Examining Teacher Perspectives on College Readiness in an Early College High School Context

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As educational stakeholders endeavor to prepare more students for postsecondary success, the construct of college readiness has gained national attention. Scholarly perspectives vary regarding what constitutes readiness, but even less is known about the perceptions of secondary educators tasked with preparing college-ready students. Drawing on interview data and sensemaking theory, we explore the perspectives of 108 teachers working in eight early college high schools in a border region of Texas. Findings suggest teachers rely primarily on their personal and professional experience to make sense of college readiness, resulting in wide variation with respect to how they approach it in their classrooms. The article closes with implications for policy and practice.

As more and more students are encouraged to pursue higher education, college graduation rates remain stratified by race/ethnicity, class, and parent education (National Center for Education Statistics 2017). In some cases, disparities are worsening. For example, between 1995 and 2015, the gap in college completion among white and black adults aged 25–29 grew by 9 percentage points, whereas the gap among whites and Hispanics grew by 7 percentage points (Kena et al. 2016). High remediation rates, up to 68% at community colleges, further suggest that students are graduating high school underprepared to succeed in higher education (Chen and Simone 2016). These challenges have motivated a national focus on "college readiness," or the preparation required to succeed in credit-bearing college courses and persist to graduation (Conley 2014). Policy efforts to enhance readiness have spanned K–16 contexts, from a "college for all" high school curriculum to the Common Core State Standards to innovative developmental education models (Domina and Ruzek 2013; Gamm et al. 2012).

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Some college readiness initiatives, such as dual-credit coursework and early college high schools, employ secondary-postsecondary partnerships to bridge the two historically distinct sectors (Venezia and Jaeger 2013).

Despite increased attention to college readiness, confusion persists regarding what it means: what exactly do graduating high school students need to be able to know and do? Whereas researchers have focused on identifying a litany of college-ready competencies (Conley 2014; McAlister and Mevs 2012), little is known about the perceptions of K–12 educators (Yamamura et al. 2010). This gap is concerning, given that teachers are the individuals responsible for preparing college-ready students in the nation's schools and classrooms; unpacking teacher perspectives is critical to develop and implement effective college readiness reform.

This qualitative interview study explores the perspectives of 108 teachers working in eight early college high schools in a border region of Texas. We focus on teachers in an early college context because this innovative school model is uniquely positioned to address college readiness in two ways. First, early colleges operate at the intersection of K–12 and higher education, where they combine high school with the first two years of college (Muñoz et al. 2014). Second, they are designed to facilitate postsecondary transition for underrepresented students in particular, the student populations for whom college readiness support is most needed. Our study is theoretically informed by the literature on sensemaking (Spillane et al. 2002; Weick 1995), which implies that how teachers interpret college readiness will influence how they approach college preparation. Two questions guide the study: How do early college teachers make sense of college readiness? How do early college teachers support students' college readiness? Our findings offer insight into whether and how research and policy discourses about college readiness are translating to practice at the classroom level, which may be useful for early college reform as well as college completion initiatives writ large.

We offer one caveat before we proceed. We appreciate the importance of career preparation as reflected in the construct of "college and career readiness" (Conley 2014). Our focus on college readiness is intentional, given the vastness and complexity of the concept. We reasoned that to include the career compo-

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nent further complicates an already complicated topic. Given the dearth of relevant research on educator perspectives, we suggest an emphasis on one or the other is useful to begin unpacking local understandings of readiness.

Background Literature and Theory

This section reviews background research on college readiness and the early college high school initiative. We then discuss the role of sensemaking in educational organizations to conceptually frame our inquiry into teacher perspectives.

The College Readiness Agenda: Calls for a Common Discourse

College readiness has become a centerpiece of the educational agenda to improve postsecondary preparation, transition, and persistence (Venezia and Kirst 2017). Researchers and policy makers have focused on defining and measuring the concept and developing related reforms. The assumption is that enhancing clarity around what college readiness means will increase school effectiveness and empower students to better prepare (Conley 2014). From a definitional perspective, researchers have identified an array of skills and knowledge that support postsecondary success (Conley 2012; McAlister and Mevs 2012). These frameworks indicate that college readiness is not simply about academic preparation but also involves a range of cognitive and noncognitive competencies, behaviors, and mind-sets. Often cited are David Conley's (2012) four keys of college readiness, which we define in brief here (for examples, see table 1). "Key cognitive strategies" are ways of thinking about and interacting with academic coursework. "Key content knowledge" involves knowledge of the "big ideas" in the main disciplines. "Key learning skills and techniques" are behaviors and habits that support academic learning. "Key transition knowledge and skills," or college knowledge (Conley 2005; Hooker and Brand 2010), refers to procedural awareness and cultural competencies that support persistence. The broad range of factors included in Conley's (2012) framework suggests the complexity of college readiness and speaks to the potential for confusion or disagreement among educators who may not be privy to scholarly writing on the topic.

College readiness has also been defined by the academic indicators researchers use to measure students' likelihood of success in college coursework (Porter and Polikoff 2012). Examples are the number of advanced placement or dual-credit courses a student completes (Adelman 1999, 2006; Struhl and Vargas 2012), scores on college admissions tests (i.e., ACT and SAT; Wyatt et al. 2011), scores on state assessments (Howell et al. 2010), and grade point average (GPA; Astin and Oseguera 2012). Another common proxy for college readiness is whether

TABLE 1

Conley's Model of College and Career Readiness

Think:	Know:
Key cognitive strategies:	Key content knowledge:
Problem formulation	Structure of knowledge
Research	Technical knowledge and skills
Interpretation	Challenge level
Communication	Attribution
Precision and accuracy	Effort
Act:	Go:
Key learning skills and techniques:	Key transition knowledge and skills:
Ownership of learning	Contextual
Learning techniques	Procedural
	Financial
	Cultural
	Personal

SOURCE.—Adapted from Conley (2012).

students pass remedial placement exams in reading, writing, and/or math, which community colleges and 4-year institutions use to determine a student's eligibility for college-level, credit-bearing courses (Grubb et al. 2011; Venezia and Voloch 2012).

