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Policy in Theory and Policy in Practice: Community College Students' Perceptions of Cross-Enrollment

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ABSTRACT

Most community college (CC) students nationwide aspire to transfer from CC to a 4-year baccalaureate granting institution, yet most students who aspire to transfer never achieve this goal. Cross-enrollment, facilitated enrollment in a course at a four-year college while simultaneously enrolled in classes at a CC, is one policy that may increase transfer rates. Our study is motivated by low uptake of this opportunity. We conducted 12 semi-structured focus groups with a diverse sample of California CC students to understand their perceptions related to cross-enrollment opportunities. Three themes emerged from our study: (1) cross-enrollment information is inaccessible, (2) sense of belonging and self-efficacy influence student perceptions of cross-enrollment, and (3) cross-enrollment is met with both enthusiasm and apprehension. We discuss the challenges and benefits to cross-enrollment that students consider and several recommendations, suggested by students themselves, to reduce barriers to cross-enrollment and transfer pathways.

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While 80% of community college (CC) students nationwide aspire to transfer to a 4-year baccalaureate granting institution, only 25% transfer within four years of enrollment, and even fewer (17%) obtain a bachelor's degree (BA) within six years of initial enrollment (Bailey et al., 2015). This gap between aspirations and outcomes is wider for underserved students (e.g., low-income, first-generation, students of color), the same groups who disproportionately commence their postsecondary education at CCs (Roksa et al., 2007). Prior work has identified several factors that contribute to the low-rate of BA attainment among students who start at CCs, including institutional barriers (e.g., low credit transferability), student financial constraints, and familial responsibilities (Taylor & Jain, 2017). In addition, CC students may face stereotypes that contribute to decreased sense of belonging in academia. CCs are often perceived as the least prestigious postsecondary institutions due to their open admissions, limited resources, missions of vocational training, and entirely lower-division coursework (Holy, 1961; Roksa et al., 2007). Thus, the

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status of CCs within the hierarchy of the postsecondary system positions CC students as less capable and less skilled, even among students with evidence of high academic achievement (Shaw et al., 2019). These assumptions may influence CC students' sense of belonging (i.e., they fit in and are meant to be there) and academic confidence (Gopalan & Brady, 2020). To address these issues and increase transfer rates, a number of state systems and individual colleges have developed cross-enrollment programs.

Cross-enrollment programs facilitate the enrollment of CC students in a four-year institution course, without formal admission and at reduced costs, while still enrolled in their home CC. The explicit goal of cross-enrollment programs is to increase transfer and BA attainment among CC students. Research evaluating the effect of cross-enrollment programs is thin, but findings from extant studies suggest that these programs are related to both higher transfer rates (De Los Santos & Sutton, 2012; Wang & McCready, 2013) and BA attainment for CC students (Crisp, 2013; Hindman & Russ-Eft, 2017; Wang & Wickersham, 2014), and that certain groups of students are more likely to take advantage of these opportunities (Crisp, 2013).

Thus, although studies have shown that cross-enrollment is associated with positive outcomes, selection into cross-enrollment calls for a clearer understanding of how students view this opportunity. An examination of students' perceptions is important because research indicates that students' experiences can be misaligned with the intent of policies and programs (Beattie et al., 2013; Felix & Trinidad, 2018). To our knowledge, no study has centered students' voices by examining students' perceptions of cross-enrollment opportunities. Such an examination may illuminate factors leading to differential uptake and inequitable outcomes.

In this study, we analyze data from 12 focus groups with a diverse sample of CC students to examine students' perceptions of cross-enrollment opportunities. Our study is guided by the following research questions:

(1) What knowledge do CC students have of California's cross-enrollment policy?
(2) What are CC students' perceptions of the benefits and barriers to cross-enrollment?
(3) What or who informs CC students' perceptions of cross-enrollment?

Relevant literature

Cross-enrollment programs

Cross-enrollment programs, which exist in several states including California, Arizona, Washington, and Virginia (S. 1914, 1994; Fugate, 2001; Hindman & Russ-Eft, 2017; De Los Santos & Sutton, 2012; Mangan, 2018), permit CC

students to take courses at four-year universities without formal admission and usually at reduced tuition rates. While the details of the program partnerships vary, these programs generally exist as a policy tool for increasing and diversifying the CC-to-four-year university transfer pool. The design of these programs are rooted in past theoretical and empirical work which has shown that opportunities for students to become familiar with a university campus lead to increased college knowledge and enrollment in advanced courses (e.g., Swanson et al., 2019), and that early exposure to university faculty and staff (e.g., Wang et al., 2020) and a rich transfer culture that encourages self-efficacy and a sense of belonging can increase transfer rates (e.g., Gopalan & Brady, 2020).

In recent years, there have been a number of studies investigating the outcomes associated with cross-enrollment policies. Past work using nationally representative data has shown that students who cross-enroll are more likely than similar students who do not cross-enroll to complete their BA (Crisp, 2013; Wang & McCready, 2013; Wang & Wickersham, 2014). Work examining a partnership between Linn-Benton CC and Oregon State University has shown that CC students who cross-enrolled were more likely to have higher GPAs, improved receipt of baccalaureate degree after 8 years, and reduced the number of university credits at graduation (Hindman & Russ-Eft, 2017). Additionally, administrative data from a district-wide cross-enrollment program formed in 2005 by the Maricopa CC District and Arizona State University demonstrated improved credit transferability, grade point averages, and graduation rates for Maricopa students as compared to students in other CC districts (De Los Santos & Sutton, 2012). We extend the findings of these studies by qualitatively examining student perceptions of cross-enrollment.

Conceptual framework

College pathway (re)selection model among beginning 2-year college students

We investigate CC students' perceptions of cross-enrollment by drawing on Wickersham's (2020) College Pathway (Re)Selection Model Among Beginning 2-Year College Students, which provides a theoretical foundation for understanding the academic pathways of racially minoritized and low-income students. Wickersham (2020) describes the short — and long-term factors affecting college decision-making, as interconnected and occurring in a nonlinear manner. This model acknowledges that CC students' decisions are often more complex than deciding whether and where to attend college (e.g., whether to re-enroll each term, which classes to take, and where to take classes).

The Wickersham model includes six key factors affecting student decision-making — payoff, fit, place, transferability, mobility, and flexibility. The primary factor, *payoff*, refers to students' efforts to obtain the greatest return

on investment. Payoff involves students' understanding of the costs and benefits of their decisions and thus overlaps with all subsequent factors in the model. *Fit* refers to how well a student feels they match with the university environment or program, including, the size of the institution and the extent to which students feel academically prepared for the institution (i.e., self-efficacy). *Place* refers to students' preferences in terms of an institutions' location; place is important because location influences a student's network, career opportunities, and ability to achieve other personal goals. *Transferability* describes the level of effort it takes CC students to transfer their credits to other institutions and *mobility* describes how a specific pathway might enable students to advance their long-term personal and professional aspirations. The last factor is *flexibility*, which refers to CC students' desire to choose pathways that allow them to manage other responsibilities and choose their desired mode of learning (e.g., online versus in-person, etc.).

