consolidated syllabus, but the syllabus for the remedial portion has not adapted to fit with the corequisite model:

“The [corequisite course] is basically the same course that I taught back in the late ‘90s and throughout the 2000s, and that was just a basic algebra course, very similar to algebra I in high school. And that class continues to be basically the same.”

In contrast, some sites have such a consolidated syllabus that the interview subjects had trouble responding to questions or prompts that attempted to draw contrasts between the corequisite and college level classes:

“Here’s the thing, at the end of the day, whatever you want to call the class, we’re teaching them how to write – we’re teaching them how to improve their writing and improve their writing as much as possible obviously at college level. That’s the goal... So you know, this idea that learning support and [college-level] are different classes, they’re the same class. We’re trying to improve literacy skills.”

A colleague from the same campus agreed:

“It’s the same class... We have one syllabus. It’s the corequisite syllabus, and we teach it – it’s one class.”

For the most part, these instructors reported that an observer of their classes would not be able to distinguish with great clarity when the remedial time ended and the college-level course began:

“Because I’m the same instructor in our current model, it would be a three-hour class, I mean, I vary it somewhat, but it has to be connected to what we’re currently doing, and so it’s going to be a three hour class. Because that’s the way I think about it, and that’s the way I structure it. I know that some of my colleagues kind of split and do the learning support. I’m not sure how they do that, and I did try to do that at one point, but I never could kind of separate it in my brain effectively.”

In at least one institution without an explicitly consolidated syllabus, faculty seemed aware of the potential benefits:

“Right now the corequisite courses are separate courses. We’ve asked, ‘is it more appropriate for the learning support to be a lab associated with the college level course?’ But nothing has ever come of that. I don’t know any good ways to do it.”

In contrast to the frenetic pace of serial compression, instructors whose course is structured with the consolidated syllabus talked about how the format felt more leisurely, with benefit to student learning:

“I have more time to walk them through things more slowly... because we’ve got the time. And we just really slow down, because the students – It’s not that they’re not capable, they just have not been listened to. A lot of their skills are already there. It’s helping them be confident that they’re smart enough to manage it and learn some of the tricks and tools that they either missed out and have some deficits in that area, or they were put in the back of the classroom and kind of ignored, or just no one in their home had achieved a level of success academically, and so they didn’t believe they had that or they’d been told they didn’t. And so a lot of it is building up their confidence and helping them to kind of get used to the whole college experience and realizing that it’s not a select group of people who can [succeed]. Those are skills you can learn. Those are skills you can practice, and there are various strategies and techniques to do that, and just to help them recognize that they have the skills, that I’ve got the tools to help them use their skills, and I can provide that education to them so that they can move forward and be more independent and more confident.”

To the extent the two courses were misaligned, students saw opportunity to trim content from the remedial course that never came up in the college-level course, perhaps suggesting that institutions more explicitly structure the remedial syllabus as a complement to college-level courses:

“There were a lot of elements that seemed like they didn’t recur later. So you learned some information that maybe didn’t come back up. And... because some of that information didn’t reoccur later, some of the content never came back up, I felt like maybe some of it just isn’t fully necessary.”

The variation in the structure of syllabi belies variation across TBR institution sites in the extent to which they share a vision of what corequisite remediation is intended to be. By maintaining unique and separate syllabi for the two courses, especially syllabi from 30 years ago, departments reflect an understanding of the corequisite model as a mere reordering and rearranging of the prior system—a new way of offering both a remedial and also a college-level course as separate entities. Conversely, the consolidated syllabus may demonstrate an understanding of the corequisite model as an entirely different form of student support from prerequisite. Rather than being the same remedial material offered on a different timeline and retaining the approach of requiring students to master and pass one course before taking another, corequisite time can wholly focus on helping students succeed in the concurrent college-level course. This understanding would then have clear implications for decisions regarding paired instruction (which then makes more practical sense) and serial course compression (which then makes less practical sense).

Course streamlining: Where institutions offer a single learning support course to precede multiple college-level courses rather than streamlined one-to-one course matching, this appears to be a vestige of the prerequisite system that creates unnecessary challenges for students and instructors under the co-requisite model.

