Cover photo courtesy of ACE member institution University of Redlands.

American Council on Education
One Dupont Circle NW
Washington, DC 20036

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ACKNOWLEDGMENTS

ACE would like to thank the many people who contributed to this important work and the production of this nal report, which we hope will lay the foundation for improved policies in credit transfer and increase

LETTER FROM THE TASK FORCE

Dear Colleagues,

e National Task Force on the Transfer and Award of Credit was convened by the American Council on Education (ACE) in March 2020 with the aim of improving transfer and award of credit practices in an e ort to spur student success and reduce the cost and time to complete a degree. Comprised of more than two dozen college and university presidents and chancellors from institutions nationwide—two- and four-year, public and private—the Task Force spent the past year assessing critical topics related to transfer and award of credit. Our work was bolstered by ex-o cio Task Force members representing several higher education associations, regional accreditors, and experts and practitioners involved with transfer credit at their institutions. e report that follows is the culmination of our work; we ask you to give it consideration to help you identify modi cations to existing practices to best support student success.

Today's students are likely to arrive at our institutions already having earned credit at a prior institution of higher education or acquired college-level learning through a variety of other experiences, such as direct assessments or military or employment training opportunities. A 2018 snapshot found that one-third of the 2.8 million students entering college for the rst time in fall 2011 earned credits from two or more institutions within six years.

For higher education to e ectively address equity gaps and be more e ective about addressing equity and being an engine for upward social mobility, we must do better with the transfer and award of credit.

Better supporting today's students and helping them successfully complete a quality postsecondary degree is a social justice issue that demands a renewed commitment from all of higher education. While we are under no illusions about the sustained and multi-pronged e ort required to close equity gaps for today's students, we know that we will not succeed without tackling the issue of transfer and award of credit head on. Its impact for students will be to make college more a ordable, reduce the tipac- deg8-7hTJ0 -37r2.027 y deg,transin4
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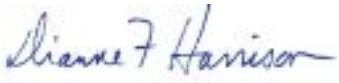

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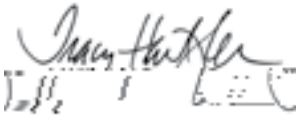

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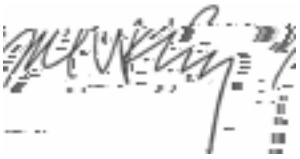

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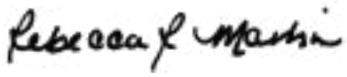

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EXECUTIVE SUMMARY

Over the past decade, college students have become more mobile, moving in and out as well as through multiple colleges and universities and other learning environments, such as service in the military or other employment opportunities, as they navigate their path to a degree. As students more frequently transition between higher education institutions and between higher education and learning opportunities outside the academy, tracking and validating learning that occurred elsewhere—and when appropriate, awarding credit for it—has become a stumbling block for many institutions in their e orts to serve students.

Research suggests that transfer student equity gaps have failed to budge over time, raising questions about the e ectiveness of existing transfer policies and practices. e increased focus on racial injustice and widening socioeconomic gaps demands that higher education reduce the barriers for low-income students and students of color to enable them to transfer, persist, and complete their degree. Ine cient transfer of credit policies and practices only exacerbate inequities that already exist and add to the nancial challenges facing college students and their families due to the COVID-19 pandemic. By shedding unnecessary barriers to students' success, institutions can help strengthen public trust in higher education and rea rm its value as an engine of economic and social mobility and justice.

Acknowledging the shifting realities undergirding the transfer dialogue, ACE convened a National Task Force on the Transfer and Award of Credit. e Task Force focused its e orts on the central and perhaps most challenging part of this e ort—namely, the need to improve the award of credit for college-level learning acquired at another institution or outside of the academy and maximize the application of this credit to satisfy speci c degree requirements.

e work of the Task Force resulted in these six recommendations from college and university presidents and chancellors to their peers across the country.

1. Prioritize the award of transfer credit and credit for prior learning, and its application to degree requirements, as an essential component of student success. Embed this priority throughout the culture of your institution.

- Intentionally integrate the recognition of prior learning as a critical component of how your institution serves the various transfer students who enroll with transfer credit and credit for prior learning. is may require a purposeful integration into your strategic priorities through the strategic planning process. It also requires that the campus community recognize transfer students who bring with them prior learning are an asset to the institution and to all students' curricular experience.

2. Adjust your institution's end-to-end policies and practices to improve the ability of students to receive credit for learning already acquired, including removing unnecessary obstacles that prevent students from accessing their transcripts to continue their education at another institution.

- A critical step to improving the transfer function at your institution is to review and implement

learning for credit more transparent and consistent. is includes removing unnecessary obstacles that prevent students from accessing their transcript and evaluating how your institution's transfer of credit policies and practices align with guidance from accreditors, state and federal agencies, and other higher education bodies.

3. Leverage innovative technologies to facilitate the review of credit, to provide greater consistency across credit award determinations, and to increase the ef f ciency and timeliness of the process.

- Technology can facilitate the transfer and credit award process by decreasing the time needed to make and communicate decisions about the transfer and award of credit. Automated processes can also provide greater consistency when credit is awarded and how it is applied to a student's program of study, and can better arm students with more timely access to information to appeal decisions about a denial of credit or how it was applied.

4. Improve transparency by making clear upfront what credits will be awarded and how they will be applied to a student's degree pathway.

- Provide students and advisors at sending and receiving institutions with up-to-date information online about your transfer and award of credit policies and processes in a way that is easy to understand, make informed decisions, and navigate the process. Provide information about how a student's credit will be awarded and applied upfront and, preferably, before a student enrolls at a receiving institution. If certain credits cannot be awarded or applied to a student's program of study, communicate why credit was not awarded and the applicable policy.

5. Dedicate the resources necessary to ensure quality advising that provides students with early, knowledgeable, and personalized information and guidance at key points throughout the course of their learning pathway. Implement a cross-institutional advising approach with key transfer partners to the maximum extent possible.

- Students are faced with a maze of articulation agreements, state transfer requirements, and institutional policies and practices, as well as a myriad of decisions about how best to complete a degree in their chosen program of study in the most cost- and time-e cient manner. Successful student outcomes will not be possible without quality advising, personalized to the student's unique situation and degree completion goal. Cross-institutional advising approaches create a shared responsibility for transfer students' success throughout their academic journey and are strongly recommended.

6. Partner with your most frequent sending or receiving transfer institutions to implement articulation agreements and structured pathways to increase the transfer and award of credit toward degree requirements.

- Co-designing articulation agreements and transfer pathways creates a shared responsibility between frequent sending and receiving institutions and helps ensure transfer students receive the maximum number of credits, not just awarded in transfer but applied to their program of study. is helps to create structured pathways for students to have their prior learning apply to their degree requirements. Consider establishing or joining consortia or existing networks of transfer-friendly institutions.

After reviewing the initial papers and available national data sets and reports, the Task Force commissioned two additional papers to inform their deliberations further. e rst was a national study on transfer student perceptions conducted by ACE and AACRAO to better understand students' experiences transferring credit.

e second was a pilot transcript-level study examining transcripts for more than 300 transfer students across 13 Task Force member institutions. is novel research explored how the institution's credit award policies and practices impacted the percentage of transfer credits awarded and applied to a student's program of study.

e white papers provided valuable insights and observations, and we highly recommend them for further review and study. A brief summary of some of the key takeaways is provided below.

A PORTRAIT OF STUDENT TRANSFER AND THE AWARDING OF CREDIT TOWARD DEGREE COMPLETION

Debra D. Bragg, University of Illinois at Urbana-Champaign

AN OVERVIEW OF TRANSFER AND ARTICULATION AGREEMENTS

Gloria Crisp, Oregon State University

Higher education leaders can support student success through developing and maintaining transfer articulation practices, policies, and agreements. This paper reviews the landscape of transfer articulation practices, policies, and agreements that facilitate the award of academic credit. Extant literature and resources show that statewide articulation policies provide a foundation for articulation. However, statewide agreements are not a panacea and do not always reduce credit loss or provide effective and clear transfer pathways for students. Innovative institutional partnerships are overcoming limitations in state articulation policy by making transfer a priority and providing needed advising and other resources for students before, during, and after transfer. Some evidence suggests institutional agreements may have greater impact on student transfer than statewide policies. Additionally, promising developments in articulation are expanding articulation to better support students who transfer to private institutions, across state lines, as well as for vocational students who desire to earn a bachelor's degree. There are however several challenges associated with developing, implementing, and maintaining agreements.

- Articulation agreements and policies do not always reduce credit loss.
- The complexity of students' transfer behaviors doesn't always align with articulation policies or practices.
- The language of agreements can be complicated to understand and navigate.
- Articulation is designed for a particular type of student—those who have identified a major and a transfer path.
- Agreements can be challenging for the institution to support and maintain.
- A lack of trust and communication between community college and four-year institution faculty can impede articulation efforts.

ENABLING THE TRANSFER AND AWARD OF ACADEMIC CREDIT FOR PRIOR LEARNING

Steven C. Taylor, ED2WORK®; Wendy Kilgore, AACRAO

The recognition and awarding of transfer credit for students' prior validated learning is of increasing importance

- Few institutions have access to student-level demographic data tied to credit awarded through prior

- Most students feel that their transfer institution and their current institution have resources to help with the transfer process.
- Academic advising is an integral part of the transfer funnel, having both positive and negative implications.
- Twenty-three percent of students in the study had to ask the receiving institution to evaluate their transcripts for potential transfer credit.
- Fifty-six percent of respondents reported that all of their credits transferred, 41 percent indicated some transferred, and 3 percent indicated none of their credit transferred.
- Students enrolled in private institutions are statistically less likely to report that all of their credits transferred and are more likely to report that none of their credits transferred.
- Students choose to take courses they know will not transfer for reasons such as pursuing one major for a period of time and then changing majors (26 percent), exploring a major (19 percent), personal interest (19 percent), to earn a better grade (15 percent), and to pursue a certificate (8 percent) or minor (5 percent) not otherwise required.