Wickersham's (2020) model played an important role in our thematic analysis. Specifically, we explored how Wickersham's decision-making factors might inform a student's perception of cross-enrollment and its value as a beneficial pathway. Our analysis reflects the complex back and forth considerations that students contend with when weighing the potential short — and long-term payoff of cross-enrollment in their transfer journeys. Although we used Wickersham's (2020) model as the base for our analytic approach, and many of our findings align with the factors in the model, we also examined factors that do not fit neatly into the model.

Study context: Cross-enrollment in California

California houses the largest public higher education system in the nation, with 115 CCs, 23 California State University (CSU) campuses, and nine undergraduate-serving University of California (UC) campuses.[1] California Community Colleges (CCCs) enroll approximately 2.5 million students annually (Foundation for Community Colleges (FCC), 2017; Community College League of California, 2018). California is an ideal context to study students' cross-enrollment perceptions given the size of the system, the high enrollment rates, and the statewide cross-enrollment policy.

California's cross-enrollment policy, instituted in 1995, specifies that any full-time CCC student in good standing can take one course per term at a UC or CSU without formal admission to that campus and at the same per-unit cost as the CCC system, space permitting (S. 1914, 1994). Good standing is defined as having a minimum 2.0 GPA, being registered for at least 6 units at their home CCC campus, and being current on tuition and fee payments (S. 1914, 1994).[2]

The goals of senate bill 1914 (1994) mirror those of other simultaneous enrollment practices (e.g., dual enrollment,[3] co-enrollment[4]): to increase responsiveness to student needs via inter-segmental collaboration. The language of the bill (see supplemental materials) indicates that the authors of the bill believed that cross-enrollment could improve transfer rates, especially for underrepresented students, by "bolster[ing] the confidence of California Community College students by their successful performance in university level courses, thereby encouraging them to continue their education beyond the associate degree level" (S. 1914, 1994).

Despite the state-wide policy's intentions for increasing transfer, there is variation in its implementation across the state. Individual four-year campuses, and even individual departments on the same campus, can create their own definition of what constitutes "available space" in a class. Moreover, California colleges, including CCs, CSUs, and UCs, can decide where to house cross-enrollment programs (e.g., campus extension, the registrar, or the admissions office). To investigate the amount and accessibility of information available to students, four researchers on our team navigated the website of six neighboring CCs for information related to cross-enrollment. We followed the rubric on the accessibility and usefulness of transfer information available online outlined in Schudde et al. (2019) and found that cross-enrollment information was housed in various locations on the schools' websites: the admissions page, the honors program, and the transfer center. Also, the presentation of the information varied across colleges. Some colleges provided links to applications, credit transfer forms, a point of contact for questions, while others linked students to external websites, placing additional burden on students to self-navigate. This variation in the implementation of a statewide policy adds complexity and uncertainty to cross-enrollment.

The implications of this inconsistent implementation are evident in findings from the sole statewide report that examined student participation in cross-enrollment between 1997 and 2002. This report found low overall participation among CC students (~450 students total in these five years) and that most of these students (about 90%) had cross-enrolled at a CSU campus rather than a UC campus (California Postsecondary Education Commission, 2003). This report is the most recent statewide data available, which is likely a function of the lack of coordination and tracking regarding policy implementation across schools.

This wide variation in cross-enrollment advertisement, implementation, and lack of evaluation highlights the complexity of postsecondary systems and motivates an examination of students' perceptions of cross-enrollment as a transfer pathway. Such an examination is especially important within the CC context, in which complex and non-linear educational paths are common, the student population is especially diverse, and students are most reliant on institutional sources of information.

Positionality statement

The identities of the research team influenced how we approached this study. Extent of prior engagement with CCs varied across the research team. The principal investigator of the grant supporting this study has a long research history with CCs and strong understanding of higher education policy which allowed us to ground our study in an understanding of the current policy landscape. Two authors previously participated in dual enrollment programs and one author attended a CC for non-degree courses during pauses in her enrollment at four-year institutions. Additionally, two of the authors have direct experience with CCs as employees. While these experiences gave our team insight into the experiences of CC students and staff, the experiences of part-time transitory CC students and CC employees no doubt differ from those of full-time transfer-intending CC students. Therefore, throughout the entire research process, from the development of questions to data analysis, we purposely consulted with three undergraduate students who had transferred from a CC. Additionally, authors identify as White, Korean American, and Latina/o and represent a range of socioeconomic backgrounds, thus bringing a diverse set of perspectives to the study's analysis. The diversity of our research team allowed us to nudge each other to consider alternate interpretations based on the students socioeconomic or cultural context while building parallels across student experiences.

All authors are directly associated with a four-year university near the three participating CCC campuses. This affiliation may have kept students from fully sharing their thoughts of our campus and its transfer process. As a team, we discussed existing power dynamics between CC students and university-based researchers and created strategies for approaching students as knowledgeable informants. For instance, we assured students that we recognized the need for improvements from our university. We also sought to level the playing field through information sharing. The level of rapport the research team developed with students is evident in the number of students who stayed after focus group sessions to converse with the team about information specific to their journeys. These conversations informed subsequent focus group discussions.

Research design

Research sites

We will refer to our three sites as Mountain College, Beach View College, and Sunshine College (all pseudonyms). The distance between each CCC and the local UC ranges between 5 and 15 miles and between 15 and 30-miles to the nearest CSU. These CCCs and CSUs follow a semester system, while the local UC is on a quarter system. Our study sample mirrors both the city and CC

populations in terms of racial/ethnic make-up (see Table 1). The schools vary in size (average yearly enrollment between 22,000 to 39,000) and serve diverse populations, with predominantly White non-Hispanic, Asian, and Latine students (California Community College Chancellor's Office, 2020). Even though each of the cities is home to predominantly White citizens, the racial demographics vary between them; two of the cities report Hispanic/Latines as their second largest group and the third houses Asians as their second largest (U.S Census Bureau, n.d.). Between 2015 and 2019, the median household income for each college's respective city ranged from $84,138 to $118,477, slightly higher than the CA state-wide median household income of $71,228 (U.S Census Bureau, n.d..).

Between 2015 and 2019, the percentage of citizens 25 years or older who had completed a bachelor's degree or higher in the three cities ranged from 40.3% to 68.9% (U.S Census Bureau, n.d.). The average six-year transfer rates at the three schools are slightly higher than the state-wide transfer rate (40%); Mountain College's is 60%, Beach View College's is 50%, and Sunshine College's is 50% (California Community College Chancellor's Office, 2020). Mountain College is the largest feeder CCC to the local four-year college, Beach View College is the second largest, and Sunshine College is the fifth (University of California

Table 1. Student demographics.