High school reform initiatives have integrated the language of college readiness into existing accountability systems (Welton and Williams 2015). Recommendations include increasing the rigor of curriculum (Adelman 2006; American College Testing 2007), developing and adopting college readiness standards (e.g., the Common Core State Standards; Hess and McShane 2013), and assessing students according to those standards (Yamamura et al. 2010). Researchers have suggested that schools create college-going cultures by building students' college aspirations and providing college counseling (Corwin and Tierney 2007; Hill et al. 2015). The need to prepare college-ready students has therefore become a common refrain in K–12 policy and practice.

Yet studies on the perspectives of educators in schools are scant. In the early 2000s, Stanford University's Bridge Project conducted research on the gap between high school and college and found that students, parents, and teachers were often confused about the requirements for postsecondary entrance and related state policies (Venezia et al. 2003). Teachers in grades K–12 raised concerns about students' readiness, citing a need for more resources to raise awareness about college, provide college counseling, equalize access to rigorous curriculum, and educate teachers about college preparation. Although this study offered insight into teachers' perceptions of students being underprepared for college, it did not expound on what specifically teachers thought students needed to know. A handful of studies have spotlighted the views of first-generation students spe-

cifically (Byrd and Macdonald 2005; Reid and Moore 2008) and community stakeholders such as parents (Cortez et al. 2014; ENCORE 2009; Yamamura et al. 2010). We know of only one study that examined teachers' views about what college readiness entails through inquiry into the implementation of a college readiness course (Washington et al. 2012). Consistent across these studies is a lack of stakeholder consensus regarding what a student needs to be successful in college. More research is required to better understand what teachers think college readiness involves and how they approach it.

The Early College High School Initiative

The early college high school initiative was created in 2002 to increase postsecondary success for underrepresented populations by providing high school students with exposure to college coursework (Barnett and Stamm 2010; Webb 2014). Formed via partnerships among high school districts and postsecondary institutions, early colleges enable students to earn college credits—up to an associate's degree—at little or no cost to the students and their families (Muñoz et al. 2014). Students earn college credit by completing dual-credit courses, which confer high school and college credit simultaneously for the same class (Tobolowsky and Allen 2016). Dual-credit courses may be taught on a college campus or at a high school by college professors or high school teachers with the proper credentials (Karp 2015). How a particular early college offers dual credit depends on the specific partnership between the postsecondary institution and the school district as well as the design of the early college. For example, some early colleges are located on college campuses with easier access to college classrooms, whereas others are located on stand-alone campuses or within comprehensive high schools. Early colleges are distinct from traditional dual-credit programs in that they target students who are traditionally underrepresented and/or in the academic middle as opposed to high achievers (Zinth 2016). Early colleges are also schools of choice; students interested in attending an early college must apply and are selected through a variety of admission procedures, typically a lottery system.

State-level policies governing early colleges are loosely based on a set of principles that explicitly address college readiness (see table 2; Jobs for the Future 2008). Principle 3 requires early colleges to create a comprehensive dual-credit curriculum that allows students to begin progressing toward an associate's degree as early as ninth grade. This principle speaks to the first two keys of Conley's (2012) framework (i.e., cognitive strategies and content knowledge), as well as the course-taking indicator associated with college readiness (Porter and Polikoff 2012). Principle 4 involves developing a support system to impart the skills and behaviors required for successful college completion. This principle supports stu-

TABLE 2

The Five Principles of Early College High Schools

	Description
Principle 1	Early college schools are committed to serving students underrepresented in higher education.
Principle 2	Early college schools are created and sustained by a local education agency, a higher education institution, and the community, all of whom are jointly accountable for student success.
Principle 3	Early college schools and their higher education partners and community jointly develop an integrated academic program so all students earn one to two years of transferable college credit leading to college completion.
Principle 4	Early college schools engage all students in a comprehensive support system that develops academic and social skills as well as the behaviors and conditions necessary for college completion.
Principle 5	Early college schools and their higher education and community partners work with intermediaries to create conditions and advocate for supportive policies that advance the early college movement.

SOURCE.—Jobs for the Future (2008, 2).

dents' development of cognitive skills, learning techniques, and transition knowledge (Conley 2012). Early colleges implement various forms of academic and social support for students, such as mandatory academic tutoring, advisory groups, and summer bridge programs.

Although the literature base is nascent, preliminary studies of early colleges suggest positive impacts on college readiness, as measured by student GPA or credits earned (Berger et al. 2014; Edmunds et al. 2012). Consistent with the reform's objective, early college students are entering more college courses and completing more college credits than their traditional high school counterparts (Berger et al. 2010, 2013; Edmunds et al. 2017), although whether outcomes vary by early college type is not yet clear. Two studies used survey data to explore the implementation of North Carolina's early college high school initiative and found that most students were on track for college (Edmunds et al. 2010, 2012). Haxton et al. (2016) identified positive impacts of early college enrollment on college enrollment and degree completion based on a randomized controlled trial. One mixed-methods study by Edmunds and colleagues (2013) showed that early colleges support high student outcomes through integrated support systems that "mandate" students' engagement in their learning. Given their college-focused mission and potential to positively affect student success, early colleges offer an ideal setting for exploring how teachers conceptualize readiness.