A PILOT TRANSCRIPT STUDY: EXPLORING THE IMPACTS OF INSTITUTIONAL ADVISING AND CREDIT EVALUATION POLICY AND PRACTICE

Wendy Kilgore, AACRAO; Kenneth Sharp

Transcript-level studies are considered the gold standard for understanding how transfer credit is awarded and applied. But these studies are rarely undertaken due to the significant time and work involved in analyzing and comparing data from multiple sources. To better inform practice, they must be coupled with additional data points regarding the institutional policies and practices that impact the amount and way credit is awarded. In an effort to help address some of these questions, the Task Force commissioned a pilot transcript study to review a segment of current transfer students' transcripts across task force member institutions.

e Task Force took an expanded view of prior learning to explore how institutions can facilitate the transfer and award of credit, regardless of how and where students acquired college-level learning, if the content and quality are consistent with the institution's academic requirements. Awarding credit for prior college-level learning and applying it toward a student's degree requirements improves student retention, decreases the cost and time to complete a degree, and improves college completion rates for students.[8]

COVID-19 Impact on Enrollment and Student Well-Being

In the years leading up to the COVID-19 pandemic, postsecondary enrollments declined, although the pace of enrollment decline slowed between the 2019 and 2020 spring terms.[9] en, the pandemic brought the sudden challenges of shifting to remote learning, uncertainty about the future, and resulted in reduced or lost wages and perilous nancial situations for millions of students and families. Altogether, this led to drastic decreases in fall enrollment for many postsecondary institutions (-4.4 percent overall), with community colleges experiencing the biggest declines in the fall 2020 term (-9.5 percent).[10] e impact has been especially hard for community colleges, which saw enrollment declines for fall 2020 of roughly 529,000 students compared to the previous year.[11] Furthermore, community colleges saw a signi cant drop in "continuing students" (-7.2 percent)—, students who were enrolled in the spring or summer term but did not re-enroll for the fall.[12] Together, changes in enrollment patterns exacerbated by the pandemic may result in more students transferring and lead to more churn between institutions and between higher education and the workforce.

As mentioned above, the pandemic has also brought dire nancial challenges to college students and their families. A national survey of 18,764 students across 14 campuses between March and May 2020 found that 66 percent of college students reported having experienced nancial di culties due to the pandemic, and over 30 percent reported that their mental health negatively a ected their academic performance.[13] A study by e Hope Center showed that nearly three in ve students experienced food and/or housing insecurity, with approximately 44 percent of students at two-year institutions and 38 percent at four-year institutions

8 See, e.g., Rebecca Klein-Collins, Jason Taylor, Carianne Bishop, Peace Bransberger, Patrick Lane, and Sarah Leibrandt. " e PLA Boost: Results from a 72-Institution Targeted Study of Prior Learning Assessment and Adult Student Outcomes," Council for Adult and Experiential Learning, 2020, Retrieved at https://www.wiche.edu/wp-content/uploads/2020/10/PLA-Boost-Report-CAEL-WICHE-Revised-Dec-2020.pdf.

9 Todd Sedmak, "Pace of College Enrollment Decline Slowed Nationwide Prior to Covid-19 Impact," National Student . d[(CAEL-)70 (WIudent)]TJHE-Revised-Dxperiential Learning, 20Bc (ely a ectq of cocontent/nscs experiese that)]crly tSa

a ected by food insecurity.[14] Similarly, another study undertaken in the spring at Arizona State University (among the largest public universities) found that 40 percent of surveyed undergraduate students had lost a job, internship, or job o er, 31 percent su ered a decrease in wages, and 37 percent experienced a cut to their weekly work hours.[15]

POLICY AND PRACTICE RECOMMENDATIONS

Students may face any number of barriers when attempting to receive credit for their prior learning and having it applied toward their degree requirements. Barriers include an unreceptive campus culture for transfer students, unclear policies and practices, obstacles that limit students' access to their transcripts, insu cient automation and use of technology, limited transparency to students about credit award decisions, unclear transfer pathways, insu cient transfer advising and support, and insu cient coordination and articulation between frequent transfer partners.

e result of these barriers is that students have di culty navigating the process to transfer credit between institutions or receive credit for prior learning acquired outside of an institution of higher education. Admittedly, addressing these issues is complex. Improving the student experience in the transfer and award of credit and appropriately having that credit applied to their program of study requires a deep understanding of how

for transfer students might be a needed and valuable investment. Orientation for new transfer students should be as comprehensive as the one for new rst-year students, and it should be evaluated as carefully.

e previously mentioned white paper, “Designing a Transfer Student Experience to Support Persistence and Completion,” provides examples and a roadmap for institutions to create institutional structures and supports to help transfer students navigate the admissions, degree planning, and advising process well before they enroll at their transfer destination. A commitment to transfer student success goes beyond a more e cient pre-transfer experience. It includes ongoing e orts to understand whether transfer students perceive the climate at your institution as supporting or hindering their continued success.

e National Institute for the Study of Transfer Students (NISTS), located at the **U . e , f N . h Ge . g a**[18] (UNG), uses research and evidence from various sources to inform solutions around the complexities and challenges of transfer and drive improvements to the transfer student experience. UNG empowers practitioners, faculty, and administrators to be transfer champions, which starts with ensuring all incoming transfer students receive communications from an assigned Transfer Coach from the point of application. e coaches are available via phone, email, or virtual one-on-one appointments. Financial aid counselors o er individual guidance to students planning to transfer or who have already transferred to e ciently plan for nancial aid awards with credit already awarded and applied to a student’s program of study. All incoming transfer students go through a transfer student orientation to help them navigate academic or student services resources throughout their educational journey. As part of celebrating transfer students and creating a favorable climate for them, UNG emphasizes National Transfer Student Week and runs the TREX Program, a transfer experience program that provides opportunities for transfer students to connect and develop a community among their peers.

M a a S a e U . e ,

In the summer of 2020, **Ca f a L he a U . e** began construction for a newly established Transfer Center, which will house various resources to serve transfer students at the institution. is space will open its doors in January 2021 and be a focal point for the transfer student experience. Additionally, transfer-speci c New Student Orientations were introduced in the fall of 2019 to provide community-building opportunities unique to the transfer students' experiences. Also, in 2018 the institution launched a Transfer Achievement Scholarship program. is competitive scholarship can range up to full-tuition coverage and mirrors a program that has been in place for rst-year students for some time.

exercise of identifying and mapping existing policies and practices helps to identify gaps or inconsistencies, question assumptions about why particular policies or practices are in place and create strategies to maximize transfer student success and credit acceptance. Some questions that you could include in an audit of your institution's transfer credit policies and practices are:

- How many policies govern transfer credit at your institution?
- How often are they updated to align with institutional mission and student needs?
- How do the policies in uence the unequal evaluation of credit?
- Are the policies designed to maximize student success and credit acceptance or meet institutional needs?
- Are they transparent, accessible, and easy for students to understand?
- Who maintains or tracks success benchmarks or bottlenecks stemming from these policies?
- Does the lived practice by your faculty and sta align with all of the stated policies?

Ca e a U . e uses a central team to streamline its process and practices to review and make credit award determinations for transfer credit. A fully centralized processing team manages transfer awards for all schools and programs. is team can appropriately apply transfer credits to meet students' speci c program of study requirements, including credit for electives, general education, program core, and specialization (major) courses deemed available for transfer by the school. Capella also uses a central mapping repository to ensure consistency in transfer awards and has prior learning assessment policies and practices to appropriately award credit for military training and other college-level learning acquired in non-classroom settings.

Colleges and universities should review the AACRAO-CHEA-ACE Joint Statement on the Transfer and Award of Credit (updated 2017)[20]

students transferring among these ve institutions. e institutions include Dallas College, Texas Woman's

Another technological advance that can be used to facilitate the transfer credit award process is the usage of arti cial intelligence (AI) or chatbots to answer students' most commonly asked questions. Not only does AI free up sta to handle more complicated questions, but it can also collect data that can then be analyzed to enhance the student experience. rough repeated usage and regular updates, AI can become quite e cient at answering more routine transfer credit questions.

e Task Force recognizes that implementing technology enhancements comes with associated costs, and that institutions have varying levels of available resources to invest in technology solutions. Still, institutions can use cost-e ective strategies to use existing technologies or modify current practices to create more e cient processes to maximize the number of credits that apply toward a student's program of study. e earlier mentioned white paper, "Technology as an Enabler of Credit Transfer," covers some of the technological enhancements that institutions of varying resources levels can leverage to make their review processes more streamlined and e cient.

A aS a e U .e (ASU) serves as an exemplar of leveraging technology to its maximum potential. ASU's "Transfer Guide" is an e cient student online tool built on a database of over 800,000 articulated courses from institutions across the country, with regularly integrated up-to-date approved courses. eir simple-to-use platform allows prospective transfer students to see if and how their transfer credit courses would be applied, based on their desired program of study. Once the student selects a desired program of study, the tool then outlines suggestions for remaining courses they can take to ful ll the degree requirements. Intuitively, it also has the exibility for the prospective transfer student to see how an academic pathway would change based on di erent programs of study.