	M
Age	22.9
Female	60%
Employed	61.32%
Latine	30.19%
Race/Ethnicity	
White	29.25%
Asian	38.68%
Black	1.89%
Other	19.81%
More Than 1	8.49%
Highest Parent Education	
High School or Less	27%
Some College	18%
Associates or Bachelors	33.96%
Advanced Degree	20.75%
Primary Campus	
Beach View College	42.45%
Mountain College	39.62%
Sunshine College	17.92%
Started College at Current Campus	74.53%
Years Student at Current Campus	
1–2 Years	68.87%
3–4 Years	25.47%
5+ Years	5.66%
Observations	106

Note. Race/Ethnicity and Latine percentages add to more than 100 because whether students identified as Latine was a separate question from the students' race and most students who identified as "other" or "white and other" then indicated that they identified as Latine. If a student identified as Black, white, Asian, or other AND identified with another race/ethnicity they were only counted under the *More than 1* dummy variable, this prevented double counting. Parent education are dummy variables with the highest level of education obtained among both parents. Campus names are pseudonyms.

Office of the President, 2020). Cross-enrollment data from the local four-year indicates low cross-enrollment rates; only 155 CCC students cross-enrolled between 2013 and 2019. Mountain College students constitute 33% (n = 51) of those cross-enrollees, Beach View College students make up 7% (n = 11), with Sunshine College students contributing 14% (n = 22).

The CCs and nearby four-year college in our qualitative study represent an informative sample for two reasons. First, we examine a postsecondary education *ecosystem* rather than a unique dyad of one CC and one four-year college. Focusing on an ecosystem of schools allows for variation in campus characteristics and structures, while reducing the complexity of studying a state system (though, because of the state-wide cross-enrollment policy, this study can provide actionable insight to schools across the state). Second, because of the complexity of this policy and the various levels at which there are important details of implementation, our preexisting research relationships allowed us to gain access to faculty, administrators, and students, thus allowing for a comprehensive picture.

Participant recruitment

We conducted 12 focus groups with a purposeful sample of students (N = 106) from three CCCs (Mountain College n = 42, Beach View College n = 45, Sunshine College n = 19) who could speak to how transfer-inclined students perceive cross-enrollment (Creswell & Poth, 2018). Details on recruitment efforts and the smaller sample size at Sunshine College can be found in our supplemental materials. Participants signed an IRB-approved informed consent and were compensated with an electronic $30 gift card. Our recruitment strategy included asking CC transfer counselors to forward a flyer to any student who had demonstrated behavioral intent to transfer, signed-up for or otherwise participated in a transfer-related activity, participated in specialized transfer programs, co — or cross-enrolled, or enrolled in transfer requirement courses. While these served as recruitment guides, we did not ask students to self-identify into these groups. Instead, we focused on reaching students who could offer unique insights on whether cross-enrollment was perceived to be in line with transfer pathways, a key goal of the policy.

Data collection

Prior to conducting the focus groups, team members toured each CC campus to contextualize the sources of information and resources available to students. For example, we explored the information available to students in transfer centers and libraries and spoke with transfer and counseling office staff. Focus group sessions were conducted in English, audio recorded, took place on the three CCC campuses during normal operating hours, lasted about 60 minutes each, and consisted of 4 to 18 participants.

We used several techniques to ensure that our participants felt safe to share and that we accurately captured what was shared. We communicated to site partners that focus groups should be a safe environment for students to share without fear of repercussions and that campus staff were not allowed to sit in on focus group sessions. We also did not share identifiable data with CC partners. During the focus groups a dedicated note-taker recorded emerging categories and impressions of emotional reactions (e.g., excitement, confusion, frustration) that would not be explicitly captured by audio recordings (Creswell & Poth, 2018). Finally, after each campus visit and focus group, team members collaboratively memoed their initial insights and reactions to identify emerging patterns and to refine the interview protocol for future focus group interviews (Creswell & Poth, 2018).

We developed our semi-structured focus group questions based on existing CC transfer and cross-enrollment literature (see protocol in the supplemental materials) (Crisp, 2013; Wang & McCready, 2013; Wang & Wickersham, 2014). Our conceptual framework (Wickersham, 2020) further guided our development of our focus group interview protocol. We focused on the complexity of factors students must iteratively consider such as students' perceptions of the potential payoff to cross-enrollment, students' rationale for why local four-year campuses may be attractive sites for cross-enrollment, and how cross-enrollment fits in with students' long-term goals. Finally, to contextualize Wickersham's (2020) model in the context of cross-enrollment, we also examined ways students obtained sufficient and reliable information and used this information to best navigate different opportunities.

Data analysis

After the audio recordings of the focus groups were transcribed verbatim by a transcription service, our team of six coders underwent a collaborative and iterative coding process allowing for both deductive and inductive data analyses. Some codes were derived directly from patterns in the data and other codes were derived from our key theory and previous literature (Thomas, 2006). Aligning with the approaches outlined in Campbell et al. (2013) and Richards and Hemphill (2018), we emphasized inter-coder *agreement* over inter-coder *reliability*, which is appropriate for data from focus-groups with multiple coders. Our process can be described in three broad phases: I) open coding and initial codebook building, II) unitization, inter-coder agreement, and group-based consensus, and III) final recoding, pattern finding, and thematic analysis. We revised our codebook at each step of the analytic process. We briefly describe our approach below and provide more details in our supplemental materials.

Phase I

In Phase I, we first analyzed our field notes and generated analytic memos that documented emerging ideas and structures guided by our theory (Wickersham, 2020). Specifically, we noted the factors that students perceived as important at various decision points in their trajectories. After this initial step, we began multiple sessions of collaborative and individual open coding where we discussed the operationalization of codes (Creswell & Poth, 2018). We created a preliminary codebook on the qualitative coding software Atlas.ti and refined it based on team discussions.

Phase II

Unitization refers to the level or unit of analysis including individual sentences, entire quotes stated by one-person, multiple paragraphs or dialogue between two people, or any combination of these depending on the study goals (Campbell et al., 2013). It is important for establishing inter-coder agreements. We defined our unitization as individual quotes or, in some instances in which multiple quotes were needed for context and clarity, dialogue between two focus group participants (Campbell et al., 2013). We accomplished inter-coder agreement by subjecting each transcript to a double-coding process and full coding team review (Campbell et al., 2013; Richards & Hemphill, 2018). We focused on perceptions of factors important for short — and long-term decision-making (Wickersham, 2020). As a result of this process, we developed a final codebook.

Phase III

The first author re-coded each of the 12 transcripts using the finalized codebook. In this study, we focused our analysis on sub-codes under the cross-enrollment code group (n = 16 sub-codes; table S1). To maintain a succinct list of codes while allowing for granularity, we devised a group of codes that we called qualifiers (n = 8 sub-codes; table S2) which contextualized the cross-enrollment sub-codes and captured instances of differentiation (Miles et al., 2014).[5] Finally, we separated all 312 units of analysis from their codes and recombined them into larger groups that spoke to different patterns in the data (i.e., themes and sub-themes; Rabiee, 2004).

