

**Framing Corequisite Reform: Examining Staff Perceptions and Buy-in  
of a Statewide Dev-Ed Reform Mandate\***

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**Abstract:**

States and colleges nationwide are adopting corequisite reforms, where students assessed as not meeting college-readiness standards concurrently enroll in developmental and college-level coursework. Leveraging frame analysis—an approach drawn from collective action research—and interviews with 49 actors at 16 community colleges implementing a statewide corequisite mandate, we examine how institutional actors construct meaning of the status quo and reformed dev-ed systems and how they assign responsibility for solving identified problems. Examining the micro-processes experienced by institutional agents may explain the lack of buy-in among college personnel responsible for implementing dev-ed reform—surprising given growing evidence of the effectiveness of corequisites—and variation in reform take-up. Our findings on the frames used by implementing actors illuminate individual-level processes underlying lags in reform implementation and, for policymakers and administrators, can inform potential counterframes to spur further action and overcome resistance.

*Keywords:* developmental education, community colleges, policy reform, framing theory, frame analysis, corequisite

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## **Framing Corequisite Reform: Examining Staff Perceptions and Buy-in of a Statewide Dev-Ed Reform Mandate**

### **Introduction**

One third of all college students attend community colleges, broad-access public institutions that disproportionately enroll students of color and students from low-income families (Snyder et al., 2019). Almost two thirds of community college students do not meet college-readiness standards in math and, until the advent of recent reform efforts, were placed into prerequisite developmental education (dev-ed) courses that do not contribute credits toward credentials (Bailey et al., 2010). To improve dev-ed completion rates, states and college systems across the nation are adopting *corequisite coursework* in which students concurrently enroll in college-level and developmental courses, thereby broadening access to college-level credits.

Implementing corequisites requires institutional actors to make sense of complex policy signals and determine how to translate policy into practice (Coburn, 2006, Schudde et al., 2022). How individuals frame policy problems can both “assign responsibility” and “legitimize actions” toward reform (Benford & Snow, 2000; Coburn, 2006, p. 344; Schneider & Ingram, 1993; Stone, 1988). The way faculty and staff frame and interpret dev-ed math reform informs their decisions about whether and how to redesign course sequences and prescribe access to reformed math pathways. Many stakeholders tasked with reform implementation previously maintained the traditional prerequisite approach to dev-ed. Recent research suggests resistance to dev-ed reform is particularly strong among math faculty and academic advisors (Cueller Mejia et al., 2020). Examining how personnel frame and make sense of dev-ed reforms illuminates micro-processes that occur when translating mandates into practice.

We draw on interviews with 49 actors implementing dev-ed math reform at 16 Texas community colleges (one third of community colleges in the state) to understand how community

college administrators, faculty, and staff frame and understand a statewide corequisite mandate. We leverage frame analysis—an approach drawn from research on collective action—to examine how institutional actors construct and co-construct meaning of dev-ed reforms and the traditional dev-ed system (Benford & Snow, 2000; Coburn, 2006). Frame analysis allows us to systematically analyze the way community college staff understand the status quo and reformed dev-ed systems and how they assign responsibility for solving the identified problems. The micro-processes experienced by institutional agents may explain the lack of buy-in among college personnel responsible for implementing dev-ed reform—surprising given growing evidence of the effectiveness of corequisites (Brower et al., 2017). They can also illuminate why colleges sometimes enact dev-ed reforms “in ways that undermine their potential benefits” and offer insights about interventions to improve staff buy-in and rates of reform implementation (Edgecombe et al., 2013, p. 5).

Our results illustrate that most implementing personnel—even those who are resistant to corequisite reforms—acknowledge that long dev-ed sequences in math can demoralize students. However, a substantial portion of math faculty, administrators, and advisors frame dev-ed as a consequence of earlier failures in the educational pipeline; many still emphasize a prerequisite approach to dev-ed as more aligned to how students should learn math skills. Support for corequisite reform often requires shifts in mindset about student learning, along with structural changes at the institution. We find that staff emphasizing frames that include alternative solutions—those who envision how corequisite reforms can address the problems of the traditional dev-ed system—are more likely to take responsibility for implementation. However, even among more problem-focused (rather than solution-oriented) administrators, middle managers understood it as their responsibility to comply with state policy by organizing the institution’s collective response.

### State Policy Contexts

Texas's public higher education system is among the largest and most diverse in the United States, second in size only to that of California, and includes 50 community colleges (Snyder et al., 2019). Before recent reforms, many colleges in Texas still offered dev-ed math sequences that were up to three semesters long (down from up to five semesters in prior decades). In 2011, almost one half of community college students did not meet the state's college readiness standards (Texas Higher Education Coordinating Board [THECB], 2016). Three years later, only 29% of those students had completed the dev-ed math sequence and 16% had completed the college-level math course required for a college degree (THECB, 2016).

In 2017, the Texas legislature passed House Bill 2223 (HB2223) (we also refer to HB2223 as "the corequisite mandate"), which required that Texas colleges rapidly scale corequisites. The law required a progression of increased enrollments in corequisite coursework across 3 years: by fall 2018, 25% of students enrolled in dev-ed had to participate in a corequisite model; the threshold increased to 50% by fall 2019 and to 75% by fall 2020 (THECB, 2018). In late 2020, the THECB leveraged its rule-making authority to require that, by fall 2021, 100% of students below college-readiness standards enroll in corequisites (THECB, 2020). Although the staircase-implementation of the mandate is unusual, the transition toward corequisite reform is not. Twenty-four states now use corequisite coursework to accelerate student access to college credits (Education Commission of the States [ECS], 2021).