Theorizing Teacher Perspectives on College Readiness in an Early College Context

We draw from the literature on sensemaking to explore how early college teachers interpret college readiness. This research theorizes a relationship between interpretation and action in organizational contexts. Developed in Karl Weick's (1995) work, "sensemaking" refers simply to the "making of sense." It is the cognitive process whereby people take in, interpret, and organize information. Sensemaking plays a "central role in the determination of human behavior" (Weick et al. 2005, 409) because people act based on what they interpret things to mean. Thus Weick et al. (2005) likened sensemaking to cartography; it produces a map to guide future action. Organizations are critical settings for sensemaking, as members interact with each other, perform certain roles, and negotiate institutional norms and objectives (Weick 1995). Sensemaking theory is useful to understand school and classroom contexts because how teachers notice and interpret information will prompt them to act in certain ways (Porac et al. 1989). These momentary actions create a school's daily structures, routines, and cultures, which in turn shape student outcomes. Sensemaking becomes especially important when people are confronted with changes or problems they need to solve (Heifetz et al. 2009)—for example, the challenge of preparing students to be ready for college at a time when most college-aspirant high school graduates are not.

A variety of internal and external influences interact to shape sensemaking processes in organizational contexts (Weick 1995). Internal influences make up a person's individual cognition: one's beliefs, assumptions, and prior knowledge about how the world works (Spillane et al. 2002). These personal beliefs, taken-for-granted assumptions, and prior knowledge produce cognitive frameworks, or what some scholars have termed "worldviews" (Porac et al. 1989; Weick 1995) or "mental models" (Senge 1990), which then serve as filters for new information. Cognitive frameworks are also shaped by identity (Weick 1995); how people interpret situations will depend on who people think they are and what role they see themselves performing in a given context (Thurlow and Mills 2009). Although people are not always aware of their preexisting assumptions about the world, they are "biased toward interpretations consistent with their prior beliefs and values" (Spillane et al. 2002, 401). Cognitive frameworks help explain why members of the same organization may observe the same situation or pursue the same goal but come away with divergent interpretations and, by extension, divergent plans of action (Senge et al. 1994). Importantly, Weick (1995) has suggested that sensemaking is, by necessity, a retrospective process. People must look back on their experiences in order to notice significant patterns and decide what they mean. Their reflections on prior experiences will shape how they make sense and act in future situations.

Yet although personal assumptions and beliefs are important to sensemaking, people do not exist in individualized silos. The people we interact with and the

spaces we inhabit shape our interpretations of the world. These external influences, or what Spillane and colleagues (2002) referred to as "situated cognition" or "context," shape the sensemaking process in two main ways (Weick 1995). First, sensemaking depends on social interaction and shared meaning making (Coburn 2001). People construct knowledge, interpret information, and reach new understandings through conversations with and relationships to others (Blumer 1969). How people see themselves and what roles they feel entitled to will also depend on the other people within an organization (Resnick 1991). Coburn's (2001) study of teachers' sensemaking about reading, for example, showed how teachers interpreted the same messages differently depending on whom they were with. From this perspective, the meaning of a particular idea in education reform, such as college readiness, "is not given, but is inherently problematic; individuals and groups must actively construct understandings and interpretations" (Coburn 2001, 147). Second, situated cognition depends on organizational context. The values, traditions, norms, and professional culture that characterize a particular organization will influence its members' sensemaking. Within organizations, people rely on cues, or "simple, familiar structures that are seeds from which people develop a larger sense of what may be occurring" (Weick 1995, 50). A cue might be a national indicator like the SAT or a local practice such as a shared teaching strategy at a particular school. These contextual influences intermingle with individual cognition to shape the sensemaking process.

We use sensemaking as the study's theoretical frame to explore how teachers working in early college high schools conceptualize college readiness. Our data and analysis focus on the internal and external factors that shape teachers' sensemaking and their subsequent efforts to prepare students for college.

Research Design

This study emerged from an ongoing multiyear research project on the early college high school initiative in a US-Mexico border region of Texas, which includes 12 early colleges across eight school districts and one large community college system. This section describes the research site, sample, and methods of data collection and analysis.

Site

This study is situated in Texas, a state that has been a nationwide leader in implementing early college high schools, with close to 200 in the 2017–18 school year. Their expansion is part of the state's 60 × 30 plan to increase the proportion of postsecondary degree or certificate holders to 60% by 2030 (Texas Higher Ed-

ucation Coordinating Board 2017). The governing document for early colleges in Texas is the Early College High School Blueprint, which outlines six benchmarks that schools must meet to obtain and maintain an early college designation (Texas Education Agency 2017). Consistent with the five principles described earlier (Jobs for the Future 2008), the blueprint requires early colleges to develop a rigorous dual-credit curriculum and implement support systems to ensure students can qualify for college coursework (i.e., test out of remediation) and develop college-ready skills (Texas Education Agency 2017). The borderland in particular provides a rich context for studying college readiness in that it is binational, bilingual, and bicultural. The region under study is home to about 700,000 people on the US side of the border; of this number, roughly 80% are Latinx, 20% live in poverty, and 20% of adults hold a bachelor's degree. The local schools serve, on average, high proportions of students who are of color, low income, and/or first-generation students.