Another way to expedite the transfer process, though it would involve a whole new dimension of challenges and steps, is to dlef quent pa-8 (tpdegr)10s0350.2 (ed pr)6.364 Tkr(eeon thel7e n (ying r)10.1co(war)14rses)]TJ0 -1.364 Tds

RECOMMENDATION 4: Improve transparency by making clear upfront what credits will be awarded and how they will be applied to a student's degree pathway.

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When developing advising systems, we strongly encourage institutions to consider the bene ts of a cross-institutional approach. A cross-institutional approach removes the onus from students and creates a shared responsibility for transfer students' success throughout their academic journey well before they matriculate to the receiving institution. Advisors at the sending institution should use a graduation-centered approach to provide students with advising beyond the semester for which they register. Advisors at the receiving institution should engage actively with advising sta at sending institutions.

selective major programs. is enhanced, partnered advising helps students to map out a seamless pathway from community college matriculation to university graduation.[22]

Florida has a long and well-established transfer history that includes its cornerstone statewide 2+2 articulation agreement. is statewide infrastructure for seamless transfer across the Florida College and State University Systems provides e cient and e ective progression for transfer students. **F da I e a a U . e** (**FIU**) continuously seeks to strengthen the transfer pathway, including its three largest sending institutions: **M a Dade C ege**, Broward College, and Palm Beach State College. Connect4Success is a guided transfer pathway that includes bene ts like fast-track enrollment, dedicated advising, scholarships, and transition workshops. e Connect4Success transfer pathway includes Bridge Advisors at the three primary sending institutions. e Bridge Advisors work in tandem with college advisors to promote transfer readiness, which means a student has selected a major and met the GPA and prerequisite requirements at the point of transition. Bridge Advisors are knowledgeable about FIU majors, minors, transfer scholarships, and transition resources.

Va e c a C ege is one of six Florida colleges that partner with the University of Central Florida (UCF) to ensure a smooth transition for transfer students pursuing a bachelor's degree from the University of Central Florida. DirectConnect® to UCF is a transfer pathway that guarantees Valencia College graduates admission to a bachelor's degree program at UCF. Transfer students who use the DirectConnect pathway bene t from joint advising from UCF and Valencia sta and assistance from both schools with admissions, nancial aid, and academic support. Students have access to a personal success coach at UCF while enrolled at Valencia; this ensures students receive personalized advising before and after transferring to UCF.

RECOMMENDATION 6: Partner with your most frequent sending or receiving transfer institutions to implement articulation agreements and structured pathways to increase the transfer and award of credit toward degree requirements.

Both sending and receiving institutions play an active role in facilitating transfer students' success. Co-designing articulation agreements and transfer pathways create a shared responsibility between frequent sending and receiving institutions and helps ensure transfer students receive maximum credits, not just awarded in transfer, but applied to their program of study. is type of relationship between sending and receiving institutions provides opportunities for both institutions to harvest information from the advisors on what is and isn't working and from faculty on course-equivalency determinations. is information sharing helps both institutions regularly evaluate and improve articulation agreements, policies, and practices to minimize credit loss while ensuring transfer credits are applied e ciently and toward the student's degree requirements.

Articulation agreements should be proactively shared with students and advisers early in the enrollment and advising process, well in advance of the term before a student transfers. Agreements should also be integrated into college catalogs and documents and outreach initiatives to inform students about their transfer options as early as possible and get students thinking about a program of study. Students and advisors can proactively

22 is process is described in greater detail in the Dual Degree Program Guidebook, sponsored by the Kresge Foundation: https://opus.govst.edu/cgi/viewcontent.cgi?article=1003&context=student_a airs_reports.

plan which courses to take at the sending institution to guarantee students' acceptance and application to a degree program upon transfer. ese transfer pathways may narrow some curricular choices for students but provide more certainty about how credits will apply to a degree program in transfer.

ere are many examples of state and system-level articulation agreements to help students navigate guaranteed in-state transfer pathways. Similarly, many institutions have also developed extensive course-level articulation agreements within and across states and types of institutions.

In California, the state's 116 community colleges have transfer agreements with the two state university systems—**CSU** and UC—to make it easier for students to transfer from the community college into these four-year colleges and universities. e Associate Degree for Transfer program provides transfer students with eligibility advantages compared to other transfer students. In most cases, if a student meets the CSU's minimum eligibility requirements, they are guaranteed priority admission to a CSU campus with junior standing, though not necessarily to a particular campus or major.

Launched in the fall of 2018, ADVANCE is a partnership between **Ge ge Ma U e** and **N he V g a C ege (NOVA)** to improve transfer student success by eliminating unnecessary credits, money, and time. Faculty at the two institutions have collaborated closely to design almost 100 structured degree program pathways starting at NOVA and continuing at Mason in elds ranging from visual arts to engineering. Upon joining the program, students receive a dedicated success coach who guides them through their entire journey toward both an associate and bachelor's degree. is includes access to several Mason resources such as career services and student health insurance to equip ADVANCE students for holistic success. is program continues to welcome a remarkable number of students, serving more than

Some institutions have developed articulation agreements with online learning providers who o er courses recommended for credit by ACE and military training and occupations and work-based learning or apprenticeship programs to award credit for prior learning deemed to be course-equivalent at the college level. For example, **E ce . C ege** and

consortium representing K–12, two- and four-year colleges, universities, and state agencies. CU Denver collaborates with DEAN partners to review statewide prior learning and work-based learning policies and cross-institutional academic pathway curriculum maps and integrate student data tracking functionalities between sectors. CU Denver has strengthened their 2+2 pathways between K–12, technical and community college partners for business degree concentrations and information technology tracks through these collaborative e orts. In spring 2020, CU Denver and DEAN partners nalized the state's rst Auraria Engineering Pathway(s), a cross-institutional 2+3 Engineering (concentrations in civil, electrical, mechanical) guaranteed admission agreement to encourage K–12 students to enroll in STEM speci c concurrent coursework toward completion of their engineering degree with stackable degree attainment.

RESOURCES

Other Transfer Initiatives

CREDIT WHEN IT'S DUE

- University of Washington
- Funded by Bill & Melinda Gates Foundation, Lumina Foundation, Kresge Foundation, Helios Education Foundation, USA Funds, Greater Texas Foundation, Houston Endowment, Meadows Foundation
- https://www.washington.edu/ccri/research/transfer/

EQUITY TRANSFER INITIATIVE

- AACC, AASCU, APLU
- Funded by ECMC Foundation, Ascendium Education Solutions
- https://www.aacc.nche.edu/programs/equity-transfer-initiative/

INTERSTATE PASSPORT

- WICHE
- Funded by ECMC Foundation, e Carnegie Corporation of New Yill & Melinda Gates ,

APPENDIX A: A PORTRAIT OF STUDENT TRANSFER AND THE AWARDING OF CREDIT TOWARD DEGREE COMPLETION

NATIONAL TASK FORCE ON THE TRANSFER AND AWARD OF CREDIT

EXECUTIVE SUMMARY

Transfer is important to higher education in the United States. Research shows the demographics of transfer students are changing, particularly for students who engage in vertical transfer from associate-granting institutions to baccalaureate-granting institutions. National projections show higher proportions of college students who are older than traditional college age (18–24) and who identify with racial minority groups, enrolling part-time while working full-time, and who struggle to meet the nancial and personal demands that college places on students to succeed. We consider these students to be "post-traditional transfer students" because of the ways they di er from transfer students of the past and require policies and practices that address particular circumstances and needs. Building on successful state- or system-level and institution-level transfer and articulation mechanisms, states and institutions might pursue even more nuanced approaches to supporting transfer student progression through the entirety of college to attainment of the bachelor's degree, and beyond. Well documented in the literature, higher education systems and institutions di er in performance, resulting in wide variation in baccalaureate completion from state to state and institution to institution within states. Recognizing why and how this variation exists is necessary to transform policies and practices and address the needs of post-traditional transfer students to complete baccalaureate degrees. Moving forward, research on how the evolving population of transfer students is impacted by reforms is needed. Also, the research on transfer more heavily skews toward public schools, this may be due to the nature of their public status or connection to systems of higher education; however, many private institutions have robust transfer policies and partnerships. Knowing how students are changing and understanding when the transfer function is responsive to those changes is important to ensuring that baccalaureate attainment is achievable by post-traditional transfer students.

INTRODUCTION

Student transfer has long been important to higher education in the United States and is growing in prevalence and consequence. As the student population becomes increasingly diverse, and college-going becomes more universal, patterns of college attendance are varying from the past. College enrollment patterns are shifting from those exhibited by traditional students typi ed in full-time college enrollment immediately following high school to patterns where more students balance college with other life commitments, with more students moving in and out of college and attending multiple institutions. ese students are considered "post-traditional transfer students"[1] because their characteristics and behaviors di er substantially from college students of the past (Santiago 2013; InsideTrack 2016). Knowing more about the pro le and preference of the full gamut of transfer students, including understanding how prior transfer students' experiences and demographic characteristics (for example, race and ethnicity, gender identity, socioeconomic status, and other attributes linked to college attendance) compare to current and future transfer students' experiences and characteristics is important to understanding how the transfer function should progress into the future.

is paper summarizes research on transfer students and transfer policies and practices in higher education in the United States, de ning terminology referring to distinct transfer patterns, discussing what is known about the enrollment and outcomes of increasingly diverse students who transfer, including post-traditional transfer students, and identifying promising policies and practices that contribute to improved transfer outcomes. e paper concludes with some nal thoughts on the importance of transfer to meeting the needs of America's increasingly diverse college students.