Findings

We identified three main themes: (I) hidden and inaccessible doors, (II) sense of belonging and self-efficacy, and (III) cross-enrollment as a double-edged sword.

Theme I: Hidden and inaccessible doors

No centralized sources of information

The most common theme that emerged from our analysis was students' lack of knowledge about cross-enrollment. Since most of the students had little to no information on California's cross-enrollment policy, the focus group moderators provided students with a description of the policy. Many students, including those who had heard of cross-enrollment prior to the focus group, had numerous questions. Students expressed great interest in the policy as evidenced by one students' reaction to learning about cross-enrollment, "It's what I wanted to do, but I didn't know it existed[. . .]I didn't know it was possible." This statement echoed that of many across all focus groups. Wickersham's (2020) model describes the factors that students generally consider when making decisions, however, our focus groups highlighted that before students can engage with these factors, they must be aware of their options.

The few students who knew about the policy had learned about it through informal and idiosyncratic channels such as through previous employment at other colleges, from a high school substitute teacher, from an English department head during a field trip to a four-year university, or from a current four-year student at a transfer fair. Perhaps because this knowledge was coming through unofficial channels, many students expressed uncertainty as to whether cross-enrollment was a worthy or viable endeavor in their academic careers. As one student explains, "If there was a clear set way to do it, like, this is what you need to do, it's like single, and everyone could see that, I think a lotta people would do it . . . " Similar to prior findings on transfer, the lack of clear systemic guidelines, may contribute to the low uptake (Bailey et al., 2015).

Students who were unaware of cross-enrollment before participating in the focus groups used their previous experiences to form opinions about the policy. Many students assumed that the opportunity to pursue cross-enrollment would generally parallel their experiences with pursuing transfer. Specifically, students relied on different sources of information to learn about transfer, and many students expressed that these sources were sometimes unreliable. As such, many students noted that they cross-referenced transfer information from several online sources and from on-campus student offices. Moreover, students described the siloed nature of the institution and the challenges with obtaining accurate information about transfer, "It was a circuitous bureaucracy versus actually getting results . . . circuitous bureaucracy because it just felt like you just were going from person to person . . . " The students extrapolated that it would be even more challenging to navigate another set of administrative offices on a new campus. These anecdotes reinforced that cross-enrollment is not perceived as an accessible process in its current form.

General administrative questions

Once students learned about cross-enrollment, they began to ask broad questions about requirements. Questions surrounding financial aid coverage for cross-enrollment courses surfaced frequently: "I have a minimum of six units here. How do they count those units at [local UC]? So that I remain a full-time student, so I get my financial aid." Students also inquired about financial aid for other expenses beyond tuition, "Here at [home CC], I came here specifically because they were gonna pay for all my tuition, all my books, even gave me scholarships." Students wondered which resources would be applicable to cross-enrollees. As students envisioned how cross-enrollment could fit in with their plans, they raised questions about logistics such as timing: "My question then is . . . if I want to go to summer school at [local UC], does cross-enrollment, is it applicable for that or just during the regular school year — they're on the quarter system too." Questions like this demonstrate both interest in the policy and concerns about the programmatic and logistical factors students would need to navigate to participate in cross-enrollment.

Specific major-related questions

Once students felt that they had a grasp of the general cross-enrollment requirements and protocols, they began to dive into more targeted questions, such as transferability of coursework. For example, one STEM major had concerns about how cross-enrollment would affect their required course sequence: "chem[istry] 1A, chem[istry] 1B, at [home CC campus], it's two courses, but at [local four-year], it'd be just one. How does that work?" Students had many questions like this that indicated a deep knowledge of curricular and administrative requirements and a desire to understand how cross-enrollment would work in practice. In response to learning that full-time four-year university students receive priority registration and cross-enrolled students must wait for available seats, a student echoed others' concern:

> As far as I know, there are people who wait-list to take computer science courses. What is the likelihood that cross-enrollment students will be able to get into their class of choice if all the other UC students need that course too?

These concerns about capacity constraints were common across many majors who voiced worry about it leaving them hastened to secure a seat in courses required by their programs.

Theme II: Sense of belonging and self-efficacy

Institutional stereotypes and students' support

In addition to the lack of systematic knowledge regarding cross-enrollment, students' perceptions of support available at a UC compared to their home campus informed their sense of belonging and academic confidence. Students'

perceptions of institutional prestige inform how they view potential educational opportunities (Holy, 1961), especially as these opportunities interact with students' beliefs in their own capacity to perform or achieve a certain task (i.e., self-efficacy; Bandura, 1977). As previously mentioned, CCs are often perceived as the least prestigious postsecondary institutions due to their open admissions, and perceptions of prestige carry over to stereotypes about students' abilities. Many students in our focus groups shared that they believed CC students would be looked down upon at four-year colleges:

> I don't know how valid these rumors are, but I guess as transfer students, there's sometimes this idea that you're not as smart as the students that have been here since freshman year. You can get less[er] treatment from the professors or even from the other students.

Participants suspected that university professors, particularly at UCs, may have lower expectations of cross-enrolled students and invest less time in them. These perceived stereotypes negatively influenced students' self-efficacy and academic confidence even when others praised their abilities, " . . . the problem with me . . . it's just if I would be able to handle the difficulty of the class. Just 'cause people are always telling me I'm this smart [gesturing big], but I think I'm this smart [gesturing small]." While most students perceived cross-enrollment as a great opportunity for taking advanced coursework, many students confessed to having doubts about their ability to successfully complete courses at four-year universities. This concern reinforces the concept of fit, as students consider whether their academic preparation will set them up for success in a four-year college course (Wickersham, 2020).

Many participants also perceived faculty, at UCs specifically, to be less student — and teaching-orientated, "Yes. I heard that UC professors usually don't have a lot of time [be]cause they have to do a lot of research . . . They don't have a lot of office hours." These perceptions of UC faculty align with the initial conceptualization of California's tiered postsecondary system (Holy, 1961; Roksa et al., 2007). Nonetheless, students often indicated that they preferred the smaller class sizes at their home CC campus and appreciated that their instructors implemented diverse strategies for different learning styles, "It's more difficult to . . . communicate with the professor. I have friends that go to [local UC], and they say their classes are 200 per." Perceptions of less-than-optimal teaching quality and less individualized attention at research universities negatively influenced students' willingness to pursue cross-enrollment.

Lack of support from institutional agents

Another factor that contributed to students' self-doubt was the messages students received from key personnel at their CC throughout their academic journey. One student acknowledged the importance of receiving

encouragement from CC counselors and shared how negative experiences with counselors influenced their subsequent decisions: "You can't be pejorative or condescending, and you have to be very cautious if you're going to be a counselor. You are saying things that are going to affect the trajectory of somebody's life." Due to prior discouraging experiences with counselors, some students assumed that counselors would discourage them from pursuing cross-enrollment. For example, one student described a demoralizing conversation they had with a CC counselor.