Data were drawn from eight early colleges with student populations ranging in size from 200 to 450. These schools were selected to represent the range of early college models (i.e., the school's campus location), ages (i.e., years in operation), and district contexts (i.e., urban or rural; see table 3). The four urban schools are located in heavily populated districts at the center of the region, whereas the rural schools are located farther out from the city center in districts that serve farming communities with few students. All early colleges included in the study are partnered with the region's one community college system, which has five campuses and serves roughly 30,000 students.

The missions, vision statements, and campus improvement plans at the eight early colleges under study are similar in content. All schools pledge to provide a "rigorous learning environment" or "rigorous curriculum." Two promote an emphasis on "college first." Three work to cultivate a "college-going culture." Several refer to ensuring students are "college ready," as measured by the state's placement exam for entering college coursework. Most schools emphasize developing students' "skills" or "college study skills." Many refer to engaging students in "college experiences." One school specifies that "every student will graduate on time, ready and equipped to enter college, the military, or a career-ready job" and another commits to creating a "college and career readiness plan" for each student. Although the college focus of early colleges provides a fitting context for this study, the early college setting is distinct from comprehensive high schools, and our findings should be interpreted in that light.

Sample

In total, 108 teachers participated. Teachers were recruited via presentations at each school. Between 10 and 22 teachers from each school participated, which

TABLE 3

The Eight Early Colleges in a Texas Border Region

Early College	Type of Early College	Year Founded	District Context	Teachers, *n*
1	Community college	2006	Rural	22
2	Community college	2007	Urban	13
3	Community college	2008	Rural	10
4	Community college	2008	Urban	16
5	Stand-alone	2010	Rural	12
6	Stand-alone	2012	Rural	13
7	School within a school	2013	Urban	10
8	School within a school	2015	Urban	12

was at minimum half the faculty. At three schools, every teacher participated. Teachers' years of experience spanned from 1 to more than 20, and years at an early college specifically spanned from 1 to 10. About 65% of the teachers identified as Hispanic, 30% as white, and less than 5% as other. Roughly half were first-generation college students. Most (upward of 95%) had taught in a regular school setting prior to the early college. As such, some of our data about how they made sense of readiness are not specific to the early college and thus are transferrable to other school settings.

Data Collection

Data were collected from September 2015 to December 2017 via interviews and focus groups. We conducted semistructured, one-on-one interviews with 74 teachers that lasted between 24 minutes and 3 hours, with an average of 1 hour. The remaining 34 teachers participated in focus groups. Each focus group included two to eight teachers and lasted from 60 to 90 minutes. Interview protocols included questions regarding how the participants defined college readiness, how they worked to get students ready, what the school was doing well to enhance students' readiness, and what the school might do better. All interviews were audio recorded and sent to an outside agency for transcription. To situate teacher interview data, we reviewed each school's vision and mission statement and campus improvement plan for references to college preparation and readiness, which helped contextualize the research sites (discussed earlier).

Data Analysis

Analysis techniques included coding and categorizing data, identifying common themes and contradictions, and drawing conclusions (Miles and Huber-

man 1994). The researchers used deductive and inductive approaches to develop the codebook. Deductive codes were based on sensemaking theory and college readiness literature. For example, "internal factors" and "external factors" were used to identify influences on teachers' sensemaking, and "content knowledge" or "college knowledge" was used to organize teachers' definitions of readiness. We also generated open and in vivo codes. For example, we created the code "college experience" because so many participants referred to their own experiences as undergraduates. Through the process of coding and categorizing, we identified overarching themes, which we used to produce a data outline and establish findings. To ensure trustworthiness, the authors employed the constant comparative method and member checking by contacting participants about potentially confusing sections of a transcript (Glaser and Strauss 1967). Each author—one from outside the region and one from the local area, and both former teachers—engaged in reflexive memoing and discussion with one another to address issues of researcher positionality.

Data Presentation

Data analysis revealed three themes with respect to teachers' sensemaking of college readiness: personal experience, professional roles, and early college context. We present each below and consider their analytic implications in the subsequent discussion.

Personal Experience: "When I Was in College"

Common across the data was the association of college readiness with teachers' recollections of their own experiences as students. Teachers' recollections included the competencies they needed in college, the challenges they faced as first-generation students, their high school preparation (or lack thereof), and the experiences of friends or family.

To begin with, teachers regularly referred to the skills they used to navigate college. As one participant stated, "I know most of us have successfully gone through college by asking questions and studying with groups and understanding that you control your own destiny." Others recalled the advice they received from professors. Citing the importance of seeking help, for example, one teacher said, "That's one of the things that my professors would always say in college, 'If you don't understand, come and see me during office hours.'" Teachers often used their personal stories to convey what college would be like to their students: "I tell them you know when I was at [university], my biology class was no less

than 200. I was 1 of 250, just a number there." One warned students about college grading: "I told them, 'When I took this class you guys, I had two tests and an essay. Bam, that's it.'" Another surmised, "Most of college is teaching yourself." He continued, "And I tell the kids that: 'Don't go to college expecting to have a teacher like you do in high school because that is not what you are going to get.'"

Many highlighted the importance of reading and writing based on personal experience. Recalling his time as an undergraduate, one teacher said, "I will argue you spend more time in college reading than doing any other single thing." Another teacher struggled with vocabulary because "when I was in college, I was like, 'I don't even know what this means.'" Others focused on writing: "Being able to write. I think that's making them college ready. What do you do in college? All you do is write. That is all I did." Several discussed the challenges they faced trying to write for their college classes: "I had to write so many papers. I know I struggled with that." These teachers adjusted their teaching accordingly: "With all my quizzes, I include short essay answers, so at least they're able to write something cohesive." Another teacher recalled her tendency to procrastinate, explaining: "I try to break [my students] of those habits. My late policy [is] pretty strict; it's 20 points off per day late. So within 5 days you're done."