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FORMS OF STUDENT TRANSFER IN HIGHER EDUCATION

VERTICAL TRANSFER	LATERAL TRANSFER	ALTERNATIVE CREDIT TRANSFER
Student transfers from a community or two-year college to a four-year college or university	Student transfers to a similar institutional type (e.g., from one community college to another community college).	Student requests credit-equivalent learning acquired in a non-college or university setting (e.g., military or workplace) to be accepted for credit by a community college or four-year college or university

Considering the many ways students can move from one institution to another, it is important to clarify what transfer means as it relates to higher education policy and practice. Many forms of transfer exist in the United States, so it is important to understand how each is de ned before moving into research results on transfer student enrollment and outcomes. As such, a prominent de nition of transfer re ects student movement from a community college that acts as a sending institution to a university that acts as a receiving institution, referring to "vertical transfer." is form of transfer represents student movement that is somewhat unique to the United States compared to other countries. Vertical transfer is important to upward mobility in this country, which is one reason it has been researched more extensively than other transfer patterns.

Another form of student movement between institutions is "lateral transfer," which re ects the transition between similar institutional types. Lateral transfer, therefore, refers to students who move between a community college to another community college, or who transfer from one baccalaureate degree-granting institution to a similar type college or university. As is noted later in this paper, lateral transfer is a predominant form of student transfer in the United States that is not particularly well documented but important to fully understanding college student transfer patterns in higher education.

Another form of transfer is "reverse transfer," referring to students beginning at a baccalaureate-granting institution who physically leave the university to transfer back to a community college (Townsend and Dever 1999, 5). Increasingly, this term is used to describe students maintaining their physical presence at the university level but transferring credits earned at the university back to the community college to attain their associate degree (Taylor and Bragg 2015). Taylor and Bragg researched the implementation of reverse credit transfer in multiple states involved in the multi-state Credit When It's Due (CWID) initiative,[2] and recommended using the term "reverse transfer" because it represents a more accurate label for this latter transfer pattern, also suggesting that this term would clarify how this transfer pattern di ers from the earlier one referenced by Townsend and Dever.

"Alternative credit transfer" is yet another form of transfer that deserves recognition. Similar to reverse transfer, alternative credit transfer does not involve students physically transferring from one institution to another, but institutions still must make credit acceptance determinations that impact students' credit attainment. Credit for

2 Credit When It's Due (CWID) is a 16-state initiative involving Arkansas, Arizona, Colorado, Florida, Georgia, Hawaii, Maryland, Michigan, Missouri, Minnesota, Ohio, Oregon, New York, North Carolina, Tennessee, and Texas that focuses on creating and improving state and institutional policies and practices on reverse credit transfer (Taylor and Jain 2017).

prior learning and recognition of prior credit, often using some form of assessment, is growing in higher education in the United States (Palmer and Nguyen 2019; Taylor and Kilgore 2020).[3]

Added to these transfer patterns is the growing trend of states authorizing community colleges to confer baccalaureate degrees, mostly in the form of applied baccalaureates. Community colleges that confer baccalaureate degrees

Looking more deeply at undergraduate students 18–24 years old over the period of 2000 to 2017 for insights into college enrollment by post-traditional transfer students, we see that both full- and part-time enrollment grew over this period, with full-time enrollment outpacing part-time enrollment and showing a 45 percent vs. 27 percent increase, respectively. However, the National Center for Education Statistics (NCES) (McFarland et al. 2019) projects the downward trend in part-time enrollment will reverse itself from 2017 to 2028 when part-time enrollment will increase at a faster pace than full-time. is trend may re ect stagnant enrollments of high school graduates, along with increased enrollment of older and more racial minority students (Bransberger and Michelau 2016) who are well represented among post-traditional transfer students.

e NCES report also provides enrollment trends by race and ethnicity, showing more racial and ethnic diversity among college students in 2017, compared to 2000. Of the 16.8 million undergraduate students in fall 2017, nearly 9 million were White, 3.3 million were Hispanic, 2.2 million were African-American, 1.1 million were Asian/Paci c Islander, and 124,000 were American Indian/Alaska Native (see gure 1). Hispanic enrollment more than doubled from 2000 to 2017 (from 1.4 million to 3.3 million, a 142 percent increase), African-American enrollment increased by 73 percent (from 1.5 million to 2.7 million), Asian/Paci c Islander enrollment increased by 29 percent (from 846,000 to 1.1 million), and American Indian/Alaska Native enrollment increased by 29 percent (from 139,000 to 179,000)(see gure 2). Despite these dramatic increases by 2017, enrollment actually declined for some groups over the last seven years from 2010 to 2017. During this latter seven-year period, enrollment for White students declined by 19 percent from 10.9 million to 8.9 million students, African-American enrollment declined by a similar percentage (19 percent) from 2.7 million to 2.2 million, and American Indian/Alaska Native students decreased by an even more sizeable percentage (31 percent) from 179,000 to 124,000. Contrary to these declines, Hispanic students climbed from 2010 to 2017, reaching 3.3 million students, and Asian/Paci c Islander students

Whereas most of the research reported thus far focuses on college students generally and speci cally on students who engage in vertical transfer, other forms of transfer exist. Shapiro et al. (2018) found students who began at baccalaureate-granting institutions and transferred to another baccalaureate-granting institution were slightly higher than students who began at associate-granting institutions and transferred to an associate degree-granting institution (39 percent and 37 percent, respectively). New national research by Crisp, Potter, Robinson, and Carales (forthcoming) using the Beginning Postsecondary Student (BPS) dataset shows a higher proportion of racial minority students participate in lateral transfer between associate degree-granting institutions than White and Asian students, and that students of color do engage in transfer at the same rate as White and Asian students. ese results suggest transfer pathways di er by student sub-group and point to the need for more research on transfer pathway and baccalaureate attainment by student demographics.

TRANSFER STUDENT OUTCOMES

A recent study of college completion produced by the National Student Clearinghouse (NSC) reveals that the national college completion rate continues to rise, although the increase has been relatively modest in recent years (Shapiro et al. 2019). Of the over 2.3 million first-time college students who first enrolled in college in the fall of 2013, NSC state-level data show a 1.8 percent increase in degree completion (two- or four-year) over the previous cohort of first-time college students. These results translate into a 59.7 percent degree completion rate for 1.4 million U.S. college students. This six-year completion rate is 1.4 percentage points higher than the previous cohort's rate, and nearly seven percentage points higher than the cohort of students who enrolled four years ago.

Looking at an earlier NSC tracking study that included a cohort of community college students in 2010 who expressed an intent to transfer to a baccalaureate-granting institution, Shapiro et al. (2017) reported 29 percent of these students earned a certificate or associate degree and only 13 percent attained a bachelor's degree after six years of college enrollment. Among students who actually did transfer, the rate of completion of a college credential was higher, with 34 percent of these students earning a certificate or associate degree (with few reverse credits toward the associate-level certificate or degree), and 42 percent attaining the baccalaureate degree. Of note, this rate of baccalaureate completion represents a roughly 17 percent gap for transfer students compared to students who receive a degree within the same institution of attendance (without transfer).

Research conducted on over 850,000 transfer students led by Shapiro et al. (2017) for NSC showed 42 percent of a fall 2010 cohort of transfer students earned a baccalaureate degree within six years of beginning at an associate degree-granting college. These results also show baccalaureate attainment is associated with income in that 35 percent of lower-income transfer students earned a bachelor's degree compared to 49 percent of the higher-income transfer students. Of all fall 2010 students beginning at associate degree-granting institutions, the baccalaureate-degree completion rate is 13.3 percent, again showing higher-income students completing a bachelor' degree than lower-income students. Also, the bachelor's completion rate for transfer females exceeded transfer males (36 percent to 34 percent, respectively). A slightly higher rate of bachelor's completion was detected for transfer students who attend full-time rather than part-time, and this finding is attributed in part to the fact that full-time students tend to complete an associate-level credential prior to transferring to the baccalaureate-level.

Also with respect to transfer and baccalaureate completion rates, the NSC data also show bachelor's completion rates for degree-earners who first enrolled in an associate degree-granting institution by state (Bragg, forthcoming). A comparison of four-year bachelor's completion rates for students with prior enrollment at associate degree-granting institutions varied from a low of 24 to 29 percent for four states to 70 to 74 percent for three states, with the remaining 33 states included in the analysis being distributed between these extremes. These results are consistent with other national studies of transfer completion rates (see for example Jenkins and Fink 2016) that also use NSC and other national data sets to report wide variation in transfer and baccalaureate completion rates by state. Often these researchers call for states to conduct more research on transfer and baccalaureate completion to inform transfer policies and practices. They argue that without more systematic analysis of transfer rates on the state-by-state level, it will be difficult to fully understand how transfer is working and who it is working for.

Looking at these comparative results, research suggests the reasons for the difference in college degree completion may relate to system and institutional policies and practices that pertain to the transfer process and detrimentally impact student progression through college. Students who experience credit loss in transferring from the associate- to the baccalaureate-granting institutional level often also experience extended time toward completion of the degree due to the need to retake and complete additional credits at the baccalaureate level. Extended time to degree is also a predictor of attrition wherein students leave college without obtaining their bachelor's degree (Monaghan and

Attewell 2015; Shapiro et al. 2016). Concerning as these results are, more research needs to be done to understand the impact of credit loss and time to degree operating independently and together as these phenomena may operate di erently from state to state. Using data from the Credit When It's Due study, Giani (2019) found considerable variation in the incidence and magnitude of credit loss in two states (Hawaii and North Carolina), having di erent higher education systems and governance structures. ese results raise questions about how state policies impact credit loss and baccalaureate completion and point to the need for more state-level research on the transfer function.