As noted earlier, course streamlining intersects with other dimensions of corequisite program design. For corequisite courses using a consolidated syllabus or paired instruction, streamlining is largely inherent to the program design. But in cases where the remedial and college-level courses have separate syllabi and are taught by two different instructors, the isolated contrast between streamlined and split course sequences is quite notable in terms of both the coordination that occurs between faculty as well as the coherence of the program for participating students. Notably, the positive excerpts regarding faculty communication included in the section of this report on Paired Instruction come from institutions with highly streamlined course sequences, and the participant who expressed skepticism about communication between remedial and college-level course instructors works at an institution with split sequences. That department leader continued:

“There’s not that great of communication with the college level faculty. Another factor that compounds that issue is at present a student can sign up for any learning support course and any college level course. So you may have a class of 20 learning support students in 10 to 12 different college level courses, and that makes it sort of hard for that communication to happen. I would suspect there’s not much communication going on.”

At the institution with the highest degree of split sequences, student perception of the alignment of the courses was mixed. For students at this institution who felt their corequisite course was well-aligned, it seemed that the students themselves served as liaisons between the faculty to compensate for the lack of direct communication:

“[The corequisite instructor] would ask what we were learning in our statistics class and then we would tell her, and then she would kind of break it down in simpler terms so we were able to better understand it.”

For many others at that institution, the split sequencing led to a lack of coherence in the remedial course:

“[The courses] weren’t in sync, so I would have already covered what [the remedial course] was on way ahead in [the college-level course], and we’re like ‘okay, we just did this before already. Why are we covering this now?’ Like we should have – You should have been in sync more, so it really didn’t help at all. That’s why I was really confused about the whole two class things anyways. I really didn’t even think about them being connected.”

In some cases, the misalignment led to students seeking a third level of support for content only covered in the remedial course that was not in the college-level syllabus or textbook:

“It just didn’t make any sense to me, because... there were also things that weren’t covered in the [college-level] class, so I was like, what is this? We’re not even learning this. I’d have to look it up, Google it.”

In other cases, the course content remained misaligned, even if some students found it generally helpful anyway:

“[Corequisite] was a nice refresher, but in terms of helping with the other math course, it wasn’t. [The college-level material] was different than what they were teaching in the remedial course. I believe I probably could have skipped [remediation] altogether and gone straight into the [college-level course], but of course scores didn’t match up.”

And others even saw contrast in alignment over the course of the semester:

In the beginning they were similar, but later on it was very different. In the beginning it was helpful... concepts were aligned. Whatever they were teaching in my [college-level course], first they introduced me in the [corequisite], and then it was easier for me to understand what she's going to teach in my [college-level] class. Later the [college-level] topic was totally different from what [corequisite] was teaching and whatever assignments was in different – they were different in both classes.”

This echoed the experience of students who had split-sequence courses at an institution at which streamlining was more of a norm:

“My supplemental class had students in there from different classes-- one might be statistics, one might be trigonometry. I was in there for just general studies math. But they would still talk about how it was connected to each class. The professor knew what each class was going through, so if you had a question about it you could ask her about it and she'd understand which one you were talking about. So if someone from statistics had a question they would ask her, and they would usually get their [questions] answered.”

In streamlined sequences, students' experience of the two courses felt more coherent despite having separate instructors and syllabi for the two:

“[The alignment] was just apparent. I mean, it would be like chapter one, learning support, chapter one, [college-level], same week type thing, but it was never like ‘this is to help you directly in [college-level course].’ [Corequisite worked] perfectly. It did what it was supposed to do. If I tried to skip doing my learning support and just do my [college-level course] first I would be lost.”

Faculty at institutions with split sequences spoke of the challenges of creating a coherent corequisite curriculum to sequence with multiple college-level courses at once. These excerpts become a dense web of course number references, but an illustrative example is as follows:

“I may not go quite as deep into the algebraic concepts [in the corequisite], and there’s kind of a disconnect there, like if a student has [the statistics] learning support and then goes on to take like the algebra essentials course because they’re going on in STEM, there’s a little bit of a ‘we expect you to know this in algebra essentials,’ but you kind of got it in the [statistics] learning support, but maybe not as in depth as we kind of expect. So we’re going back over stuff and reviewing stuff with them and, you know, I get – the more algebra stuff I add into the learning support with the statistics, I start getting kick back from other math instructors that are like, you know, this class isn’t supposed to be for going onto [college-level algebra].”