> They first look at your transcript and then determine how much they wanna help you. They sometimes will recommend me like, "Oh. Did you know that you don't have all A's . . . did you know that it's kinda hard if you don't have all A's? Have you considered switching to another major?" . . . I was like, "Wow, that's, kind-of, discouraging."

Ultimately, students voiced concerns about potential underlying biases that influenced the kinds of pathways counselors encouraged them to pursue. Together, these discussions in our focus groups demonstrate a lack of overt encouragement from CC counselors, combined with students' perceptions of stereotypes attending a CC, can erode students' sense of self-efficacy and their willingness to pursue opportunities.

Some students in our focus groups did not report experiencing direct negative comments about their academic abilities but still reported institutional mistrust, "Sometimes, it doesn't always feel like they have my actual goals in their best interest. It's all about what the school needs to look better." A student who had previously attended college in another state shared that there seemed to be a program like cross-enrollment between two institutions and sensed that counselors at that school had priorities other than his success, "I actually did ask about it in one of my counseling appointments there, and they strongly discouraged it, but I think that was purely a financial incentive for the university." Likely related to these types of experiences, students largely agreed that seeking out information on their own would yield better results, mirroring findings from other studies (Jabbar et al., 2021; Wang, 2020).

Theme III: Double-edged sword

Additional complexity and limitations

Assuming that students know about cross-enrollment and feel supported to cross-enroll, we found that students still expressed perceived trade-offs to cross-enrollment. Students face challenges in navigating existing administrative processes, so the prospect of navigating the enrollment process at another institution led many students to question the value of the opportunity. Students voiced concerns over obstacles they might face in negotiating the process of registering for cross-enrollment and in the actual act of cross-enrolling. One concern centered around the logistical implications and

underlying costs of taking classes on multiple campuses (e.g., double parking pass costs, commute time, extra gas costs, dependent care, employment). There was an evident preference toward institutions or pathways that provided flexibility with minimal inconvenience to their everyday lives. Students with book and parking vouchers at their home CC campus mentioned that because these might not apply at the four-year campus, cross-enrollment would not be a cost-effective opportunity.

In addition to the logistical concerns discussed above, students also mentioned academic concerns, generally focused on whether cross-enrollment would strengthen or derail their planned course trajectory. Students enrolled in honors programs who have priority registration at their home campus were particularly wary of cross-enrollment. Planning to enroll in a particular course via cross-enrollment added uncertainty and risk to their curricular planning; not being able to enroll in a specific course could disrupt their academic plan: "if it was cross-enrollment, you're not a priority, more like an add-on if anything. Who's to say you'll get that class?" Due to this perceived risk, some students expressed a preference of taking required courses on their home CC campus. This perception demonstrates students' consideration of how short-term implications could translate into long-term impacts, such as not graduating within their desired timeframe.

Furthermore, students expressed concern that support available on their home CC campus (e.g., disability services, tutoring) might be unavailable on the four-year campus, which could jeopardize their chance of success. Students were also cognizant of the competitiveness of admissions to a four-year school and of the importance of maintaining a high GPA for transfer. Students were concerned about their performance in cross-enrolled courses: "if that's a core class that you can think—you thought you could get an A at [home CC], why risk trying to get a B or a C at the UC school." This perception of being able to easily enroll and succeed in general education or major required courses at the CC was a common sentiment among participants. Students seemed to grapple with the fear that cross-enrollment could potentially put their long-term goal of transferring at risk if they did poorly in a cross-enrolled course.

Given the complexities surrounding articulation agreements and credit transferability related to the transfer process (Bailey et al., 2015; Wickersham, 2020), students also anticipated high levels of uncertainty related to credit transferability and cross-enrollment. The ease of transferability of credits between institutions influences a student's perception of payoff, mobility, and flexibility in future planning. Students expressed that these concerns were based on previous frustrations with articulation agreements changing or being outdated. Given that CC students do not have guaranteed admission to any four-year campus, the uncertainty about the transfer of credits, both back to their home CC campus and to other four-year schools, was a concern of

many students. One student shared this perspective, "But then I transfer to a Cal State, then I don't know how they would count that class or not. 'Cause it'll all be confusing. And if they don't count it, then that's a waste of my time." Thus, many students believed it was best to avoid the complexities of cross-enrollment and pursue coursework for transfer at their home campus, unless they were very confident that they would be accepted to the four-year school where they cross-enrolled.

Opportunity for a head start

In tandem with expressing these concerns, students saw several benefits to cross-enrollment. Students perceived cross-enrollment as an opportunity to get a head start on their academic goals. Many students discussed potential benefits to cross-enrollment related to future goals, such as being more competitive as a transfer applicant, making connections with faculty and students at the four-year institution, and getting a sense of the campus culture. This perception of increasing one's capacity for upward mobility was another form of payoff that students consistently voiced. Students focused on the ways cross-enrollment could improve their chances of transfer by allowing them to take courses otherwise unavailable to them.[6] For instance, one student voiced how cross-enrollment could solve their course credit transferability dilemma, "They changed the requirement a little bit . . . [home CC]'s data structure class no longer articulates to [local CSU], and so I've been screwed on that one. With cross-enrollment, can I take the data structures class at [local CSU]?" This quote highlights students' consideration of transferability in that they were being strategic in their course planning to achieve their goal of transfer.

Another perceived benefit of cross-enrollment was exposure to the difference in pace between a CC and a four-year course. Most students saw the change in pace as a challenge worth taking on now in hopes that they would later reap the benefits, "If you would go to UC, you would get to experience the quarter system versus semester, and that could give you a head start if you're transferring to a UC." Students were aware of the change in pace they might face upon transfer and were striving to be well-equipped for those shifts. Along these same lines, cross-enrollment was also perceived as a means to prove themselves to admission committees:

> If you did take one [a cross-enrollment course] . . . [local 4-year] might take it into consideration that you did well in the class—like, 'Hey, they've already taken two classes here, and they did well.' Just a little extra bonus point on your application . . .

As such, students saw cross-enrollment as a strategic opportunity to demonstrate their academic strengths to transfer admission committees.

Students considered other ways to maximize the potential benefits of cross-enrollment by meeting bachelor's degree requirements prior to transferring. Specifically, a student expressed interest in cross-enrollment as a means to get

a jump start on major course requirements in a cost-effective manner, "would you be able to take major classes to get ahead? . . . I'd probably do that, because in high school I never saw myself going to UC or CSU because of the expenses." Taking major related coursework was a popular benefit of cross-enrolling. Students saw it as a way to meet other students with similar interests and to learn what major-related activities four-year students participated in. Meeting experts in their desired field of study, accessing lab equipment, and library resources was perceived as advantageous by providing enrichment not available at their home campus. Generally, cross-enrollment was perceived as opening opportunities for students who had not previously seen these opportunities as accessible or attainable.