INEQUITIES IN THE TRANSFER PROCESS

Research documents the inequitable consequences of transfer that impact college retention and completion, and may also extend beyond college to employment. Transfer students, particularly post-traditional transfer students who amass college credits but do not secure degrees, are left without a tangible marker to demonstrate skills and knowledge mastered in their college education (Bragg et al. 2011). Adding to this concern, transfer students may experience added debt associated with credit loss and extended time to degree that diminishes their ability to bene t from the full marketplace value of their college credentials (associate and baccalaureate degrees). Employers may also be disadvantaged as they struggle to secure quali ed employees who re ect the increasing diversity needed to meet the needs of their customers and constituencies (Bragg and McCambly, forthcoming).

For decades, research on transfer rates has shown a large and persistent gap between racial minority students and other student groups who transfer to a university to complete the baccalaureate degree.[7] e gap between these groups in terms of the six-year baccalaureate completion rate is approximately 20 percentage points higher for White the 037B.2 (ra.1037)5n (y)oina), having30 radihmp(cCaed asya2ty needed9w udents and)]Ticu0 t3 Tdeti261 way7cost-tradiJ0 -1

study including Colorado, Minnesota, and Ohio (Yeh and Wetzstein 2019). is study shows transfer partnerships are complex and varied, exhibiting a range of policies and practices focused on improving transfer student outcomes. Improvements focused on recruitment, admissions, and advising of transfer students; better aligned curriculum and instruction from the associate degree through to the baccalaureate degree; enhanced involvement and support for transfer students by faculty across the entire collegiate continuum; and improved data sharing that points to improvements to transfer policy and practice are evident in higher-performing transfer partnerships. is research advises that the notion of transfer partnerships deserves further support to see additional improvements in transfer students' educational experiences and outcomes on a wider scale.

Taken together, these studies point to the importance of states and institutions working together to implement transfer and articulation policies and practices to improve transfer student outcomes. E orts to improve transfer often focus on a set of reforms that are coordinated (sometimes mandated) by state education agencies that have scal responsibility for owing state funds to colleges and universities. Evidence of the impact of these e orts vary considerably, with some but not all improving transfer student outcomes. Even with their duciary responsibility, many state agencies have weak regulatory authority over transfer, resulting in institutions having varying levels of guidance and taking disparate approaches to transfer. As a response, institutions implement a range of transfer policies and practices that have uneven and unclear e ects on student transfer pathways.

PROMISING PRACTICES

is section describes approaches to reforming and improving transfer that are becoming more commonplace within higher education across the United States. Many promising transfer reforms and practices are so new that relatively limited research exists to document details on implementation and impact. Still, this section provides a high-level overview of the changes that are starting to occur and that may be possible to improve the transfer function in U.S. higher education. e concepts shared here are explored in greater detail in subsequent white papers developed for ACE's National Task Force on the Transfer and Award of Credit.

Evolving transfer policies and practices operating at the state or institutional level that strengthen transfer and articulation may create more comprehensive and e ective changes to the transfer function. ough relatively untested, state or inter-institutional agreements that emphasize 3+1 or 1+3 transfer arrangements, or growing internal 2+2 agreements within community colleges that authorize community college baccalaureate (CCB) degrees may prompt to larger systemic reforms that incentivize improved transfer performance on baccalaureate degree completion for more students.[8] is is especially true for post-traditional transfer students who tend to be less well served by the transfer function. Innovation in transfer policies and practices that put more attention on degree completion outcomes rather than administrative rule-making, and that require breaking down siloes and barriers that impede transfer student completion, deserve further implementation, along with rigorous research to determine their impact.

8 e most prevalent pattern of transfer is 2+2 where the equivalent of the rst two years of college coursework is completed at the associates-granting institution and the second two years at the baccalaureate-granting institution. is pattern compares to newer patterns of 3+1 and 1+3 wherein the equivalent of three years of coursework is completed at the associate degree-granting institution and one year at the baccalaureate-granting institution, with the opposite pattern pertaining to 1+3 wherein an equivalent of one year of coursework is completed at the associates-granting institution and three years at the baccalaureate-granting institution.

Learning outcomes assessment initiatives related to transfer o er promising results. e use of higher education experts, professional (academic) groups, faculty committees, and other personnel who are knowledgeable about and committed to transfer reform is growing. Knowing how to align curricula and course equivalencies to learning outcomes and make student attainment of course credits and progression toward degrees transparent is useful for improving transfer policies and practices. Evolving e orts to convert college curricula from credit-based to competency- and outcome-based may represent a forward-thinking way to acknowledge student learning as they progress through the transfer process. When competencies become more transparent and aligned with tangible outcomes, transfer students, particularly post-traditional transfer students who tend to be older and engage in part-time attendance, may bene t by having their competencies recognized toward degree attainment.

State- or system-level e orts to establish and endorse general education transfer courses that confer credits for a block of courses toward speci ed transfer degrees are growing across the United States (Education Commission of the States 2014). States that are evaluating transfer blocks in relationship to other transfer reforms, such as reverse credit transfer and other transfer pathways options, seek to reduce students' guesswork in course and credit transfer and ensure those transfer students who move institution to institution actually attain the course credits that qualify them for baccalaureate degrees. For example, a new report from the state of Illinois, a state with one of the highest baccalaureate completion rates among community college-to-university transfer students, echoes the importance of state- and system-level transfer blocks and seeks to extend and enhance implementation in the future (Illinois Board of Higher Education and Illinois Community College Board 2020).

In recent years, states have joined together to learn from one another about how to implement reforms intended to improve the transfer function. ough limited research has been done on credit loss for students who cross state lines, it is reasonable to expect these students are most disadvantaged when it comes to transferring credits. e Western Interstate Commission for Higher Education (WICHE) Passport and Credit When It's Due (CWID) are two such multi-state initiatives that exemplify this development. Using NSC data on transfer student performance as a quality assurance measure for such initiatives, the WICHE Passport focuses on crediting learning associated with lower-division general education as a whole. Using the "transfer block" approach,[9] learning outcomes are matched to sets of competency-based outcomes to confer credit. e WICHE Passport links learning outcomes to pro ciency criteria in nine knowledge and skill areas linked to the AAC&U's Liberal Education and America's Promise (LEAP) essential learning outcomes (WICHE 2016). With more states signing on within the WICHE region, as well as nationally, it will be important to track this initiative to see how it impacts completion outcomes.

Faculty engagement within and across institutions (for example, WICHE institutions that cross multiple states) that strategically seek to improve the transfer student experience has been recommended for literally decades as key to improving transfer outcomes (see for example Ignash and Townsend 2000). Typifying this point, CWID linked sixteen states across the country in the implementation of policies and practices to enable students to reverse transfer credits from the university level to the community college level, and faculty engagement emerged as an important component of reverse transfer approaches. CWID focused on strengthening relationships between two- and four-

9 A "transfer block" refers to a set of courses selected from a larger group of designated courses, typically general education, that are approved to count toward the associates as well as the baccalaureate degree requirement. When students fully and successfully complete a transfer block all of their credits transfer as a block and are accepted by the baccalaureate-granting institution, also often ensuring that the transfer student transfers with junior year (third-year) standing.

year institutions and identifying and improving new transfer pathways and implementing technologies to support transcript audits. Lessons learned from transfer initiatives that intentionally involve faculty in improving the transfer process is important to improving the transfer function writ large.

Recent research shows that deliberate and intentional relationships between higher education institutions that include but also go well beyond state-level rules on transfer and articulation agreements help to improve transfer student outcomes, including baccalaureate degree attainment (Dolinsky, Rhodes, and McCambly 2016; Wyner et al. 2016). ese studies provide insights into a wide range of collaborative practices and policies that focus on improving the transfer process. Examples of such collaboration include faculty and student services sta across sending and receiving institutions working together to improve curricular alignment and transfer student credit attainment, which in turn facilitates student retention and baccalaureate completion. ese collaborative e orts focus on supporting students to be transfer-ready when they matriculate at the receiving institution; they also focus on rewarding students with increased credit attainment and application towards their degree, helping the receiving institution retain students upon transfer and improve persistence and completion outcomes.

System- or institution-level e orts to organize and communicate pathway options to students are on the rise nationally (Bailey, Jaggars, and Jenkins 2015). To this end, Wyner et al. (2016) authored a “transfer playbook” to apply lessons from their research to help vertical transfer from community colleges to four-year colleges and universities. is report discusses how transfer-related strategies used by institutions with especially high transfer student success rates implement transfer pathway reforms, pointing to the need to prioritize transfer and create clearer and more navigable pathways, including enhanced advising processes that are more accessible and useful to transfer students.

CONCLUSION

To address the evolution of the transfer mission, state higher education systems and colleges and universities operating within states should continue to explore and implement policies and practices aligned with their institutional mission and student population to improve transfer student outcomes. Building on foundational work with state-level transfer and articulation policies and expanding to implement, complementary, carefully researched e orts, it may help to improve transfer rates and degree attainment.

Higher education systems and institutions that actively engage in transfer reforms such as2lcq6ttaii andnsfer outcomes1ibe (e ciT

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APPENDIX B: DESIGNING A TRANSFER STUDENT EXPERIENCE TO SUPPORT PERSISTENCE AND COMPLETION

NATIONAL TASK FORCE ON THE TRANSFER AND AWARD OF CREDIT

ABOUT THE AUTHOR

John Fink is a senior research associate at the Community College Research Center, Teachers College at Columbia University. His research focuses on uncovering structural barriers within higher education that result in inequitable access to educational and economic opportunity for racially minoritized, low-income, and first-generation students. Fink uses national and state administrative data to study high school student access and acceleration into college, relationships between community college student outcomes, course-taking patterns, and program of study, and the effects of Guided Pathways reform on student success.