HB2223 and the THECB's corresponding rules set timelines for meeting enrollment targets, but colleges had flexibility regarding how to meet policy requirements. The phased nature of the mandate and the resulting lag in implementation offered a unique window of opportunity to examine how institutional actors made sense of the policy and their actions toward meeting policy targets as the requirements ramped up over time. Before 2018, about 20 of the 50 community colleges offered corequisite math, with most early adopters offering only one or two corequisite courses and tightly

restricting student eligibility (Meiselman & Schudde, 2022). After the first phase (fall 2018), 30% of colleges failed to meet the required 25% threshold for student enrollments in corequisite math (Morales-Vale, 2019).

### **Literature Review**

#### **Dev-Ed Reform and the Role of Personnel**

Under a traditional prerequisite dev-ed model, fewer than one third of students assessed as not meeting college readiness standards complete their developmental coursework, according to national estimates (Bailey et al., 2010). An effective approach for increasing gateway math course completion among students who did not meet college-readiness standards is to allow them to enroll in an introductory college-level math course concurrently with dev-ed—i.e., a corequisite support course (Cho et al., 2012; Jenkins et al., 2010). With this approach, students can receive developmental support while they work to accrue degree-bearing credits, improving their momentum toward a degree (Adelman, 2006; Jenkins et al., 2010). Evidence from experimental and quasi-experimental research illustrates more positive impacts from enrolling in corequisite coursework than from enrolling in prerequisite dev-ed math coursework (Logue et al., 2016, 2019; Meiselman & Schudde, 2022; Ngo & Melguizo, 2022; Ran & Lin, 2022).

Despite the overwhelming positive evidence bolstering support for dev-ed reform, implementing largescale postsecondary reform is challenging. Personnel may be expected to revise programming with limited warning (Nix et al., 2021; Nienhuser, 2018). In the case of corequisite reforms, departments must decide how the dev-ed supports are structured, who should receive them, and which instructors to assign. In Tennessee, colleges had varied timelines for implementation of required corequisite reforms ranging from 1 to 4 years after their statewide mandate, despite the target that they implement at scale after a 1-year pilot (Ran & Lin, 2022). Dev-ed reform implementation takes time—to navigate the logistics and design decisions for new models, but also because of the time and

effort necessary to increase buy-in from personnel, some of whom prefer the previous system (Brower et al., 2017; Cueller Mejia et al., 2020). Descriptive results suggest that specific design elements of corequisite math are less important for student outcomes than is simply enacting the reform (Ryu et al., 2022). Examining the frames faculty and staff use as they interpret and communicate about dev-ed and related reforms can help illuminate the processes that stymie dev-ed reform take-up.

### **How Personnel Interpret Corequisite Reform**

Institutional actors are central to how policies work on the ground (Lipsky, 2010), where a crucial element of implementation is the process through which “actors grapple with a policy’s ideas” (Spillane et al., 2002; Woulfin et al., 2016, p. 114). Administrators’ framing of policies can shape how those policies are ultimately enacted at their institution (Coburn, 2006; Spillane et al., 2002; Woulfin et al., 2016). Enacting largescale reforms often requires organizational change, which involves political, social, and cultural transformations within the institution (Kezar, 2001). Both administrators and street-level workers endeavor to make sense of policy messages (Lipsky, 2010). Administrators may leverage specific frames in their communication with staff, emphasizing (or de-emphasizing) some ideas to motivate action (or inaction) based on their own understanding, preferences, or beliefs (Coburn, 2006; Woulfin et al., 2016). But street-level workers—in this case, faculty and advisors—concurrently work to interpret and implement policy messages and to communicate and enact their visions (Coburn, 2006; Lipsky, 2010; Spillane et al., 2004).

Implementing curricular reforms, in particular, often necessitates that instructors “want [that] change, take an active part in changing, and have the resources to change” (Cohen, 1990, p. 326). Knowledge and expertise, accumulated through years of teaching in and navigating a complex bureaucracy, can contribute to faculty’s power over organizational processes and resistance to institutional change (Grissom et al., 2015; Spillane et al., 2002). Faculty have domain over course sequences and curricula in their departments and over teaching approaches in their classrooms (Mesa

et al., 2014). As dev-ed reforms proliferated over the past decade, so did complaints from faculty that state policies accelerating and condensing dev-ed coursework circumvent faculty expertise (e.g., Cafarella, 2016; Nix et al., 2021).

Faculty are more likely to perceive dev-ed reforms as successful when they are driven by faculty rather than administrators or outside actors (Cafarella, 2016), as personnel are often more invested in policies if they feel represented in the initial policy design (Ansell et al., 2017). If college personnel oppose policies from the government or upper administration, they may actively and passively stymie policy implementation, screening out or rejecting policy messages they deem undesirable (Brower et al., 2017; Logue, 2017). Brower and colleagues (2017) examined institutional actors' reactions and implementation responses to Florida's dev-ed reform policy—which made dev-ed optional—and found that the composition of personnel's varied responses (oppositional, supportive, or neutral reactions) contributed to differing levels of implementation across institutions.

Even in contexts with state-initiated reforms, faculty often have discretion over curricula and course placement recommendations. For example, faculty are responsible for setting placement-test cut scores to determine students' initial course placement (Melguizo et al., 2014). As street-level bureaucrats, faculty may implement policies differently than originally intended, particularly in contexts with little oversight or accountability. In the case of dev-ed reforms, faculty buy-in can vary across subject-matter expertise. Early evidence from dev-ed reform in California suggests that math faculty were less likely than English faculty to meet statewide targets; proportionate to English-course enrollees, fewer students enrolled in transfer-level math courses, and math departments less frequently reported using state recommendations for placement (Cueller Mejia et al., 2020).