Limitations

There are specific limitations one should consider when broadly interpreting the results of this study. First, the CCs in this sample are in an area with predominantly White, Hispanic/Latine, and Asian student populations and with several two — and four-year colleges. Although our study includes a diverse student sample, our research sites report higher than average parental education, income, and transfer rates compared to other CCs in California. This is a unique ecosystem within California where students are comparatively privileged as compared to students in other cities. While students in our sample perceive opportunities like cross-enrollment as inaccessible, students in other areas with access to fewer resources may perceive greater barriers. Secondly, this study focuses on the perspective of students who have yet to cross-enroll and does not include the voices of previously cross-enrolled students and students who have transferred. It also does not capture perspectives from diverse stakeholders who are often in charge of enacting policies like cross-enrollment (e.g., counselors; Felix & Trinidad, 2018). Thirdly, while we aimed to offer a wide range of focus group dates and times, transfer-intending CC students who are unable to come to campus for non-class related activities (e.g., students with families or students lacking flexible transportation) may have been left out of our study. This might indicate that student perceptions, and the experiences that influence those perceptions, captured in our study may not neatly align with perceptions of students unable to participate. Finally, because the nearest public four-year campus to our CC sites was a UC, with which we have an affiliation, many of our conversations with students organically shifted toward perceived cross-enrollment barriers and benefits specific to UCs. Student perceptions of cross-enrollment may be different for students considering cross-enrolling at a CSU.

Discussion and conclusion

This qualitative study provides examples of the ways that imperfect information in complex contexts can lead to varied perceptions of college pathways among CC students (Baker, 2016; Bourdieu, 2011). We discuss the implications of our findings and provide directions for future research.

Hidden and inaccessible doors

The lack of knowledge of cross-enrollment and the varied concerns that students expressed in our focus groups highlight the complexity of the United States' postsecondary system. Our study emphasizes the need for clearer and consistent dissemination of information and resources, which echoes the work of other scholars (Baker, 2016; Schudde et al., 2019; Wickersham, 2020). Wang (2020), for example, also found that CC students were unsure what information they needed or where to locate up-to-date information to inform enrollment decisions. Community college students are often overwhelmed by the many complex options available to them and many report that they feel ill-equipped to complete their goal (Bailey et al., 2015). Students who receive frequent coaching and clear specific information demonstrate improved persistence compared to students without coaching or consistent dissemination of information, regardless of their racial background (Bettinger & Baker, 2014; Jabbar et al., 2021). Senie (2016) depicts the complexity of how (mis)information trickles down in our current postsecondary systems and the multiple academic cultures that student support agents (e.g., counselors) must navigate prior to assisting students. Students need accurate, timely information from counselors, faculty, and administrative staff and for this to happen those same agents need clear communication from higher education policymakers (Senie, 2016). Without accessible and centralized information portals, there will continue to be disparate access to information, generally benefiting students with more privileged forms of social capital (Bourdieu, 2011; Iloh, 2018). Before students consider the factors in Wickersham's (2020) model they need precise, timely information; otherwise, existing inequalities in college enrollment pathways may be further exacerbated.

Sense of belonging and self-efficacy

Reflecting the hierarchical structure of U.S higher education, CC students found themselves negotiating perceptions of institutional prestige. Students reported being affected by how college personnel viewed their abilities. These beliefs affected students' conceptions of their own self-efficacy and belonging. Students communicated that in order to see cross-enrollment as a fruitful

pathway they needed certain types of support (e.g., to be treated as capable and to have an engaging curriculum). This comports with the work of Shaw et al. (2019), who found that students who received support from their CC faculty and counselors in explicitly preparing for expectations at four-year universities experienced fewer feelings of self-doubt and a greater sense of belongingness. While cross-enrollment is intended to promote self-efficacy and belongingness, students may be better able to realize the benefits if key actors at CCs help students to prepare for different expectations while instilling academic confidence and self-efficacy.

Students also alluded to the need for faculty, counselors, and administrators to consciously work to counter biased attitudes toward underperforming students. Existing inequities can be compounded when students perceive opportunities to be withheld by trusted advisors, which affects students' sense of self-efficacy (Iloh, 2018). Although students demonstrated perseverance and tenacity by sharing the ways in which they utilized multiple sources of information on — and off-campus to make-up for what they felt was weak support from counselors, consistent personalized, positive guidance from key personnel on their home campus is crucial for success (Bettinger & Baker, 2014; Jabbar et al., 2021; Scrivener et al., 2015). These points underscore that college counselors and administrators must provide unbiased guidance to students and disseminate opportunities widely.

Double-edged sword

Finally, students negotiated how cross-enrollment could be beneficial or harmful toward their academic careers. Overall, we found that students' perceptions of the benefits and detriments of the policy appeared equally salient. It was clear, though, that students in our focus groups recognized how certain policies and programs may not equally benefit all student populations, which supports the findings of past work; students in our focus groups underscored that policies intended to provide CC students with added flexibility should be careful not to add complexity and confusion (Wang & McCready, 2013). Wickersham's (2020) theoretical model argues that not all students consider the same short-term and lifetime decision-making factors when making enrollment decisions. Echoing this sentiment, students in our study described a wide range of needs, planned trajectories, and considerations. Both our key conceptual model (Wickersham, 2020) and our findings argue that decision-making is far from static or linear and that policies interact with student preferences, strengths, and needs in ways that can exacerbate inequality.

California policy implications

Because cross-enrollment is a defined process, both in timing and in scope, it provides a tractable understanding of several related, but more complex, processes such as transferring into four-year colleges. Students' suggestions mirror and complement some reforms currently underway in California to improve transfer pathways. For example, Associate Degrees for Transfer, implemented in 2012, made clear the importance of having standardized transfer requirements across CSUs. These degrees have resulted in increased transfer and increased efficiency for CCC students hoping to transfer to a CSU. Students' concerns related to clear articulation of credits is reflected in California Assembly Bill 1111, introduced in February 2021, which proposes to require common course numbering across all CCCs. Finally, a new admissions policy in California, in which students are admitted jointly to a CCC and a CSU or UC and spend their first two years in a CCC before transferring, explicitly highlights the importance of collaboration across sectors and giving potential transfer students access to information and resources (e.g., counseling) on the four-year campus prior to transferring. These enacted and proposed policies echo many of the sentiments that the students in our focus groups expressed and provide a framework for how cross-enrollment policies could also be improved.

Implications for practice

Insights from students in our study point to various levels at which potential interventions intended to increase and equalize uptake of policies could be targeted: student, practitioner, faculty, campus-wide, state-wide (table S3). Ultimately, a centralized guide establishing baseline standards on policy implementation is necessary in order to hold institutions accountable for collaboration and the attainment of policy objectives (Jain et al., 2011; Taylor & Jain, 2017). One way to implement policy guidance could be to reserve a specific number of seats for cross-enrolled CC students at four-year campuses. This guarantee of space would remove uncertainty for students considering cross-enrollment.