Except where human resource constraints preclude it, it seems departments should make an effort to maximize the streamlining of corequisite and college-level courses. Structuring remedial courses for versatility in course sequencing may have had appeal when students took remediation and college-level courses in successive semesters, creating an opportunity to change routes. Though instructors still often use the temporal language of “going on to” a college-level course from a given corequisite, the concurrent enrollment in the two courses under the corequisite model should minimize the occurrence of students changing their minds on course selections between remediation and college-level courses.

Measuring Success: Faculty respondents spoke positively about specific benefits of the corequisite model while still holding largely negative summary judgments.

Faculty perceptions of the success of the corequisite model varied less between participants and more within individual interviews, depending on what objective the participant was discussing at the time. Many faculty participants spoke about the benefits to remedial students in having a shorter path to college-level material, and thus their degree, through the corequisite model. Several observed that benefit in specific students. Said one instructor who made the contrast to prerequisite explicit:

“In the classes where I’ve taught a prerequisite, and they have to move through semester, semester, semester to get into the math course. A lot of them give up before they get to the end, because it’s like, ‘I’ve got to take three semesters of math before I can even get my math credit? Why am I bothering with college?’ They don’t see the light at the end of the tunnel right away, especially if they have to take three prereqs before they can even get into their credit course, where with the coreq they know one semester they might be taking double classes, but one semester and they’re done and they can move on into trying to finish their degree.”

Others spoke to either the theoretical aim of the corequisite model.

“The idea is – because we don’t want to create barriers for our students. We don’t want them to be stuck or feel like they’re trapped in the quicksand that is learning support, and they’re spending all their time and energy and learning support. So that’s essentially why the shift to the corequisite model.”

“It was frequently two to three semesters before they even finished their learning support, which if you’re a two year community college, you want people out in the workforce after two years, that’s not good, right? I do understand that.”

...or to its positive effects:

“The completion rate, the minimal attrition rate, those are what I see as successes of the coreq.”

“It has improved through [student] performance, because now the goal is for the students to pass the college level course or the gateway course as some people say. And I mean, that’s – the focus has changed to helping them get through the college level.”

And yet, many of these faculty members who understand the goal of corequisite and could see its success in achieving those goals at their institution, still spoke unfavorably of the program on the whole:

“[Was the prerequisite model better?] Yes, yes. And I think if you talk to anybody that’s teaching in those classes they will tell you the same thing. I don’t know anybody that will tell you that the corequisite is the best model.”

“It’s been my desire since the coreq has been in existence to break it.”

“Just tell them to make it stop.”

Negative summative judgments of the corequisite model seemed to come in the context of instructors evaluating the model not on the success of its stated goals, but in their observation of reduced student aptitude in their college-level courses. These instructors did not acknowledge the ways this might be an anticipated, if not intended, byproduct of the model working as designed. An apparent consequence of TBR’s move to corequisite remediation may be that the very success of the move looks like failure to many faculty at these campuses. That is, the students who constitute the positive policy effects of the corequisite’s higher retention rate are students who now take college-level courses they would not have taken otherwise and appear to these instructors to be especially underprepared in a way they were not used to seeing among the much smaller, pared down, pool of students who made it to those college-level course under the prerequisite model. This is a form of reverse survivorship bias: under the old system, marginal and low-performing students were effectively screened from college-level courses by a multi-semester slog of prerequisite classes, making the remaining students appear especially strong when they finally reached college-level courses. But naturally the survivors will be strong in a system in which only the strong survive. What instructors interpret as corequisite courses being less effective at *developing student ability* may be merely corequisite courses being less effective at *screening out weaker students*. This potential bias is evident to greater degree in some interview excerpts than others:

“I would like to go all the way back to 1985 when we had a basic arithmetic course for five days a week. We had the elementary algebra for five days a week, and we had the intermediate algebra for five days a week. Yes, that was 15 hours of prerequisites, but the students were stronger by the time they got to their college level course.”

“[The prerequisite model] worked much better, because they would take their prerequisite courses, pass those, and then move on to the college bearing, credit bearing courses, college level.”

A clearer example of instructors not fully internalizing what success of the corequisite

switch should look like is an instructor who cites the very figure published by TBR as evidence of the success of corequisite remediation,³ but cites it as a criticism rather than as a multi-fold improvement over past performance across TBR colleges:

“Up until the end of 2019 I taught that pairing in the classroom and the first seven weeks of the semester we had to cover the [corequisite] course, and then the second half of the semester we covered the [college-level] course, and the success rate for students to be able to complete both of those was never really very good. Maybe 50%, maybe a little higher.”