Academic advisors are the face of institutional student success initiatives and a primary source of policy information for students, transmitting and translating policy signals (Karp & Stacey, 2013; Schudde et al., 2021). At times, advisors convey expectations of reform-resistant instructors, sending



students messages about course “rigor” to prepare them for “sink or swim attitudes” among faculty (Brower et al., 2018, p. 122). When dev-ed courses became optional in Florida, if students learned about the shift in policy, they did so through advisors (Brower et al., 2017). In cases where advising staff did not revise guidance to incoming students, policy-uninformed students were more likely to enroll in dev-ed coursework despite its being optional. These examples further illustrate how college personnel shape students’ access to reformed math pathways. However, extant research does not offer insights into the micro-processes that shape why and how personnel interpret and enact (or hinder) reforms as they do.

### **Research Questions**

To understand micro-processes shaping community college personnel’s corequisite reform implementation, we ask two interconnected research questions:

1. How do community college personnel frame dev-ed reform and the corequisite policy mandate and what is the content of prevalent frames?
2. How do actors assign responsibility for success in the dev-ed system and understand their own responsibility for implementing change?

### **Conceptual Framework**

Contemporary framing theory originated from social movements and collective action research focused on organizational processes that mobilize action; it is well-suited for studying responses to policy reform (Benford & Snow, 2000; Johnston & Klandermans, 1995; Snow et al., 1986). Collective action frames capture how individuals interpret and make sense of complicated social situations and policies in ways that motivate action (Coburn, 2006; Snow et al., 1986). Frame analysis examines problem framing, how people use interpretive frames to shape their own and others’ meaning-making, and strategically communicating those frames to mobilize action (Coburn, 2006).

People invoke two kinds of frames as they translate policy into practice: diagnostic frames, which define problems, and prognostic frames, which propose solutions (Benford & Snow, 2000;

Coburn, 2006). In implementation, diagnostic frames provide a rationale for overhauling practice, whereas prognostic frames provide ideas about how educators should or must respond to a policy (Woulfin et al. 2016). The two types of frames are “closely intertwined,” as prognostic framing implicitly defines the problem and attributes its source (Coburn, 2016, p. 347). Both frame types involve an attribution of responsibility. Diagnostic frames often involve the assignment of responsibility or culpability of problems, where different actors may differently attribute the source of the problem (Snow & Bedford, 2000). Even in prognostic framing, as potential solutions are put forward, there is still an attributional aspect where each frame implies a source primarily responsible for moving toward the solution.

### **Methods**

To explore how institutional actors understood dev-ed and corequisite reform in Texas, we drew on data from interviews with personnel responsible for implementing dev-ed math reforms at 16 community colleges. The University of Texas Institutional Review Board determined that this study met criteria for exemption from further review due to its focus on educational settings and use of low risk interviews (FWA #00002030).

### **Sampling and Recruitment**

To ensure we had variation across colleges in our sample, we used purposive sampling to capture community colleges at different stages of implementing the mandate. We relied on descriptive statistics provided by the THECB that captured the percentage of eligible students at each college enrolled in corequisite math in fall 2018 and 2019. We stratified the list into colleges falling below, at, and above the state’s target corequisite threshold (i.e., 25% and 50% of eligible students in corequisite math in fall 2018 and 2019, respectively), selecting five colleges per stratum with varied institutional

characteristics. We collected data at five low-, six medium-, and five high-implementation colleges.<sup>1</sup> Table A1 in Appendix A briefly describes the sample colleges, illustrating variation in enrollment size, percentage of white students, and urbanicity within each stratum.

We used purposive sampling to recruit personnel involved in coordinating corequisite implementation decisions (academic and student affairs administrators), designing math sequences and corequisite courses (math faculty, program coordinators, and department chairs), and advising students on math course selection (advisors). In each interview, we also used snowball sampling, asking for referrals of colleagues involved in corequisite math implementation. We aimed to interview two or three staff per institution but experienced variation across colleges that ranged from 1 to 5 participants. We conducted 49 interviews with staff across the 16 colleges. Table A2 in the Appendix describes the participants, including their pseudonym, institution's pseudonym and strata (whether their college was below, at, or above state enrollment targets for corequisites), role at the college, and primary frame type (diagnostic or prognostic). We interviewed four upper administrators (e.g., vice presidents of student success); 19 mid-level administrators (personnel with administrative duties who also have ground-level duties and expertise, e.g., eight department chairs, seven deans, and four program coordinators); 15 math faculty; and 11 advisors.

### **Data Collection**

In fall 2020, we conducted 60-minute semistructured interviews via phone and zoom, which we audio recorded and transcribed. We asked general questions about dev-ed and the goals of reform, along with specific questions about HB2223, asking participants to describe HB2223, how it informed changes at their college, and what role they played in implementing those changes. Given the timing of our research, some interview questions were retroactive; we asked staff to recall implementation after

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<sup>1</sup> Because of a delayed response from one of the medium-implementing colleges, we selected an alternate but eventually also received a response from the first.

the initial phase of the mandate. However, because all colleges were still in the process of expanding access to corequisites and at least one third of the sample lagged in meeting the state's required thresholds, we capture the ongoing framing of reforms and sensemaking of policy signals in real time.

### **Data Analysis**

We coded transcript data in the qualitative software program Dedoose using a hybrid method (Miles & Huberman, 1994). Informed by the literature, framing theory, and knowledge of the policy, we initially coded the staff transcripts using a priori codes we developed, including the staff members' perceptions of dev-ed in math; how they learned about HB2223; their knowledge and perceptions of HB2223; the role they played in implementing corequisites; and plans for moving toward scale. To complete initial coding and enhance the validity of our findings, all team members individually coded one transcript and met to talk through discrepancies, resolve disagreements, and determine necessary revisions to the coding scheme. Each coder coded a second transcript, which was checked by the first author, and the team met again to resolve discrepancies and further clarify the coding scheme. Then each coder individually coded a caseload of the remaining transcripts. The first author checked a random set of transcripts throughout the coding process, and the team met each week to discuss and resolve coding questions and disagreements about their caseload.