To ensure accessible and accurate dissemination of information, policy guidance at the state-wide level could include instituting a cross-enrollment "point person" at each two — and four-year campuses to guide counselors, faculty, and students. A designated person on each campus could help students and counselors navigate the complicated terrain of cross-enrollment. Another avenue to increase transparency and streamline the process across campuses is a centralized state-wide cross-enrollment website. Several students in our focus groups suggested a centralized website, which would provide counselors with accurate tools to use and to share widely with students on diverse pathways.

The involvement of faculty at both two — and four-year campuses could be an important policy lever. Faculty at CCs could aid in the identification of courses on their campus with high demand (e.g., GEs or popular major specific requirements for transfer) but limited offerings, which could be good options for cross-enrollment. Similarly, four-year faculty can work with counselors, administrators, and faculty on CC campuses to identify courses that match CC sequences. We acknowledge that substantial faculty involvement is no easy feat. Fostering collaboration among faculty at two — and four-year campuses is often challenging due to politics, mutual distrust, curricular power struggles, and stigmas like those perceived by the students in our focus groups (Wang, 2020). In states like California, where recent legislation is working toward or has already enacted policies such as standardized transfer requirements, uniform course numberings, and guaranteed admission programs, some of these barriers to collaboration might be reduced. In states where such policies are lacking or in institutions (both two — and four-years) where the focus on student success is weak, tensions in faculty collaborations may be intensified (Wang, 2020).

Future research

Findings from this study offer insights into potential practical administrative and policy changes and serve as a foundation for future studies. Policies like cross-enrollment could be useful in helping institutions fill gaps in course offerings and in combining expertise across campuses. Thus, future interventions could explore differences in how well cross-enrollment serves student transfer and B.A. degree attainment. For example, scholars can compare a four-year campus that actively engages its faculty and administration with those at a partner CC versus those that take a more hands-off approach. Contextualizing this, interviews in different CC districts or among different two — and four-year campus partnerships can tell us about the support that administrations need to make cross-enrollment run efficiently for students.

Additional qualitative work with students who are currently cross-enrolled, students who have transferred after cross-enrolling or who stopped-out after cross-enrolling could further our understanding of how cross-enrolled students prefer to utilize the opportunity. For instance, are students cross-enrolling to take advanced major related coursework, to explore areas of interest, or to meet general education requirements that may be impacted at their home campus? In answering this question, the higher education community will better understand the role of cross-enrollment in students' trajectories.

Quantitative efforts to better understand the extent to which cross-enrollment impacts CC students' trajectories are also needed. Within the context of California, future work can aim to descriptively compare CCC

transfer rates and bachelor's degree attainment rates before and after the implementation of the CA Senate Bill 1914. Further efforts are also needed to identify the causal effect of certain cross-enrollment behaviors (cross-enrolling multiple times a year, only taking major related coursework, cross-enrolling at multiple four-years). Our third theme situated cross-enrollment as a policy with both positive and negative factors, thus, future research should also consider potential negative effects of cross-enrolling on student academic outcomes.

Future research should examine potential costs and benefits of remote cross-enrollment for CC students, particularly now that COVID-19 forced higher education institutions to shift toward remote learning. While many of the benefits of cross-enrollment explicitly outlined in CA Senate Bill 1914, involve face-to-face interactions, such as students expanding their network and becoming familiar with the campus, online cross-enrollment may not allow for these anticipated benefits. However, online cross-enrollment removes additional educational expenses, psychological costs of adjusting to a new campus, and time spent commuting.

Beyond the case of cross-enrollment, our study contributes to the understanding of student perspectives on policy implementation and how differences in implementation can complicate student pathways. We must include student voices to critically evaluate the disconnects between policy effectiveness in theory and its effectiveness in practice. Clear and streamlined higher education policies and partnerships must rise to their potential to promote academic confidence, improve persistence, and expand students' social capital for CC transfer-intending students.

Notes

1. In 1960, the California higher education master plan delineated the unique roles of UCs, CSUs, and CCCs. It prescribed that UCs would be charged with research and granting doctoral degrees while CSUs would lead in student instruction and grant master's degrees. California CCs award technical vocational training, associates degrees, and prepare students for transfer. The master plan also prescribed that UCs would accept California's top 12.5% high school graduates, CSUs the remaining 33%, and CCCs all other students (Holy, 1961).
2. CA Senate Bill 1914 also states that CSU and UC students can take one class per term at an institution in another sector.
3. Dual enrollment programs provide affordable early access to higher education to low-income minoritized high school students.
4. Co-enrollment is a practice that many CC students exhibit where they enroll in multiple CCs simultaneously.
5. For example, a single cross-enrollment sub-code could be illustrated with a qualifier sub-code both as a positive and/or unfavorable factor.
6. During our CC campus visits we learned that when courses do not meet a prescribed number of enrollees, the course is canceled and dropped.

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References

Bailey, T., Jaggars, S. S., & Jenkins, D. (2015). *Redesigning America's community colleges: A clearer path to student success*. Harvard University Press.

Baker, R. (2016). The effects of structured transfer pathways in community colleges. *Educational Evaluation and Policy Analysis*, *38*(4), 626–646. https://doi.org/10.3102/0162373716651491

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191. https://doi.org/10.1037/0033-295X.84.2.191

Beattie, J. W., Thornton, B., Laden, R., & Brackett, D. (2013). 21st century challenges in higher education: Strategic changes and unintended consequences. *International Journal of Educational Leadership Preparation*, *8*(1), 62–71 https://files.eric.ed.gov/fulltext/EJ1012986.pdf

Bettinger, E. P., & Baker, R. B. (2014). The effects of student coaching: An evaluation of a randomized experiment in student advising. *Educational Evaluation and Policy Analysis*, *36*(1), 3–19. https://doi.org/10.3102/0162373713500523

Bourdieu, P. (2011) The Forms of Capital (1986). In *Cultural Theory: An Anthology*, *1* (pp. 81–93). UK: Wiley.

California Community College Chancellor's Office. (2020). *Management information systems data mart*. Retrieved April 30, 2020, from https://datamart.cccco.edu/Default.aspx

California Postsecondary Education Commission. (2003). *A review of California's cross-enrollment program: A report to the governor and legislature in response to senate bill 1914 and senate bill 361*. http://www.cpec.ca.gov/completereports/2003reports/03-01.pdf

Campbell, J. L., Quincy, C., Osserman, J., & Pedersen, O. K. (2013). Coding in-depth semi structured interviews: Problems of unitization and intercoder reliability and agreement. *Sociological Methods & Research*, *42*(3), 294–320. https://doi.org/10.1177/0049124113500475

Community College League of California. (2018). *Fast Facts 2018 [Infographic]*. https://www.ccleague.org/sites/default/files/images/ff2018_league_0.pdf

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design: Choosing among five approaches*. SAGE.