Like most of their students, about half the teachers were first-generation college students, experiences they drew on when reflecting on college readiness. One teacher recalled: "I know at least when I was in [college] my parents didn't get what it was like for me. I was first generation, so they thought going to college classes, 'Oh, that's easy.' You're not outside working or doing manual labor, but your mind is exhausted! So for a lot of our kids, their parents just don't know." For many teachers who shared this background, college transition was a challenge academically. As one reflected, "When I graduated from [high school] here, the education system was very similar, very similar demographics, very similar kids. I got accepted to go to a school in New York and it was like a whole different world." With respect to her coursework, "as far as being college ready I was not," but she persevered. Thus she defined college readiness as not only being "exposed to the rigor" but also learning to be "tenacious" in the face of obstacles. Another teacher recalled feeling shocked and embarrassed by her remedial placement: "I got out of high school with almost an A [average]. I go into college and I'm in remedial classes. It was like a big pile of ice on me." She continued, "So college readiness for me means, I want to help these kids not have to go through something like that," which for her meant developing students' basic skills in reading, writing, and math.

Teachers who were first generation also identified other challenges of postsecondary transition. As one said, "I was not mentally prepared or mature

enough." Many discussed the difficulty of navigating admission or campus life: "I graduated from one of the [high] schools here and I had zero information about how to go to college, how to get in, how to succeed. I had to figure it out on my own because I was a first-generation student. So because of that I'm very sensitive about those issues." She discussed trying to guide students in terms of thinking about college options and putting together a college application. Another teacher tried to familiarize her students with the online resources available at the college, such as research databases, explaining, "I wish when I was even a freshman and sophomore at [the university] somebody had shown me that."

Numerous teachers reflected on their high school preparation in discussions of college readiness. One teacher recalled an opportunity to take advanced placement chemistry with "an actual professor from [the local university]," citing the value of advanced academic coursework. Another praised her school for preparing students to pass the remedial placement exam, explaining: "I know when I was in high school I don't remember anything like that. It was just, 'Sign up for your ACT and SAT if you're going to take it.' But that was really it." Several discussed the importance of mentoring: "In high school I had several teachers that I grew attached to and they helped me. So my goal here is to connect with them and push them to keep going so they can get their bachelor's." One teacher described his negative experience in college preparatory courses in high school: "When I was in high school, I had bad experiences with how [dual-credit] classes were taught. It was mostly, there were 10 pages of overhead stuff, and you would just do notes, and I wouldn't learn anything." He juxtaposed the teaching he encountered with what he tried to offer his students: "Here there's so much support; we [the teachers] really teach the stuff."

Sometimes, teachers' drew on the experiences of their children, family members, or friends. One teacher recounted how "my wife graduated [college] not that long ago and it was all group work. And there was a disproportionate amount of group work when I was [in college] too. That seems to be the trend in universities now." Thus he stressed the need for college-ready students to "be social and work with other people." Another teacher reflected on what she believed worked well for her son: "The best thing that got him ready for college was to have that alternating day schedule [in high school], because that's what colleges do. He learned how to time-manage his homework." One teacher believed that allowing students to "fail and learn" was the best way to develop students' college readiness: "When my kids were in school if they didn't do their work they failed. You learned real quick because there are consequences." Others stressed life skills: "they've got to take care of themselves," said one teacher, adding that "my friend's daughter called home from college because she didn't know how to microwave ramen."

Professional Roles: "As an English Teacher"

In addition to personal experience, teachers' professional roles emerged as important for their sensemaking about college readiness. This theme encompassed, first, teachers' knowledge about their specific discipline and, second, their perceptions of their students' strengths and weaknesses.

Discussions of college readiness were frequently tied to teachers' area of expertise. Math teachers, for example, tended to stress numeracy skills or content mastery. In the words of a geometry teacher, "To me college ready is to be able to perform all the mathematical operations without a calculator." Another math teacher remarked, "I think the student who is making all As in math classes—they're gonna do fine in college." According to another, "college ready to me is you get out of my classroom and you enroll in Calculus I college level and you can perform, meaning you're getting a C or better." English or social studies teachers, meanwhile, tended to stress literacy. "As an English teacher," one prefaced, "I want them to be literate enough and accomplished enough as writers to where they can handle any writing assignment that's asked of them at a college level." One English teacher detailed how she scaffolded research paper assignments. Another aimed to impart strategic reading skills: "When I show them how to break apart a reading section, and how each of them can take just a portion, become experts, and share information with each other, I tell them, 'You're doing this in my class, but just remember how you can do this in college.'"

Apart from basic math or literacy, the specific skills teachers emphasized often depended on what they saw as critical for success in their subject area. For example, one economics teacher discussed his perspective on readiness as follows: "Economics is—you need to apply. You can't just be theoretical. Our kids, they memorize, they're good at that. 'Well now tell me how can you apply this? What's going on in the economy? Relate that to the real world.' That's what college readiness is." A history teacher described an assignment requiring students to relate a historical figure's actions to our current society, clarifying, "They need to go ahead and start making a good argument." One speech teacher reflected, "I am really big on telling the kids to ask questions," adding, "because I think [college readiness is] not having these walls against hearing new information." A physics teacher reflected on the role of soft skills in her discipline: "I'm in the STEM [science, technology, engineering, and math] field. Do you think we care about soft skills? We don't. Computer scientists don't really care." She acknowledged that her view set her apart from her colleagues: "The lady who teaches next door, she is all about the touchy-feely and so I'm sure there are soft skills that are necessary, and if you were to talk to [the principal], she'd tell you that I lack a lot of the soft skills [in my classroom]. But when I'm dealing with students, I don't necessarily value those things be-

cause they don't have a lot of purpose in physics." Like this physics teacher, many teachers acknowledged that their priorities might (or might not) be distinct from those of their colleagues. As one explained, "Other than what I do with [my coteacher] that revolves around math and the ways that I incorporate reading and writing into my classes, I'm not real sure what's happening in other classes." One teacher echoed this view when she reflected on college readiness: "I don't think we [as a faculty] talk about it enough."