After the initial coding, we examined excerpts captured by our general codes thematically, identifying how personnel described and interpreted policies and the role they played in implementing the policy at their college. We categorized themes and ideas that emerged inductively from the data and used them to build a metamatrix that focused on how staff understood and operationalized policy messages about HB2223. We used the qualitative matrices (Miles & Huberman, 1994) to synthesize findings across personnel, campuses, and data sources to examine implementation processes, roles, and interpretations of policy across participants. We derived categories for the matrices from the themes identified during coding. For each staff member, our matrix captured the person's demographic data,

role in the college, definition or understanding of HB2223 and related dev-ed policies (this became the primary evidence for the frames individuals used), how they learned about HB2223, how their understandings influenced their behavior, what role they and others played in selecting and implementing a plan for enacting HB2223, and experiences working with others in making those decisions. Throughout the process, we worked toward consensus by adding more details or adjusting the interpretation of themes.

We examined the matrices for patterns and themes within and across categories to draw out major findings. The emergent themes illustrated the various frames used by personnel to understand dev-ed and dev-ed reform efforts, the varied levels of individual responsibility staff took across those frames, and the implications for their role in determining corequisite practices. We worked from the matrix to create additional memos outlining different frames for understanding the corequisite mandate, varied perspectives on individuals' sense of responsibility regarding reform implementation, and individuals' role in determining new practices.

We worked to verify or correct our interpretations of participants' responses to maintain credibility and trustworthiness in our findings. We conducted member checking by soliciting feedback from practitioners who played a key role in policy implementation at colleges throughout the state and from scholars studying similar processes in other contexts (Miles & Huberman, 1994). We also triangulated data (interviews from other personnel, institutional surveys, data reported to the THECB, and our fieldnotes from corequisite workshops and conferences in the state) across sources to ensure our data and analyses were consistent and accurate.

### **Results**

Leveraging data from qualitative interviews of staff members charged with implementing the corequisite reforms in Texas, we examine their framing of dev-ed and related reforms to understand micro-processes shaping policy implementation. We first examine the frame types and frame content

used by college personnel in their discussion of dev-ed and the corequisite mandate. Then we examine how those actors assign responsibility, including taking ownership for implementing change, within the dev-ed system.

### **Framing Dev-Ed: Prevalence of Frame Type and Content of Frames**

Diagnostic framing was more prevalent across participants, with 31 focused on problem-framing with little consideration of alternative orders or solutions to the existing dev-ed system. The remaining 18 participants used frames that emphasized solutions to what they considered to be dev-ed's primary challenges. About two thirds of staff in each role—administration, faculty, and advisors—used diagnostic framing (see Appendix Table A2 for each participant's frame type).

We identified seven common frames based on general understanding of dev-ed and related reforms, where the diagnostic version emphasizes the problem and the prognostic version of that framing implies the same problem but moves toward potential solutions. Table 1 summarizes the common frames, ranked in order of prevalence of themes drawn from the interviews. Next we elaborate on those common frames and variation across frame type.

<Insert Table 1 near here>

### ***Traditional Dev-Ed Leaves Students Behind (Frame 1)***

One of the most common frames, which resonated with most staff, expressed an understanding that prerequisite dev-ed contributes to students' lack of progress to and through degree-bearing credits. Diagnostic frames about traditional dev-ed acknowledged the length of prerequisite sequences as problematic. Faculty acknowledged: "We've always had lots of students that repeated the same dev math class" and, before HB2223, "students weren't completing our math sequences" (Sierra, College B). Under the traditional dev-ed system, students languished in course sequences that did not move them any closer to their degree goals. Silvio, a math department chair at College F, explained that traditional dev-ed "put the students through a lot of challenges" because "if they failed at one of the levels, that

meant they spent another semester there, so it took them forever to get through the sequence.”

However, by faculty using a diagnostic frame, corequisites were described as “a tall order for students” (Daniel, Department Chair, College C) and like “pushing a little bird off the nest” (Sierra, faculty, College B). Samuel (professor, College O) elaborated: “You’ve got those students that I could ask them what’s three times seven and they would look at me blank. What do you do about that? Probably not put them in college algebra.” Even though personnel acknowledged the problem of prerequisite dev-ed sequences’ impeding student progress, they did not think students would fare well in a corequisite course structure.

Prognostic applications of the frame emphasized corequisites as a potential solution to prerequisite dev-ed’s leaving students behind. Those using a prognostic frame type saw corequisites as a means to prevent students from “getting stuck.” Valeria (faculty, College B) explained: “I do know, back then [under prerequisites], how many students got stuck in that developmental sequence . . . if they get stuck in that math, they can’t finish any degree, because every degree has a math component.” Corequisites, therefore, “try to get the students through their entry-level, their developmental math classes faster” (Valeria). Jean (administrator, College K) similarly understood reforms as solving the “vicious cycle of never going anywhere, never getting out of dev-ed.” Through the corequisite reforms, she explained, “we were being pushed to, basically, take out any developmental standalone classes and get students into the college classes” to “break that cycle.” That vicious cycle could otherwise lead to excess credits. Personnel worried about students leaving college with “90, maybe 100 credits” (an associate degree typically requires only 60 credits), which is “a disservice to students” (Diane, administrator, College A). Diane attributed students’ over-accumulating credits to their getting “stuck in” standalone “developmental ed buckets.” Those with prognostic frames saw corequisite coursework as building “the structures that are required to ensure students finish,” interpreting coreqs as conducive to student support and success in math (Diane).

***Traditional Dev-Ed Serves a Function (Frame 2)***

Another prevalent frame, particularly among math faculty and advisors, emphasized the important functions of dev-ed. Actors using diagnostic frames described prerequisite dev-ed as providing a necessary “foundation” and “basics” to start students on their college path in math (Samuel, faculty, College O). Ximena (advisor, College A) explained:

The goals for developmental math are to prepare you with the skills that you need and the background that you need in order to be successful in your college-level math and your science courses. So it’s really kind of rehashing, relearning things that were maybe introduced earlier on in your education, but it’s giving you that foundation.