Crisp, G. (2013). The influence of co-enrollment on the success of traditional-age community college student. *Teachers College Record: The Voice of Scholarship in Education*, *115*(10), 1–25. https://doi.org/10.1177/016146811311501008

de Los Santos, A. G., Jr, & Sutton, F. (2012). Swirling students: Articulation between a major community college district and a state-supported research university. *Community College Journal of Research and Practice*, *36*(12), 967–981. https://doi.org/10.1080/10668920903182641

Felix, E. R., & Trinidad, A. (2018). Fulfilling the transfer mission at an Urban technical college: How a transfer center mediates baccalaureate aspirations for students. *Community College Journal of Research and Practice*, *42*(12), 861–877. https://doi.org/10.1080/10668926.2017.1361877

Foundation for Community Colleges (FCC). (2017). *Fact sheet*. Retrieved November 19, 2019, from https://foundationccc.org/Portals/0/Documents/NewsRoom/FactSheets/ccc-facts-figures.pdf

Fugate, C. (2001). Community & Collaboration: "Only connect": The co-location of the University of Washington, Bothell and Cascadia Community College. *College and Research Libraries News*, *62*(1), 9–11. https://doi.org/10.5860/crln.62.1.09

Gopalan, M., & Brady, S. T. (2020). College students' sense of belonging: A national perspective. *Educational Researcher*, *49*(2), 134–137. https://doi.org/10.3102/0013189X19897622

Hindman, L. L., & Russ-Eft, D. F. (2017). A college and university co-enrollment program that facilitates baccalaureate attainment. *Journal of Applied Research in the Community College*, *24*(1), 77–93 https://www.ingentaconnect.com/content/montezuma/jarcc/2017/00000024/00000001/art00007?crawler=true&mimetype=application/pdf

Holy, T. C. (1961). California's master plan for higher education, 1960–1975. *The Journal of Higher Education*, *32*(1), 9–16. https://doi.org/10.1080/00221546.1961.11777639

Iloh, C. (2018). Toward a new model of college "choice" for a twenty-first-century context. *Harvard Educational Review*, *88*(2), 227–244. https://doi.org/10.17763/1943-5045-88.2.227

Jabbar, H., Schudde, L., Garza, M., & McKinnon-Crowley, S. (2021). Bridges or barriers? How interactions between individuals and institutions condition community college transfer. *The Journal of Higher Education*, 1–24. https://doi.org/10.1080/00221546.2021.1953339

Jain, D., Herrera, A., Bernal, S., & Solorzano, D. (2011). Critical race theory and the transfer function: Introducing a transfer receptive culture. *Community College Journal of Research and Practice*, *35*(3), 252–266. https://doi.org/10.1080/10668926.2011.526525

Mangan, K. (2018). These 2-year and 4-year college partnerships keep students from falling through the cracks. *The Chronicle of Higher Education*. https://www.chronicle.com/article/These-2-Year4-Year/243283

Miles, M. B., Huberman, M. A., & Saldaña, J. (2014). Drawing and verifying conclusions 3rd. In *Qualitative Data Analysis: A Methods Sourcebook* (pp. 275–322). Thousand Oaks: SAGE.

Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the Nutrition Society*, *63*(4), 655–660. https://doi.org/10.1079/PNS2004399

Richards, K. A. R., & Hemphill, M. A. (2018). A practical guide to collaborative qualitative data analysis. *Journal of Teaching in Physical Education*, *37*(2), 225–231. https://doi.org/10.1123/jtpe.2017-0084

Roksa, J., Grodsky, E., Arum, R., & Gamoran, A. (2007). United States: Changes in higher education and social stratification. In Y. Shavit, R. Arum, & A. Gamoran (Eds.), *Stratification in higher education: A contemporary study* (pp. 165–191). Stanford University Press.

Schudde, L., Bradley, D., & Absher, C. (2019). Navigating vertical transfer online: Access to and usefulness of transfer information on community college websites. *Community College Review*, *48*(1), 3–30. https://doi.org/10.1177/0091552119874500

Scrivener, S., Weiss, M. J., Ratledge, A., Rudd, T., Sommo, C., & Fresques, H. (2015). *Doubling graduation rates: Three-year effects of CUNY's Accelerated Study in Associate Programs (ASAP) for developmental education students*. New York: MDRC. https://papers.ssrn.com/sol3/papers.cfm?Abstract_id=2571456

Senie, K. (2016). Implementing transfer and articulation: A case study of community colleges and state universities. *Community College Journal of Research and Practice*, *40*(4), 269–284. https://doi.org/10.1080/10668926.2015.1038667

Shaw, S. T., Spink, K., & Chin-Newman, C. (2019). "Do I really belong here?": The stigma of being a community college transfer student at a four-year university. *Community College Journal of Research and Practice*, *43*(9), 657–660. https://doi.org/10.1080/10668926.2018.1528907

Swanson, E., Kopotic, K., Zamarro, G., Mills, J., Greene, J., & Ritter, G. (2019). *An evaluation of the educational impact of college campus visits: A randomized experiment*. AERA Open: Education Reform Faculty and Graduate Students Publications. https://scholarworks.uark.edu/edrepub/69

Taylor, J. L., & Jain, D. (2017). The multiple dimensions of transfer: Examining the transfer function in American higher education. *Community College Review*, *45*(4), 273–293. https://doi.org/10.1177/0091552117725177

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, *27*(2), 237–246. https://doi.org/10.1177/1098214005283748

U.S Census Bureau. (n.d.) *Quick Facts for city populations*. Retrieved June 1, 2020, from https://www.census.gov/quickfacts/fact/table

University of California Office of the President. (2020). *California community college new enrollments at UC [Interactive infographic]*. https://www.universityofcalifornia.edu/infocenter/california-community-college-enrollments-uc

Wang, X., Lee, S. Y., Nachman, B. R., & Zhu, X. (2020). It matters long before: How early exposure to faculty and advisors at baccalaureate institutions relates to upward transfer. *Educational Researcher*, 50, 105–114. https://doi.org/10.3102/0013189X20956659

Wang, X., & McCready, B. (2013). The effect of postsecondary co-enrollment on college success: Initial evidence and implications for policy and future research. *Educational Researcher*, *42*(7), 392–402. https://doi.org/10.3102/0013189X13505683

Wang, X., & Wickersham, K. (2014). Postsecondary co-enrollment and baccalaureate completion: A look at both beginning 4-year college students and baccalaureate aspirants beginning at community colleges. *Research in Higher Education*, *55*(2), 166–195. https://doi.org/10.1007/s11162-013-9317-4

Wang, X. (2020). *On my own: The challenge and promise of building equitable STEM transfer pathways*. Harvard Education Press.

Wickersham, K. R. (2020). Where to go from here? Toward a model of 2-year college students' postsecondary pathway selection. *Community College Review*, *48*(2), 107–132. https://doi.org/10.1177/0091552119880941