Another way in which teachers' professional roles shaped their sensemaking pertained to their perceptions of their students. A large majority of the sample discussed college readiness with reference to their students' strengths and weaknesses. One teacher, for example, stressed the value of motivation, recounting her observations of one senior: "This young lady went to tutoring every single day for 4 years and as a junior, she never got less than 100 on anything. When I had her as a freshman, her math skills were nonexistent. But she went to tutoring. She was so motivated." More often, teachers worried that students were underprepared in certain areas. Numerous teachers lamented that students "don't know how to study" or "need more study habits." Teachers also worried about organizational skills such as "meeting deadlines." Said one teacher, "A lot of students really don't know how to be organized or how to keep an agenda." Another elaborated, "A lot of them know the material, and a lot of them will have things to say in our discussions, which is good, but as far as executing the assignment, turning things in on time, those are the downfalls." Teachers who emphasized study skills encouraged students to develop them. One shared, "I make my students keep a notebook and I teach them, 'make sure you get the main points, don't copy the whole slide.'"

Teachers also expressed concern regarding students' ability to take responsibility for their own learning. One shared, "The students here are very passive. They do not go out to the library. They do not seek that information on their own. This is something that is especially important [for college readiness]." Another teacher reflected that college readiness was "taking pride" in academic endeavors, lamenting, "I don't know what it is today, I don't know if it's technology or what but a lot of them don't take pride in what they do; it's like, stamp my name on something and here you go." Others perceived that students were not prepared to handle the logistical aspects of college. As one teacher explained, "Students would rather go to the counselor to ask for their [password] and their ID [for the college's online system] rather than take the responsibility to remember it or retrieve it themselves. I mean that's a very serious gap." Another common concern was students' ability to self-advocate. One teacher described this problem in this way: "So the [students] are like, 'I'm failing my class what do I do?' [I say], 'Go talk to your professor!' It's a novel idea but some of them don't know that or they don't know how to email the professor without using shorthand text slang." One science teacher described how she reminded

her students to self-advocate: "Sometimes I request assignments before the due date just to test them. And I see their faces and their anguish and I say they have to come forward and very politely say, 'Dr. Gomez, I think there is a mistake.' You're entitled to that."

Early College Context: "We Are Trying to Get Them to Be More Successful"

Finally, teachers described college readiness in relation to the particular context of early college high schools. The early college context surfaced in two ways: the skills they believed students needed to navigate the early college and the nature of preparation that early colleges are expected to provide.

With respect to skills, teachers frequently pointed out that because their students enrolled in college courses, maturity was especially important. One teacher explained, "I think being college ready is being mature, because our sophomores step onto the [college] campus for the first time and they see so many liberties that are there and they have to make the right choices." Another teacher elaborated on the importance of maturity for her students: "These kids are still saying, 'I forgot to turn in [my assignment]. What if my mom calls my professor?' No. College readiness is [when] you acknowledge and understand that your mommies and daddies do not help you out like that in college." Whether in relation to attending their college classes, communicating with their professors, or completing college work, teachers' emphasis on maturity surfaced across schools: "You have to be a little bit more mature here to function." Teachers surmised, however, that exposure to college courses was a "huge advantage," because "they are able to understand a college schedule from the get-go, from living it."

The early college context also played into teachers' descriptions of college readiness when they reflected how best to prepare students. Across schools, they referred to course rigor and student support, strategies embedded in the early college model. As one teacher shared, "We are trying to get them college ready by providing them more rigorous material in our high school classes. We are just trying to get them to be more successful over [at the college]." More than half the teachers referenced the benefits of academic interventions such as tutoring, which were required at all eight schools. They also discussed their collective commitment to student success: "I think it takes a support network for a kid to really be college ready, and that is one of the things that the school does." Some discussed striking a balance between holding students to high academic standards and offering support. As one teacher said, "We're giving them support, but we also do have a high degree of rigor and the kids have to be responsible for themselves." Another elaborated, "Most of us will tell kids things like, 'If you think you're missing work you need to come and see me,' rather

than, 'You and you and you are missing work and here is what you need to do.' That is making the kids be responsible without just letting them drown."

Yet many teachers also worried that K–12 district policies prevented them from teaching to a college readiness standard. For example, a majority of teachers at each school felt that district expectations for pedagogy undermined college-level teaching. One explained, "At the high school you know we're supposed to have group work and student-centered learning. But in college you don't see a lot of group work and it's a lot of lecture and a lot of note-taking. And I think that's one of the things that has been difficult in terms of [getting students ready]." Teachers worried that student-centered approaches would leave their early college students ill prepared: "Then [students] go to [the university] and all they see is a professor in the front talking and talking." They assumed students needed exposure to college teaching styles to become ready.