Many other respondents, when asked for overall perceptions of the effectiveness of the corequisite model, stated that they were not aware of data suggesting whether the corequisite model is beneficial to students. Given the positive effects observed in Tennessee’s initial evaluations of the program, this should not only be possible to remedy but also potentially beneficial for faculty morale, implementation fidelity, and program success.

In addition to better understanding of the goals of corequisite remediation, including how that may alter the composition of college-level courses, for instructors to recognize and embrace the success of corequisite remediation, and to gain an ever-important sense of self-efficacy in their work, more professional development may be necessary to help these instructors understand what that success should look like, especially in regard to the expanded (though likely expanded downward) pool of abilities now succeeding to and through college-level courses. Specifically, it may help to instill in teachers a deeper

³ Tennessee Board of Regents. (2019). “Co-Requisite Remediation at TBR Community Colleges.” Report Brief. Accessed from tbr.edu, August 2021.

understanding that weaker, less-prepared students in their college-level courses is, in some ways, the objective of the corequisite model. The conceptually difficult truth is that the alternative to these students arriving in college-level courses under-prepared is not for them to instead arrive better-prepared by going through a battery of pre-requisite courses, but for them to not arrive in those college-level courses at all because they could not weather the prerequisite slog.

Summary and Recommendations

This report used interviews with faculty and students involved in corequisite remediation at TBR community colleges to highlight areas of contrast in the structural implementation of the corequisite model, and to understand both the nature of the experiences and perceptions of these stakeholders as well as how differences in policy may influence these experiences and perceptions.

Serial compression, paired instruction, consolidated syllabus, and course streamlining emerge as major points of divergence in the implementation of the corequisite learning model. Across each of these structural features, we find program coherence to be the dominant theme that determines whether faculty and students experience these policy decisions as successful..

- **For serial compression**, institutions can achieve program coherence by consciously adapting the corequisite curriculum to focus on a narrower set of concepts manageable for a seven-week timeframe and by carefully and thoughtfully scaffolding topics to transition seamlessly into the college-level course material. Given the pressure to reduce the number of concepts covered in the remedial section, serial compression of the corequisite and college-level courses may work best with greater streamlining of course sequences.
- **Paired instruction** can increase program coherence, but appears to do so at the expense of instructors' sense of well-being due to the cognitive demands of the extended course time. Where paired instruction is already implemented or being considered, institutions should recognize this increased cognitive demand and have additional supports (or relief) in place to make these terms more manageable for instructors. Streamlining seems to be inherent to the paired instruction model, and interviews suggest that the consolidated syllabus model also helps instructors execute a concurrent corequisite and college-level

curriculum.

- **The consolidated syllabus** requires either serial compression or paired instruction, as having two instructors simultaneously instructing a single cohort of students from a single syllabus during two-time windows was quickly deemed unworkable in places where it was tried. The sequencing of serially compressed courses can, in effect, always be viewed a consolidated syllabus, but making this design feature explicit may help frame the faculty coordination, students' approach, and student-faculty communication as more coherent.
- We find no benefits to **split sequencing** of corequisite and college-level courses in student or faculty experiences or perspectives on the corequisite model. Where possible, it seems that institutions should prioritize the creation of streamlined sequences in which each college-level course requiring a remedial component has its own dedicated corequisite course.

In addition to these design considerations, faculty may benefit from a clearer understanding of the goals of the corequisite model to reframe what they currently see as a weakness of the corequisite model as being its strength. Namely, that the alternative to having students they view as ill-prepared for college-level courses under the corequisite model is not those same students being better-equipped by the prerequisite model, but those students largely not making it to college-level courses at all under the prerequisite model.

Optimistically, such a reframe could benefit the institution, students, and instructors alike. Ideally, institutions may benefit from greater buy-in and more faithful execution of the corequisite model by department heads, faculty, and adjuncts alike. Students may benefit from a more sympathetic and appreciative approach from instructors to the extent instructors see and appreciate the corequisite model as making their time with those students possible, rather than merely harder. Finally, the instructors themselves may benefit from this positive reframe by feeling less frustration with their parent institutions, less burden to bring all remedial students to the same level of performance they previously observed among cohorts of students pared down by prerequisite sequences, and more efficacious in supporting student learning.