ABOUT THE SERIES

This paper is among a series of white papers commissioned by the American Council on Education (ACE) as part of the National Task Force on the Transfer and Award of Credit, launched in 2020, with foundation support from Strada Education Network. The series of white papers on the transfer of credit, written by subject matter experts from across the academy, is made possible with support from the Charles Koch Foundation.

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EXECUTIVE SUMMARY

For many students, transferring between higher education institutions is a complicated and confusing process. e transfer pathway from community colleges to four-year institutions—critical to the postsecondary landscape given its potential for upward social mobility—is both replete with complexity and underperforming nationally with low rates of transfer and bachelor's degree completion among bachelor's-seeking community college entrants. To design a transfer student experience supportive of persistence and completion, higher education institutions must work collectively to create clearer transfer pathways with aligned guidance and support.

is brief examines structural, institutional barriers that can be addressed to improve transfer student success. Taking an expansive view on major barriers along the college student transfer pathway, research and emerging reforms for advancing transfer success are described along the student lifecycle from initial connection and progression at the sending institutions to transfer, advancement into upper-division coursework, and completion at the receiving institution. Institutional barriers to successful transfer include unclear transfer pathways, insu cient transfer advising and support, lack of exploration and concentration into elds of study pre-transfer, and unreceptive policies, practices, and campus cultures post-transfer. To address these barriers, colleges and universities are implementing reforms to create clearer transfer pathways with aligned supports to help students explore, enter, gain momentum, and advance through a bachelor's degree program. rough these "guided pathways" reforms, which aim to improve the transfer student experience at scale with a focus on students' ultimate educational goals, community colleges are redesigning from gatekeepers to transfer catapults, and four-year institutions from passive receivers to proactive recruiters and supporters of transfer students.

INTRODUCTION

Community colleges enroll over forty percent of undergraduates in the country (AACC, n.d.). An estimated 80 percent of community college entrants aspire to a bachelor's or graduate degree (Horn and Skomjsvold 2011). Yet, researchers tracking national cohorts of community college entrants have found that only about a third of students end up transferring to a four-year institution, and less than 15 percent earn a bachelor's with six years of starting college (Jenkins and Fink 2016; Shapiro et al. 2017). Furthermore, the community college transfer pathway is falling short of its promise to drive social and economic mobility: white and Asian community college entrants are about twice as likely as their black and Latinx counterparts to cross the bachelor's degree nish line six years after starting (Shapiro et al. 2019), and higher-income community college entrants are more likely than lower-income entrants to transfer and complete a bachelor's degree (Jenkins and Fink 2016). For community college students who successfully transfer and complete bachelor's degrees, there is evidence across di erent state contexts that the typical transfer student completes with additional time to degree and excess credits, suggesting that the current transfer system is not delivering on its potential for increased e ciency and cost-savings for students, institutions, and taxpayers (Bel eld, Fink, and Jenkins 2017; Cullinane 2014; Xu, Jaggars, and Fletcher 2016).

Students experience transfer as a complicated and confusing process. Too often they are blamed for the di culties they experience transferring—or they blame themselves (Kadlec and Gupta 2014). In reality, many substantial barriers to successful transfer are institutional—not individual. To improve the transfer student experience, it is most constructive for colleges leaders to focus not on whether students are transfer-ready, but rather whether their institution is ready for transfer students.

e transfer student experience can be improved. ough nationally transfer and completion rates among transfers are low and inequitable, there is tremendous variation in outcomes, with some colleges and universities achieving impressive outcomes with community college transfer students. Encouragingly, colleges and universities are working

One of the potential explanations as to why rates of transfer are so low among bachelor's degree-seeking community college students is that transfer pathways are unclear to students. Nationally, only 8 percent of community college students who transferred and completed a bachelor's degree followed the "2+2" pathway.[4] In reality, student transfer patterns are complex and distinctive, and although colleges and universities might expect transfer students to follow one of many di erent enrollment patterns, research suggests there is much room for improvement to provide students with clearer transfer pathways. Researchers at the Community College Research Center (CCRC) asked community college students to map out their transfer pathways in a set of activity-based focus groups; they found that few students could identify their pathway. Some college leaders have tried this same exercise with their faculty and often nd they too are unable to map their path to transfer (Bailey, Jaggars, and Jenkins 2015a; Jaggars and Fletcher 2014).

Although researchers have raised concerns as to the quality and accessibility of transfer information on college and university websites (Schudde, Bradley and Absher 2018), better information alone does not appear to be a su cient approach to clarifying transfer pathways. Even with well-aligned curricular maps between community colleges and university bachelor's degree programs, students still need support to explore, select, enter, and progress along such transfer pathways (Wyner, Deane, Jenkins and Fink 2016). Yet, at many community colleges, students' development of an academic plan and monitoring of progress is not systematic and ends up being self-directed (Jaggars and Karp 2016). Clarifying student transfer pathways is challenging as the typical community college has relatively high student-advisor ratios. If a student seeks out transfer advising, it is likely on the way out of the community college.[5] In other words, transfer advising at the typical community college is too little, too late (Karp, Raufman, Efthimiou and Ritze 2016; Karp 2013; Bailey, Jaggars and Jenkins 2015b; Jaggars and Fletcher 2014).

fields of interest

Students make sacri ces to go to college, especially community college students. And although there are promising movements in the community college sector to scale developmental education reform, many community college entrants begin their bachelor's degree journey by taking a rst-term curriculum consisting of math (typically algebra

elor's degree (Fink, Jenkins, Kopko and Ran 2017). e challenge for transfer students (and their advisors) is not just to get their general education requirements out of the way, but to take general education along with pre-major coursework that will all apply to a major in the student's eld of interest at a speci c university (e.g., knowing early on whether a potential transfer university's business program requires statistics or calculus).

and an accompanying shift at four-year institutions from passive recipients of transfer students to proactive recruiters and supporters of this population.

Community colleges implementing guided pathway reforms have partnered with primary transfer partners to backward-map faculty-recommended course sequences for speci c bachelor's degree programs starting upon entry at the community college (including mapping backward to high school requirements for dual enrollment students).[8] Clarifying transfer pathways through such backward mapping enables redesigned student intake at community colleges to help all students build an individualized educational plan that prepares them for entry with junior standing in a speci c bachelor's degree program. Focusing on helping all entering students develop an educational plan has also enabled related reforms to developmental education aimed at helping more students complete program-relevant college-level math courses in their rst year. Rather than the default algebraic math, colleges can recommend other more relevant math courses, such as statistics, based on students' intended transfer institution and major. Alignment of gateway math coursework to students' intended transfer pathway, enabled by colleges helping all new students explore and select a pathway, complements other developmental education reforms such as co-requisite remediation and multiple measures placement.[9] Beyond eliminating the barriers of traditional developmental education, research on STEM-intending transfer students suggests that colleges can further boost student momentum by prioritizing the inclusion of an inspiring introductory course with active learning and alignment to students' programs of interest in their rst or second term (Wang 2016; Wang, Sun, Lee and Wagner 2017). With a focus on transfer students' end goals (bachelor's and beyond), guided pathways reform provides an organizing framework for multiple student success initiatives, such as developmental education reform, advising redesign, and improvements to teaching and learning, to work together for collective impact.

Community college redesign to improve the transfer student experience relies on a four-year institutional partner that prioritizes transfer students, and the success of colleges to prepare students for transfer hinges on active collaboration and support from receiving institutions. Proactive recruitment, preparation, and support of transfer students by four-year institutions is a departure from transfer as an ancillary component to enrollment management and student success strategy. Four-year institutions that are building a "transfer-receptive" or "transfer-a rming" culture attend with high priority to the transfer student experience before, during, and after the point of transfer (Handel 2011; Jain et al. 2011). Rather than lamenting students' lacking preparation or otherwise misaligned transfer pathways, four-year institutions invested in transfer student success take collective responsibility with their community college feeder institutions to build a talent supply chain by aligning curricular pathways, pedagogy,

8 For example, Lorain County Community College in Ohio has backward mapped dozens of bachelor's degree programs for entering community college students through its MyUniversity Program, including mapping these degrees to high school requirements for students entering through dual enrollment (see more here: https://www.lorainccc.edu/ccp/myuniversity/myuniversity-pathways/).