Staff who understood prerequisite dev-ed as a foundation argued that students wanted—and needed—it. Eric, a dean at College A, recalled:

Some students say, “Hey, I really need this development.” And the placement says, “Yes, you do.” We’re trying to get as many of them into the coreq as possible, but they need development . . . We have students where, based on their TSI score, the math faculty or all of the dev-ed areas really felt that they needed to get a refresher.

This idea that both students and faculty preferred a prerequisite “refresher” before taking college-level math was fairly common. But after the corequisite mandate, Rose, a dean at College O, lamented: “They come here, and it’s like, ‘I need help.’ Now we have nothing to offer them, except for this thing [corequisites].” She was skeptical that coreqs would offer adequate support.

Those with a prognostic frame type also understood that students needed development but saw potential in a “just-in-time” corequisite support course that offers concurrent topical dev-ed support for college-level content. Kate, a dev-ed coordinator at College N, described a distinction between the mindsets of personnel who preferred a prerequisite “refresher” course—a perspective she felt was



more common among her math faculty colleagues—and staff who were open to just-in-time corequisite support courses:

Our full-time math faculty bring with them years of experience, and traditional ways that math has been taught. I think part of the challenge for our math faculty was they were looking at it like a checklist. So, in Intermediate Algebra, there's a checklist and we have to go in this order. And then at the end of that order, that's when College Algebra starts . . . [With corequisites,] you're not going down the checklist in Intermediate Algebra, making sure you cover everything in that order. You're using College Algebra and supplementing what [students] need to be successful in that class. It's shifting that mindset from "I have to go in this order and touch on every single topic within Intermediate Algebra" to "I'm covering the topics to support College Algebra."

Corequisites would offer only supplemental support for topics relevant to the college-level course. But this was a drastic shift for personnel who adhered to the "checklist" mindset, as they wanted students to complete the entire checklist from Intermediate Algebra (a standalone dev-ed course) *before* they could begin the checklist for College Algebra (the college-level course). Many actors with prognostic framing stressed that "corequisites allow students the opportunity to actually get into the college-level course and earn that credit *with that support system in place*" (Elizabeth, advisor, College G). In this way, they still understood dev-ed as foundational for success but emphasized the benefits of taking the college-level course concurrently.

### ***Underprepared Students Inherited From the K–12 System (Frame 3)***

Institutional actors' understandings of dev-ed also framed inadequate K–12 education as the antecedent to dev-ed coursework. Carlos, an advisor at College A using a diagnostic frame, described K–12 schooling as "the root cause" for students' developmental needs; he complained: "For me, it goes back to K–12. Why are students graduating high school and still not ready for college?" He feared that

corequisites would “try to put a band-aid over it” rather than give students the full sequence of dev-ed from the prerequisite system. An administrator similarly described students’ underpreparation as a core problem colleges grapple with: “It’s before [students] even get to us. Why are we graduating 18-year-olds who can’t do simple fractions or write a complete sentence? That’s where it needs to start” (Tessa, vice president, College P). By placing blame on K–12 rather than postsecondary institutions, those with a diagnostic framing presented dev-ed as an extension—and consequence—of K–12 education.

Personnel employing prognostic frames acknowledged students’ underpreparation for college-level coursework but asserted that community college staff bear responsibility for meeting students at their current level of preparation. Josh (department chair, College A) emphasized the role of community colleges as a stopgap for students:

The high school could say, “Well, the junior high didn’t prepare them.” We can always pass that down, but eventually where does it start? It’s not just the high school’s fault; some of it can rest on our shoulders, that we’re not visiting the material in a way that’s conducive for them, we’re not offering the right classes at the right time.

Despite acknowledging failures that occurred earlier in the academic pipeline, Josh interpreted it as the professional responsibility of community college actors to address student needs. Kelly (faculty, College C) considered her responsibilities in the classroom: “Teaching the developmental student may require more teaching strategies and skills . . . I love to be able to take a student who struggles and pull the blinds back for them.” That process involved “hard work on the faculty end to create and design” course content that offered the right pieces of information at the right time to “serve our extremely underprepared students in some way” (Kelly). Overall, those using prognostic framing frequently emphasized that community colleges must offer structures and resources for students to catch up in areas where they are underprepared.

***Dev-Ed Sequences as Demoralizing (Frame 4)***

Under the traditional prerequisite approach, “some students became disillusioned” by the long sequences (Sylvio). Sylvio, a department chair at college F, explained that they would say, “Gosh, I can’t make it. College is not for me.” Personnel with diagnostic framing acknowledged that prerequisite dev-ed coursework could discourage students from continuing their studies. However, they worried that corequisite reforms would have an even higher cost. Despite conceding potential benefits of corequisite coursework such as students’ “not having to take two semesters of math” and instead “get it done in one semester,” they expressed concern over a psychological cost of the reforms. “It can be a little intimidating” for students, explained Jasmine, an advisor at College J. Tiana (advisor, College P) felt “anxiety” about the coreq model; she “see[s] a student that maybe [had] taken math three times and wonder[ed], ‘Ooh, is this co-requisite going to work?’” Despite observing the discouraging and demoralizing effects of the traditional prerequisite approach, those with a diagnostic framing did not see corequisite coursework as a viable solution.

Those with a prognostic frame type similarly described repercussions of long developmental sequences but saw corequisite reforms as a potential solution. Briana (advisor, College L) explained:

Overall, we are glad that this has happened because we [advisors] sit with these students as they struggle to get through developmental courses and become disappointed or demoralized that they’re in college but not yet feeling like they’re college students.