Many teachers also felt pressured to varying degrees to ensure students passed their classes, which they felt undermined college-ready standards. One teacher confided, "I'm not allowed to fail a kid without proof. Did I make parent contact 10 times? Did I send out emails? Did I make a house visit?" Whereas a handful of teachers at some schools dealt with this problem explicitly, a majority referred to "unspoken pressure" to have high passing rates. Most teachers perceived that these safety nets undermined their autonomy to teach to a higher level in an early college setting: "This is supposed to be college." They also believed stricter standards would help students: "I personally feel like if we didn't take any late assignments the first three weeks of school and those progress reports were really, really low, the kids would understand, 'Oh, I can't do this. I'd better get my butt in gear.'" Another teacher wanted to weight his grades like a college class: "I think if we really said, 'I don't care if you did your homework. I want to see if you can do it on the test.' I think my test scores would go up. I know they would. That's my idea of college ready." Teachers believed that evaluating students based on college standards would better prepare them. As one explained, "They're not going to go to college and get 1,000 chances."

Discussion

> As a high school teacher, you hear a lot from the top down about college readiness. But I think it's a very vague notion and it means different things to different people. (Twelfth-grade economics teacher)

Data in the prior section describe how teachers interpreted and enacted college readiness across the themes of personal experience, professional roles, and early college context. From a holistic perspective, the data reveal a few key takeaways. First, teachers expressed a wide range of perspectives about what

college readiness means and how it should be increased. Most teachers perceived that college readiness involved a range of academic, social, emotional, and behavioral skills, which together represent the competencies in readiness frameworks (Conley 2012). However, each teacher had distinct views regarding which competencies mattered most; there was no coherent, shared definition across or within schools. In fact, sometimes teachers' perspectives were contradictory. Consider, for instance, how some thought group work was common in college and others thought the opposite. One notable exception was that a majority of teachers at each school mentioned maturity as a college-ready skill—a finding that we attribute to the early college model and dissect in greater detail below. Second, teachers made sense of college readiness based on multiple factors and influences from their own college experience, to their academic discipline, to their students, to aspects of the early college model. These factors mattered to different degrees and influenced teachers' views in different ways. Third, teachers' personal interpretations of college readiness shaped how they approached instruction. Teachers often used their definition of readiness to justify their practice, explaining why they emphasized a particular skill to their students. We now turn to sensemaking theory to unpack further insights from the data set. We close with implications for policy, practice, and future research.

Making Sense of College Readiness in Early College High Schools

Sensemaking offers a lens for understanding how numerous internal and external factors interacted to shape teachers' understandings of college readiness (Spillane et al. 2002; Weick 1995). Across the themes, individual and situated cognition influenced how teachers interpreted college readiness and, in turn, how they tailored their instruction.

Individual cognition.—Individual cognition, or a person's cognitive framework, played a significant part in teachers' sensemaking about college readiness. A substantial portion of teachers' beliefs, assumptions, and prior knowledge derived from their own college experiences, a finding consistent with the limited prior research on the topic (Washington et al. 2012). Phrases like "when I was in college" were peppered throughout teachers' commentary. Just as people are "biased toward interpretations consistent with their prior beliefs and values" (Spillane et al. 2002, 401), most teachers interpreted what students would need to know based on the challenges they faced or observations they made while pursuing an undergraduate degree. The teacher who felt like just a number when he was in college warned his class about large lecture halls. The teacher who felt she was constantly writing in college emphasized essay assignments. Teachers also relied heavily on their high school experiences, recalling what they believed worked or did not work about their precollege preparation. From

a sensemaking perspective, teachers' reliance on their pasts to make sense of college readiness illustrates the importance of retrospection (Weick 1995). The primary way teachers identified patterns about college success and failure was to consider which skills they had and which they lacked.

Teachers' cognitive frameworks for interpreting college readiness were further shaped by issues of identity (Pratt 2000; Weick 1995). Consider, for example, teachers who cited their experiences as first-generation college students. For roughly half the sample, being first generation was part of their identity, one they shared with a majority of their students and one that, they believed, gave them unique insight into the support their students required to persist. Recall the teacher who graduated high school with an A average yet still placed into remediation—"like a big pile of ice on me"—and wanted to protect her students from a similarly jarring experience. Others emphasized needing more information about how to apply to college and navigate the campus once there. Interestingly, even with the shared background of being first generation, teachers pinpointed different areas of need for students depending on the specific hardships they had confronted.

Teachers' professional backgrounds also represented an important part of their identity, which in turn contributed to their cognitive frameworks. Much of their preexisting knowledge about academic and college success was specialized, based on the academic field in which they were trained. Hence, English teachers stressed literacy, the economics teacher prioritized application, and the physics teacher did not see much use for the soft skills because they were not valued in her discipline. Teachers' attention to discipline-specific skill sets speaks to their identification with their subject area; most saw themselves not just as teachers but also as math or history teachers, for example. Teacher identity was evident when teachers lamented district expectations that they felt restricted their ability to hold students to college-ready standards. In these instances, teachers envisioned a particular teaching role for themselves as early college teachers that resembled college teaching—for example, lecturing or weighting final exams more heavily—but that they felt unable to perform. This tension informed their assumptions about the conditions that would or would not support college readiness.

Situated cognition.—The data also reveal how social interactions and organizational context shaped teachers' sensemaking (Spillane et al. 2002; Weick 1995). Across themes, teachers' relationships with others shaped how they understood college readiness. For instance, teachers referenced the college experiences of their children, spouses, and friends when reflecting on the value of time management, group work, or something as trivial as heating up ramen. These data points suggest teachers had engaged in shared meaning making with these significant others to "actively construct understandings and interpretations" (Coburn 2001, 147) about the obstacles college students encounter. The frequency

with which teachers referenced their students when reflecting on college readiness further suggests the importance of social interaction for their sensemaking. Teachers used their students and particularly what they felt their students lacked, based on classroom interactions, as a metric to determine what college readiness entailed. It is noteworthy that when teachers referenced others in their school context, they tended to mention students. Recall that teachers reported not knowing what happened in other classrooms or whether their colleagues shared their college readiness priorities.