9 For example, at San Jacinto College in Texas, math faculty surveyed program chairs asking them to select the speci c math learning objectives that are most relevant to their program and then used results to make recommendations for whether programs should require algebraic math, statistics, or quantitative reasoning (Jenkins, Lahr, Fink, 2017). Additionally, the 13 Tennessee community colleges implemented co-requisite remediation in both English and math for all entering students in 2015-2016, including pathway-aligned math courses (at the same time the TN colleges implemented other guided pathways reform practices like redesigned student intake to help all students develop an academic plan, which helped ensure that students took the right pathway-aligned math course). As a result of these reforms, the most common math course enrolled shifted from algebraic math to statistics, and Ran and Lin (2019) identi ed the math pathway alignment as the driver behind the impact of co-requisite on improvements in students' college-level math completion rates.

and support services.[10] As owners of the bachelor's and graduate curricula, four-year institutions are in the unique position to most e ectively drive the process of building such talent supply chains. Investments by transfer receiving institutions include dedicated transfer support services and other structural investments in transfer, such as pre-transfer advising, dual admissions or co-location, and transfer student centers.[11] Transfer-receptive institutions also work to dispel transfer student myths, de cit perspectives, stigmatization, and other biases that transfer students encounter as they matriculate, particularly to predominately white institutions.[12] ese multifaceted e orts to transform the transfer student experience exemplify a shift in perspective among leaders, faculty, and sta at four-year institutions

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APPENDIX C: AN OVERVIEW OF TRANSFER AND ARTICULATION AGREEMENTS

EXECUTIVE SUMMARY

Articulation agreements are formal arrangements that establish course equivalencies and the transferability of academic credit in an e ort to facilitate seamless transfer of students' credit across postsecondary institutions. Most states provide a foundation for articulation through common course numbering systems that establish course equivalencies or by a transferable core curricula or associate degree that guarantee transfer of a block of lower-division credits (ECS,

From these ndings come the following best practices:

- Promote transfer articulation as a shared responsibility
- Build collaborative transfer partnerships
- Involve the right people
- Provide advising support centered around articulation agreements
- Establish a process to share agreements with campuses and students
- Ensure agreements are easy to read and are accessible
- Regularly evaluate and improve articulation agreements, policies, and practices

INTRODUCTION

According to the American Association of Collegiate Registrars and Admissions O cers (AACRAO), transfer articulation practices, policies, and agreements are one of the most actionable ways higher education leaders can

by o ering access to a broader variety of academic programs and experiences than might otherwise be available at a single college or university. Additionally, articulation provides opportunities for community college leaders to promote articulated pathways for students who desire to transfer (O'Meara, Hall and Carmichael 2007, 9). Further, agreements provide four-year institutions with access to a broader population of potential students, which may be a means to enhance diversity, and perhaps drive strategic changes that impact the pro le of the institution (AACRAO 2019, 5).

ough well-designed and implemented articulation agreements prove bene cial for students and faculty and sta , these agreements are only as good as they are visible for students to access and bene t from them. A 2017 study by the United States Government Accountability O ce (GAO) to explore college credit transfer found that roughly 68 percent of schools participating in the federal student aid programs made articulation agreements visible on their website (GAO 2017, 10). e same study revealed that articulation agreements were more commonly available on websites of public schools, yet noted that many private non-pro t and for-pro t schools also had established articulation agreements.

is paper provides an overview of the landscape of transfer articulation practices, policies and agreements to facilitate the award of academic credit and is based o extant literature and resources. It is meant to highlight best practices to develop, implement and maintain articulation agreements that more readily enable the award of credit, though it is not meant to direct institutional leaders to follow a particular strategy or recommendation. e following questions are addressed:

1. What do we know about transfer and articulation agreements?
2. What has been successful?
3. What has been challenging?
4. How does credit transfer di er between institution types and institutions across state lines?
5. What do we know about high-performing institutional transfer partnerships?
6. Are there any particular institution or state models that are promising?

OVERVIEW OF TRANSFER ARTICULATION

e following section provides an overview of the di erent types of transfer articulation practices, policies, and agreements. De nitions and structures of agreements are guided by state legislation, accreditation bodies, institutional mission or transfer agreements with partner institutions. Agreements may be broad or speci c and may include all institutions in a state or system or may be limited to speci c institutions (public or private) or colleges/schools within an institution or disciplines (AACRAO 2019, 8). As detailed in this section, the scope of articulation can vary from articulation of a speci c course to an entire associate degree and may be incentivized through guaranteed or joint/dual admission or enrollment with a partnering institution.

Course articulation is possible when courses at two or more institutions are determined to be equivalent. Although speci c course numbers, titles or assignments may not be the same, faculty evaluate the stated learning outcomes and content to determine course equivalency to allow students to transfer a course and receive equivalent credit at the receiving institution (Bers 2013, 17–18). Course agreements, also referred to as transfer guides, outline equivalent courses (AACRAO 2019, 7). In the context of state-regulated agreements, course equivalency may be structured as a common course numbering system that requires institutions to identify course o erings using a similar naming convention (AACRAO 2019, 9). Common course numbering can help ease the administrative burden of articula-

tion and reduce credit loss and the cost of college for students (Le et al. 2019, 6). As of 2018, 17 states had some version of common course numbering system.[2] Additionally, several states, including Iowa, Virginia, and Mississippi, had common course numbering that speci cally applies to community colleges within the respective state (ECS 2018). It should be noted that these systems typically only include public colleges and universities in a state. However, a limited number of states, including Florida, have recently begun to expand common numbering systems to include private and for-pro t institutions within the state (Le et al. 2019, 6).

Transfer agreements and articulation policies may also facilitate the articulation of a core curricula or set of lower-di-

the state (ECS 2018). Other states like Arizona have institutional agreements that o er guaranteed transfer of some degrees, not otherwise legislatively mandated and implemented for all institutions in the state.

Although not yet common, there is at least one example of a multi-state associate degree articulation. Minnesota and North Dakota have a joint agreement between the public university systems that allow for transfer of any general education credits or an entire associate degree to all bachelor's granting public institutions in either state (Le et al. 2019, 9). Although this type of articulation can be e ective, it should be noted that many students transfer before earning an associate degree and therefore may not bene t from these types of agreements (Le et al. 2019, 8).

e above-mentioned forms of articulation may be coupled with institutional agreements designed to help facilitate the transfer of students from community colleges to bachelor's granting colleges and universities, including guaranteed admission, dual/joint admission, or dual/joint enrollment. Joint or dual admission grants students admission to two institutions simultaneously but requires that students only enroll in courses at one institution at a time. A four-year institution may use this type of agreement as a means of providing remedial education to students or to defer students who otherwise would meet admissions requirements (AACRAO 2019, 8). Similarly, joint or dual enrollment agreements might also allow students to enroll at more than one institution at a time, thereby easing the transfer process (9). Guaranteed admission grants admission to one or more transfer institutions only after a student completes a set of requirements at a community college. ese agreements do not guarantee admission to all programs and may not apply to all institutions within a system when capacity or space issues impact admission (e.g., a student is admitted to an "impacted" academic program at an institution that accepts more quali ed students into a program than it can accommodate) (AACRAO 2019, 9).

SUMMARY OF ARTICULATION STUDY FINDINGS

Despite the prevalence of transfer articulation agreements and policies, there have been relatively few scholarly studies on the impacts of transfer articulation (Bers 2013, 23). Studies that have focused on the overall e ectiveness of statewide articulation policies found statewide agreements may have, at best, a minimal e ect on transfer rates for some groups of students (Anderson, Sun and Alfonso 2006; Gross and Goldhaber 2009; Handel and Williams 2011; LaSota and Zumeta 2016; Stern 2016). One of the most rigorous studies of statewide articulation policy to-date, evaluated the e ects of the Student Transfer Achievement Reform Act (California Senate Bill [SB] 1440) (Baker 2016). e Act guided the development of Associate Degrees for Transfer (ADTs) between community colleges and institutions in the California State University (CSU) system. Students who earn an ADT are guaranteed admission to the CSU system,[6] admitted with junior standing and are given priority consideration for capacity-constrained programs (630). Baker (2016) did not nd the implementation of ADTs had a signi cant e ect on transfer rates, however, there was evidence to suggest e ects may be seen on transfer rates in the future as it may take more than a few years for students to transfer after earning the ADT (636).

ere have been a few state-speci c studies of the e ects of statewide articulation and transfer policy. Findings by Boatman and Soliz (2018) showed mixed ndings, speci cally, students who completed the Ohio transfer module

- **A ac f . a d c , ca be ee c , c ege a d f . - ea . fac ca , ede a c a .** In a climate of mistrust, articulation policy does little to encourage collaboration by faculty and administrators across institutions to align curricula (Handel 2008, 6). Community colleges and four-year institutions often have very di erent cultures that can make it di cult for students to navigate the transfer pathway (Handel and Williams 2012, 11).

THE POTENTIAL OF TRANSFER ARTICULATION

is nal section highlights successful articulation models, high-performing transfer partnerships, and emerging or promising developments in transfer articulation. e paper concludes with best practices to develop and implement articulation agreements that enable the award of transfer credit.

According to WICHE (2014), the state of Washington demonstrates a state articulation agreement model that ensures students have a clear transfer path to receiving institutions. Washington has an articulation “umbrella” policy that includes both public and private institutions in the state (LaSota and Zumeta 2016, 173). e state of Washington graduation rate for transfer students is 74 percent, the percentage is higher (83 percent) for students who transfer with an associate degree to earn a bachelor’s within six years. e state has a transfer council, [illegible] (WSAC), that includes representatives from all institutional types and serves as the state’s transfer liaison. e council works closely with faculty to develop and maintain agreements that provide clear degree pathways for students (9). e WSAC also stores and maintains transfer agreements and is the point of contact for all transfer issues (WSAC 2019).