By enabling students to enroll in degree-bearing courses right away, corequisites overcome the discouraging and time-consuming element of prerequisite dev-ed. Marie (dev-ed coordinator, College G) said: “We get them when their confidence is so low. That’s the biggest part of developmental, and I think that’s why I realized it [HB2223] was going to work, because we could still do our main thing.” Under HB2223, dev-ed personnel could help students overcome insecurities while building their math skills within the corequisite support course.

***Understanding Policymakers' Motives and Use of Professional Expertise (Frames 5 and 6)***

Two frames that resonated with faculty and administrators—but were not expressed by advisors—emphasized the disconnect between policymakers motives and how dev-ed operated on the ground. First, faculty members and administrators using a diagnostic frame expressed concern about the misalignment between the proposed reforms and students' needs. Santiago, a department chair at College O, explained that he was “suspicious that the motivation was merely budgetary and not necessarily for student improvement”; he worried that “success and budget doesn't necessarily mean meeting students' needs.” Faculty members were similarly suspicious of policymakers' objectives, suggesting that “[policymakers] did it not to push for student success but just to push students through to save financial aid money” (Vanessa, faculty, College C); they construed the bill as “just a money thing, trying to get the students to go through college faster, to get them out faster, to get them working faster” (Nikki, faculty, College J). Their framing interpreted policymakers as prioritizing finances over student success, an understanding that also assumed the prerequisite approach to dev-ed is effective, though costly.

The other frame—also only used by administrators and faculty—concerned policymakers' lack of deference to faculty's professional expertise and obliviousness to the burdens of reforms. Faculty and administrators using diagnostic framings argued that policymakers were out of touch with what happens in college classrooms. Brenda, a math coordinator at College A, said:

They have no flipping clue, especially if they're not an educator, if they've never been in the classroom and they've never had to do content and curriculum before. It's a very difficult implementation. It's never been easy, and I don't think it's ever going to be easy. But I wish people up in the legislature could know that.

Brenda described the difficulty of teaching dev-ed, underscoring her frustration that policymakers created legislation without taking into consideration the professional expertise of college instructors.

Administrators similarly complained that through HB2223, policymakers were “forcing [faculty] to do this, and they don’t even know what they’re talking about” (Paige, department chair, College L). This lack of content expertise made faculty and administrators view HB2223 as a “program led by politicians rather than academics” (Santiago, department chair, College O). Through this framing, ground-level actors emphasized their powerlessness and sense that their expertise was overlooked.

Faculty and administrators using a prognostic frame type similarly emphasized frustration that “entities who are not in the classroom are telling us how to best teach this” (Kelly, faculty, College C) but focused on what they needed for effective reforms: time and input from ground-level workers. Luisa, a math coordinator at College B, said: “I hope policymakers give it a chance before they implement something new. That’s what affects all these redesigns—they don’t give it the proper chance to work. We can’t change something and then expect it to work the next day.” Personnel suggested they would, as John (department chair, College A) said, “need a little more time with coreqs to see how they are actually working here.” They worried that policymakers often implemented new reforms before giving the prior reforms a chance to work. Marie (administrator, College G) explained, “Some of [the dev-ed faculty] were like, ‘Oh, this is another initiative. What do we have to do now?’ It was ‘how long are we going to do this, and then they’re going to change their mind and do something else?’” In this way, faculty and staff also emphasized frustration that policymakers intervened but did not give reforms a chance to work, contributing to *initiative fatigue* among implementing actors who have cycled through different initiatives from various reform actions.

### ***Job Security (Frame 7)***

A final common diagnostic frame resonated primarily with faculty, who worried about job insecurity, particularly for non-tenure-track faculty, resulting from dev-ed reform. One faculty member described ripple effects of corequisite reform: “You’re affecting people’s livelihoods, especially in this day and age where they’re losing their regular, daytime jobs. Now they’re losing their part-time jobs

because of this rule. So it's a domino effect all across the board" (Nikki, dev-ed professor, College J). An administrator described faculty members' concerns about job security as a root of faculty resistance to the policy:

We started asking faculty, "Can you help us spread this message and share more in classes that this option exists?" Some faculty were resistant. Of course, they felt like it was a job security issue. They felt that if they promoted academic coursework, that the developmental course was going to suffer, and that they would be out of a job. (José, department chair, College I)

For these actors, job security presented another problem associated with reform and implementation. Taken together, the content of actors' frames offers a window into their interpretation of the new policy, which informed their buy-in and sense of responsibility for implementing the mandate.

### **Responsibility for Improving Dev-Ed: Variation Across Frame Type and Institutional Role**

Entangled within the content of some of the prevalent frames described above was an assessment of responsibility. In this section, we further examine actors' perceptions of who is responsible for success in the dev-ed system, including how those perceptions vary across frame type and the role of actors.

#### ***Reluctance to Accept Personal Responsibility***

When it came to taking responsibility for implementing reforms, actors who relied on diagnostic frame types—whether advisors, faculty, or, to a lesser extent, administrators—were less likely to accept personal responsibility for implementation than those relying on prognostic framing. Actors using diagnostic frames typically externalized responsibility for lack of success in the dev-ed system, placing blame on the K–12 system for underpreparing students and policymakers for failing to leverage the expertise of faculty when designing dev-ed reforms.

The actors using diagnostic frames also expected government actors to provide guidance for change. David (Dean, College C) described his frustration with the coordinating board's insistence that they comply with the mandate:

It did not feel like they were partners—it felt like they were adversaries . . . There's this “do-as-we-say” attitude that we got a couple of times from them . . . it got us off the phone with the co-board in a hurry when it came to coreqs. We determined that it was better for us to figure out all our solutions on our own and vet those carefully.