The role of organizational context on teacher sensemaking emerged as particularly important with respect to the early college setting. In fact, the only examples in which teachers expressed similar ideas about how college readiness should be defined and enacted pertained to features of the early college high school model. Teachers' collective emphasis on maturity, for instance, reflects the model's unique structure that enrolls students in college classes early in their high school careers. Maturity was understandably prioritized in a school context where 14-year-old students were either attending classes with adults on a college campus or managing a heavy workload of high school and dual-credit courses. Such concern for student maturity may become increasingly relevant not just in early colleges but in all high schools as well, as dual-credit coursework is implemented on a wider scale (Tobolowsky and Allen 2016). Teachers' shared emphasis on academic rigor and student support reflected two primary components of early college designs. These pillars of the model—publicized in early college policy documents and embodied in school structures and routines, such as mandatory tutoring—represented important cues for teachers as they made sense of how to prepare students for college (Weick 1995).

Conclusions.—A sensemaking perspective reveals how teachers drew on internal and external influences to interpret college readiness and, in turn, to prepare their students for college. Of note, although individual and situated cognition each affected teacher sensemaking, these internal and external factors also interacted with one another. Consider how teachers often reflected on their high school and college experiences in relation to those of their students. Teachers perceived that their writing skills had been stronger, their high school courses had been less engaging, or the early college was providing more test preparation than their own high school had. In this way, their past experiences were a critical focal point for college readiness sensemaking but often by comparison to what they observed about the students in their classrooms. Similarly, teachers' beliefs and assumptions about their responsibilities to enhance college readiness, such as using lecture rather than group work, were also informed by their specific teaching context. To a large extent, teachers believed they should be able to use college-style teaching practices—and that these practices were critical for students' college readiness—because they were working in a setting designed to expose students to college sooner.

Perhaps the most compelling takeaway from our data is the large extent to which teachers made sense of college readiness on their own. They relied first and foremost on their personal educational histories and professional training, which were based in their own heads. When teachers drew on external influences, they relied mostly on student observations, which happened within the walls of their individual classrooms. Many even admitted to being uncertain of how their colleagues defined and approached readiness. To be sure, teachers did exhibit collective sensemaking to the extent that they shared an understanding of their unique early college context—hence, their widespread concern for student maturity, academic rigor, and student support. These collective interpretations are noteworthy because, consistent with prior research on sensemaking and learning in organizations (Senge 1990; Weick 1995), the early college mission appeared to enhance coherence among members of the organization. Yet although these trends suggest that faculty were attuned to the school's objectives, how they specifically approached these matters in their classrooms depended on their personal assumptions about college readiness. Despite shared commitment to the early college mission, for example, the physics teacher and her next-door colleague had divergent perspectives on the value of soft skills and altered their instruction accordingly. This finding reflects the challenge of what Lortie (1975) and Tyack (1974) referred to as "egg crate schooling." Even with schoolwide commitment to prepare students for college, ultimately teachers were isolated in their own classrooms where they made sense of and enacted college readiness based on their personal and professional beliefs about what skills were most important.

Implications and Future Directions

This study suggests the persistent challenge of creating shared understandings of college readiness at the classroom level. Participants in the study were all familiar with the term "college readiness," but it was ill defined in terms of specific skills and practices. A question one might ask at this point is whether developing a common college readiness discourse really matters. Sensemaking theory suggests that shared interpretations are important to facilitate organizational coherence and collective action (Weick 1995). In practice, however, did teachers' varied definitions of readiness really create problems for students? Although our data do not answer that question, they suggest that teachers' varied interpretations resulted in varied classroom practices, whether formal or informal. Some teachers' interpretations were even contradictory, such as whether group work or soft skills matter. By extension, it is likely that students were receiving inconsistent messages about what college would be like or what skills mattered most.

One implication of our data is that conversations about college readiness at the school level are needed. Faculty discussions around what skills should be prioritized and why may help increase the coherence of college preparation for students. Our data further imply the need for conversations that go beyond simply identifying skills or terms, such as "rigor" or "maturity," to actually making sense collectively of what those terms mean and what they should look like in practice. A principal might, for instance, foster discussions regarding what it means for a student to self-advocate and what specific practices teachers can implement to encourage self-advocacy in the classroom. Another implication is that specific college-related missions, such as early college commitment to academic rigor and student support, can help unite teachers around a common set of ideas. The challenge, then, is to engage in collective meaning making to help teachers translate the vague objectives in the mission, such as college readiness or rigor, into concrete, shared practices that increase students' readiness for college.

With early college high schools representing a distinct school model, future studies might examine teachers' sensemaking about college readiness in different schooling contexts, such as comprehensive high schools or even middle schools, because postsecondary preparation should start before high school (Gaertner and McClarty 2015). In addition, case studies of districts or schools with specific college readiness policies would be informative. Our study focused on early college teachers, but studies of different stakeholders in a variety of school contexts would complement our findings. For instance, more inquiry into the perspectives of students, principals, community college instructors, and university professors is needed with attention to the institutional contexts in which they operate. Finally, as our study focused on college, future studies that examine teacher perspectives on career readiness would be valuable.

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