Like David, several personnel described taking ownership over making implementation decisions when it became clear they would be held accountable for meeting the thresholds of the mandate. Their college was expected to develop a plan for doing so. Daniel, from college C, explained:

I just don't know why there can't be more of a cohesive plan across the state for this. I guess that's what frustrates me, is that I sit on these webinars and hear what other colleges are doing. And, I think we need . . . I'm for individuality on many things, but I think there are times where we need some homogenous solutions here, and I think this would be one.

Daniel felt that the lack of clear templates for how to implement corequisites burdened college actors. By allowing colleges the autonomy to determine their own implementation strategy, the coordinating board placed greater decision-making responsibility on faculty and staff at individual institutions.

Administrators were often tasked with organizing the efforts of various personnel to implement the corequisite mandate. David, a dean, described himself as “the point person” for HB2223 at College C. He was an intermediary between upper administration and the math department; when asked to “make it happen” by his supervisors, he responded, “I need you to be patient on this particular point” and subsequently returned to the faculty and department chairs to say, “I need you to deliver.” David elaborated:

There was a lot of stuff at these meetings that pissed off the faculty that they said, “Oh man, we’ll never do that . . .” I was able to say, “Okay, I hear you. Guess what? You still have the state mandate. So you tell me what the solution will be.” So those meetings were very useful in terms of saying, “I need you to take responsibilities and—math faculty—for you to figure this out.”

They have done so. It’s been a little longer than I would’ve wanted, but they have done.

Although many faculty grumbled and did not initially feel responsible for making these changes, they were willing when pushed by leadership. Administrators, despite their own hesitation, persuaded faculty to take that responsibility. Rose, from College O, explained:

Faculty had the same reaction as I did. It’s like . . . “Heck no, this isn’t going to work. This is a terrible idea. Why is the state doing this?” After you get over that, you just kind of go, “Well, get over it. This is what we have to do.” And then they faced that challenge really well. They worked together so well as groups. We got some of our long-time adjuncts involved. They rallied.

Despite her own negative reaction to the mandate, Rose worked with faculty to “figure it out,” spearheading efforts to meet the requirements.

### ***Taking Ownership of Solutions and Reforms***

Actors using a prognostic frame were more likely to describe their individual responsibility toward implementing solutions to problems with the dev-ed system with less focus on compliance and more on meaningful change. Ruth, a dean and former math professor at College M, talked about the individual responsibility inherent in her role and the collective responsibility to make structural changes for the reforms:

I knew that I had a very large responsibility, a large responsibility to plan, to research, and to implement something that will be beneficial for students learning, and would still be rewarding for the teacher in the classroom. So I spent a lot of sleepless nights. I spent a lot of time online, on the phone talking to people across the nation because when you are dealing with so many



people's career path, it's a huge . . . I hate to use the word, but it's a huge responsibility. And I would often say that to my boss: "I am so concerned. This has to be successful . . ." It wasn't just me; we were all carrying the load. We saw the importance of involving the tutoring center, involving the advisors, midterm checks.

Ruth acknowledged that if the policy change were to work, actors from various roles would need to work together toward implementation; she saw administrators like herself—similarly to David above—as a catalyst and hub for those collective efforts.

Student-facing actors who used prognostic frames also described taking ownership for making the reforms successful. Faculty emphasized implementation responsibilities within their locus of control—namely, updating instruction for new coursework and making it work for students. Math professor Dasia (College F) rationalized, "I'm like, 'You guys deal with all the politics and all that stuff. Just let me know what I'm teaching so that I can get it together for my babies. Okay?'" Her sentiment was echoed by Valeria (faculty, College B): "I think it's up to us to show students it's [college-level math] a hurdle, but once you get over it, you're good." By focusing on their role as teachers, they emphasized their responsibility for making the reforms successful for students. Similarly, advisors admitted that before the reform, there were "so many barriers" where "we spent a lot of time basically, starting students in low-level dev-ed and they spent three semesters out of two years at a community college in those developmental courses," but now advisors worked to put a "support system in place" for students (Elizabeth, College G). The implementation process required "constant buy-in" and engagement (Brianna). Brianna (director of advising, College L) recalled:

It was a top-down directive, but it was bottom-up implementation. You get to make the decisions about what you're being told to do and then it's much more likely we're going to be able to accomplish and get it done and cope with the changes that are going to come with it.

Brianna preferred determining how required changes were carried out at her college and interpreted that autonomy as “extremely successful across the board.” All three advisors using a prognostic lens (out of 10 advisors total) were directors of advising, which may have shaped their perspective on dev-ed implementation differently from that of advisors only in student-facing roles.

### **Discussion and Implications**

This paper draws on framing theory to analyze how community college personnel in Texas understood a statewide corequisite mandate that required them to concurrently offer developmental support courses and college-level courses—eliminating prerequisite dev-ed—for students assessed as not meeting college-readiness standards. Although research illustrates resistance to dev-ed reforms and inconsistency in implementing dev-ed reforms (e.g., Brower et al., 2017, Edgecombe et al., 2013), it is unclear *why* there is a lack of buy-in among community college personnel—given the growing evidence that corequisites are effective—and which counterarguments and frames shape individual actors’ implementation. In this study, we used frame analysis to examine the frames that faculty and staff use as they interpret and communicate about dev-ed and related reforms (Benford & Snow, 2000; Coburn, 2006).

Our findings illuminate the attitudes and processes that shape dev-ed reform take-up. Those with diagnostic framing acknowledged problems with the traditional dev-ed system while stressing that community colleges—and dev-ed courses within them—enroll poorly prepared students. One of the most prevalent diagnostic frames does not identify a problem with dev-ed but rather a problem inherent to community colleges (e.g., inheriting poorly prepared students from the K–12 system), with an underlying assumption that prerequisite dev-ed addresses those challenges (another common frame). Prognostic frames, however, often strongly emphasize both a problem—e.g., that the prerequisite dev-ed system left students in non-degree-bearing courses for too long—and envisioned alternatives—like just-in-time corequisite courses—to the status quo. Although personnel using

prognostic frames tended to be more likely to take personal and collective responsibility for implementing corequisite reforms, administrators with diagnostic framing emphasized their role responsibility for complying with the policy and were catalysts for engaging faculty and staff in implementation.

The frames we identified offer insights into how personnel make sense of the traditional prerequisite dev-ed approach, where even staff pessimistic about corequisite reforms acknowledge that students get stuck in long sequences that do not count toward a degree, which can make them “demoralized.” This take aligns with prior evidence that students feel discouraged when they realize dev-ed credits do not count toward a credential (Deil-Amen & Rosenbaum, 2002) and that taking prerequisite dev-ed diverts students from taking degree-bearing credits (Scott-Clayton & Rodriguez, 2015). That even staff holding a functional interpretation of prerequisite dev-ed acknowledge these core problems suggests they may be open to solutions that address long and meandering dev-ed sequences. Individuals’ frames can be contested—changing over time—when actors are exposed to counterframes and alternate portrayals of the policy or situation (Benford & Snow, 2000; Coburn, 2006; Stone, 1988). Acknowledging these two essential problems of the status quo suggest an opening for additional evidence about how and why reforms like corequisites can overcome the challenges without leading to a host of additional problems (e.g., those counterframes would likely need to also counteract the perception among those with diagnostic frames that corequisites are akin to “pushing a little bird out of a nest”).

A related frame that resonated among math faculty emphasized the function of dev-ed. The functional interpretation of dev-ed was widespread, but only those with a diagnostic lens described *prerequisite* dev-ed as more effective than reforms at preparing students for college-level material. A dev-ed coordinator, Kate, spoke of the disconnect between the corequisite model and the mindsets of her math faculty colleagues. She described their “checklist” understanding of how students acquire

math skills, where the content related to math skills must be covered in a specific order. Corequisites “throw away” the prerequisite checklist, requiring only essential skills and content to support covering the items on the college-level course’s checklist. Improving buy-in for corequisites among math faculty with a checklist framing would require a considerable shift in mindset, and perhaps culture. To support such a shift, state agencies and institutions could offer additional evidence and instructional examples to demonstrate how and why just-in-time corequisite instruction can help students meet the demands of college-level math. By incorporating the prognostic-framing instructors and administrators—particularly those who envisage how coreqs positively interrupt the status quo—in communicating counterframes and additional evidence, the state and individual colleges could catalyze necessary institutional shifts. Such counterframes might illustrate the repercussions of status quo and the benefits of the alternative order within each college context (e.g., the negative outcomes for prerequisite dev-ed and positive outcomes of corequisites), making the benefits to the college itself tangible.

Our findings about responsibility suggest that state accountability for policy implementation incentivized action. The coordinating board’s continually checking in with implementing actors and collecting data to assess whether they met the threshold each year spurred colleges to take initiative toward reforms, despite resistance among some actors. Even among actors framing prerequisite dev-ed as more functional, personnel acknowledged that they took responsibility for making the changes at their college when it became clear that they would be assessed for compliance with the policy.

As in previous research, the content of frames from implementing personnel suggests that they might have been persuaded by the policy if they could have influenced it more (Ansell et al., 2011; Cafarella, 2016). Some of the skepticism among faculty and administrators toward the corequisite mandate emphasized the lack of input from college instructors. Incorporating faculty into early discussions about both crafting the initial guidance from the state and operationalizing corequisites could help address concerns among math faculty that policymakers did not respect their professional

experience and expertise. Incorporating implementing actors in earlier deliberations could also have helped policymakers anticipate and avoid challenges—for example, it could have led to recommendations for how colleges could address faculty concerns about layoffs.

### **Conclusion**

Understanding the perspectives of the actors charged with implementing dev-ed reforms, particularly in subject areas where the status quo may be entrenched, can offer lessons to policymakers and educational leaders seeking to make similar policy changes. Although the dev-ed reform mandates differ across states (e.g., CA's reforms for all students to enter transfer-level coursework does not require coreqs, and FL's policy made dev-ed optional), our results offer useful insights for other contexts. Our results illuminate some of the tensions that undergird the resistance to reform, including that some staff members saw benefits to prerequisite dev-ed—which do not appear to outweigh their concerns—and were frustrated by policymakers' mandating a solution without considering their expertise. The frames used by implementing actors can explain lags in implementation and, for policymakers and administrators, can inform potential counterframes to spur further action and combat resistance.

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**Table 1***Prevalent Frames by Frame Type*

Frames	Frame Content by Frame Type	
	Diagnostic	Prognostic
Traditional prerequisite dev-ed left people behind	Prerequisite dev-ed takes a long time but is less intimidating and high stakes for students than reformed pathways.	Sequences in traditional dev-ed are too long; coreqs/accelerated pathways let student get through content faster.
Dev-ed serves a function	The prerequisite dev-ed serves an important function as a necessary “refresher” or “foundation.”	Dev-ed serves a function but doesn’t require a specific timeline; coreqs can allow “just-in-time” support.
Underprepared students inherited from K–12 system	K–12 system leaves students behind.	Students come in underprepared and colleges need to catch students up while moving them toward a degree.
Prerequisite dev-ed as demoralizing	Students lose confidence when faced with long dev-ed sequences that don’t count toward degree.	Just-in-time support for college-level coursework can overcome demoralizing effects of dev-ed.
Policymakers’ proposed reforms don’t align with student needs	The reforms are not aimed at student success and do not align with the needs of students.	---
Policymakers do not understand dev-ed practices or burden of reforms	The reforms do not take into account how faculty and staff operate or ground-level workers’ professional expertise.	Policy reforms require time and expertise of ground-level workers; policymakers need to allow appropriate time for implementation before assessing if the reform works.
Job insecurity	Dev-ed reforms produce job insecurity as a direct result of policy change and implementation.	---