As previously mentioned, California community colleges o er an Associate Degree for Transfer (ADT) that in 2018 was expanded to provide students with the opportunity to transfer all lower-division transfer requirements and earn admission at a partnering public or independent four-year institution located in or outside the state (California Community Colleges, 2019). at same year an MOU was signed between California Community Colleges and the Uegrerat y (Hler-disociate Degr18 58.5 61.s snd maintaS r8Uegnd Articulemee33.(impl)

- Louisiana State University – Eunice and the University of Louisiana Lafayette
- Holyoke Community College and the University of Massachusetts Amherst
- Everette Community College, the University of Washington and Western Washington University (300)

ese high-performing partnerships were found to share three characteristics:

1. Partnering institutions made transfer a priority by investing resources, using data to guide decisions, and connecting transfer to the institution's mission (301)
2. Partners o ered high-quality instruction focused on meeting the receiving institution's expectations and created transfer maps that were regularly updated (302)
3. Partnering institutions provided individualized transfer advising that involved community college advisors prioritizing transfer and four-year advisors committed to supporting students before, during, and post-transfer (304)

Promising developments in transfer articulation include: articulation between public and private institutions; articulation of non-credit and vocational training and applied associate degrees; and, articulating credit based on stated learning outcomes. Although the majority of state policies and transfer partnerships are exclusive to public higher education institutions in a particular state, institutions have autonomy to develop partnerships with inde-

BEST PRACTICES TO DEVELOP, IMPLEMENT, AND MAINTAIN

CONCLUSION

Higher education leaders can support student success through the development, implementation, and maintenance of transfer articulation practices, policies, and agreements. Extant literature and resources show that statewide articulation policies provide a foundation for articulation. However, statewide agreements are not a panacea, and do not always reduce credit loss or provide e ective and clear transfer pathways for students. Innovative institutional partnerships are overcoming limitations in state articulation policy by making transfer a priority and by providing needed advising and other resources for students before, during, and after transfer. Additionally, promising developments in articulation are expanding articulation to better support students who transfer to private institutions, across state lines, as well as for vocational students who desire to earn a bachelor's degree. Although this report is not

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APPENDIX D: ENABLING THE TRANSFER AND AWARD OF ACADEMIC CREDIT FOR PRIOR LEARNING

EXECUTIVE SUMMARY

Adult learners comprise a new majority among college students, and they bring with them prior college-level learning and experiences acquired in non-institutional settings. Recognizing and awarding transfer credit for individuals' prior validated learning is of increasing importance to learners and colleges and universities, especially as academia looks to close national education attainment gaps. Credit for prior learning or prior learning assessment refers to the assessment and evaluation of one's prior learning and experience to make determinations about college-level equivalency to grant academic credit. e recognition of students' prior learning can be a critical lever to reduce cost and decrease time to completion and enhance students' self-con dence and motivation to pursue further college-level learning. Evaluating the quality of prior learning, notably for transfer credit, occurs within institutions and by third-party quality assurers or learning evaluators. Whether determinations about the creditworthiness and transferability of prior learning occur within the institution or with a third party, it generally aligns around standard practices and guidelines for using quali ed faculty to assess the content, scope, rigor, assessments, and college-level equivalency. Research has enumerated many bene ts associated with recognizing students' prior learning for credit, these bene ts extend to colleges and universities, students, and society. ere are, however, barriers to institutional acceptance of credit for prior learning, some structural barriers that inhibit students' successful pursuit of credit for prior learning, and some barriers embedanor pr le.eRg the qualits to impor . guci-11 (ts)]TJ0 -1.273 (and litsessmuce with r)10.sessty a- 0 (d u

and promulgates [illegible] which many colleges and universities use—directly or indirectly[6]—to guide their prior learning assessment practice and inform credit for prior learning policies.

CAEL's Ten Standards for Assessing Learning:[7]

1. Credit or competencies are awarded only for evidence of learning, not for experience or time spent
2. Assessment is integral to learning because it leads to and enables future learning
3. Assessment is based on criteria for outcomes that are clearly articulated and shared among constituencies
4. e determination of credit awards and competence levels are made by appropriate subject matter and credentialing experts
5. Assessment advances the broader purpose of equity and access for diverse individuals and groups
6. Institutions proactively provide guidance and support for learners' full engagement in the assessment process
7. Assessment policies and procedures are the result of inclusive deliberation and are shared with all constituencies
8. Fees charged for assessment are based on the services performed in the process rather than the credit awarded
9. All practitioners involved in the assessment process pursue and receive adequate training and continuing professional development for the functions they perform
10. Assessment programs are regularly monitored, evaluated and revised to respond to institutional and learner needs

In addition to institutional-driven evaluation of credit for prior learning, external evaluators or third-party quality assurers generally evaluate employer- and military-based training, industry certi cations, and other non-credit course providers to make determinations about creditworthiness that result in credit recommendations for individuals who successfully complete the training or certi cation (Lakin et al. 2015). ese entities range from programmatic and national accreditors, industry and vocational standards-setting bodies, and nonpro t membership associations focused on assessing the quality of college-level learning inside and outside of the classroom (Taylor and Soares 2020). Importantly, while third-party quality assurers evaluate and issue credit recommendations or assessments of the creditworthiness of non-institutional learning, it is ultimately up to each individual institution to decide whether or not to award academic credit for prior learning.

Two well-established entities that have decades-long experience validating learning that occurs outside of the classroom include ACE and the National College Credit Recommendation Service.

ACE's College Credit Recommendation Service (CREDIT) has evaluated and determined the creditworthiness of work-based and other non-institutional learning since 1974, following decades-long work by ACE's Military Evaluations program to review military training and occupations for college-level learning equivalency. CREDIT utilizes

Learners are increasingly pursuing an education in a variety of institutional and non-institutional contexts ("Joint Statement," 2017), and when students can access their prior learning for academic credit it may decrease their time to complete a degree and lower their cost of a degree by not having to complete coursework for knowledge and skills

Societal Benefits

Employers and government spend tremendous amounts of money each year on job training for individuals. If these validated learning experiences don't count for credit, then students (or government or employers) are paying tuition for learning to count towards a degree but which already occurred in a non-institutional setting. For example, the 2017 scal year budget request in the [illegible] included $601 billion—roughly 55 percent of the total NDAA budget—of taxpayer dollars for military training, force readiness, and associated equipment (NDAA 2017).

- Concerns about the lost revenue, i.e., if a college grants credit for prior learning the institution loses out on tuition revenue for a course in which the student would have otherwise enrolled
- Lack of clarity by students regarding the rationale for a college's inability to grant credit for their prior learning

ere are some barriers to o ering PLA internally at an institution; for example, faculty may have concerns about the rigor of a course they did not teach themselves or sta and administrators may have concerns over the perceived loss of revenue by awarding prior learning credit. ese barriers may be compounded when introducing other structural barriers surrounding the transferability of PLA credit. at said, perspectives on PLA need not be limited by focusing only on the issue of transferability of PLA credit earned at a di erent institution. Rather, PLA credit is itself a way to accept learning that happens elsewhere, so part of building PLA into your transfer policy is to o er PLA methods and services at your institution as well.

MAKING PRIOR LEARNING MORE ACCESSIBLE AND EQUITABLE

Making learning more accessible has signi cant pragmatic value, that is, to enable more learners to attain a degree so they can improve their socioeconomic status and contribute back to the economy, and also to close critical degree attainment gaps (Taylor, Haras, Magruder, Fernández, Ginsberg and Glover 2017).[12] Evaluating the quality of non-institutional learning for transfer credit can help equalize the playing eld for learners across race, gender, and socioeconomic status by focusing on prior learning experiences that demonstrate what a learner knows and can do, rather than focusing on where the learning occurred. is is incumbent on destigmatizing prior learning for credit that is acquired outside of the classroom and discounting such learning as less than learning that occurs in a traditional setting.

From an institutional perspective AACRAO found two di erent categories of barriers to PLA (Kilgore, forthcoming). e rst are barriers against o ering any type of PLA options for students. "Institutions with one or more of these characteristics are statistically[13] less likely to o er PLA options to students: small, identi ed as rural-distant by IPEDS locale, private not-for-pro t, or admit 49 percent or fewer applicants. However, the e ect size[14] associated with the di erences is small" (Kilgore, forthcoming). Reasons for not doing so include lack of an institutional culture to support PLA, a perceived lack of academic rigor, and a lack of interest expressed by students.

e second type of barriers exist in PLA practice and policy that may negatively impact students' ability to earn PLA at institutions where it is o ered. Few institutions have access to student level demographic data tied to credit awarded through PLA so it is di cult to quantify whether issues of inequity exist at most institutions. However, about a third of institutions o ering PLA noted that their institution has policies and/or practices which make it more di cult to have their non-classroom learning recognized and that minority, economically disadvantages, and/or Pell recipients are more likely to be impacted than other students. AACRAO grouped the problematic policies and practices reported into the following categories:

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12 e state of California will be short more than 1 million baccalaureates by 2030 if current enrollment trends continue, see Johnson, Hans, Marisol Cuellar Mejia, and Sarah Bohn. 2015. *Will California Run Out of College Graduates?* San Francisco: Public Policy Institute of California. www.ppic.org/content/pubs/report/R_1015HJR.pdf.

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- “ e amount of work required of a student to get their prior experiences evaluated
- Limits on course applicability
- Limits on both AP and IB applicability speci cally
- Lack of faculty buy-in of the value and academic rigor equivalency associated with PLA
- Lack of student awareness and di culty explain it to them
- Lack of a clear PLA policy and practice at the institution
- Institutional inexperience in awarding PLA
- Lack of manpower at the institution to complete the PLA” (Kilgore, forthcoming)

AACRAO also found that [illegible] in one or more of the following ways:

- “Setting a maximum number of semester credit hours (S.C.H) which can be earned by PLA
- Setting a maximum percentage of S.C.H. which can be applied towards a credential
- Limiting what the credit can be used for within the education credential completion requirements (see Figure 3)
- Not accepting PLA credits in transfer (evaluated by another institution) or limiting the acceptance of those credits to speci c conditions”

Institutionce in awar“Setting

2015), broader policies to recognize non-military training and experiences outside of the traditional classroom have not received as much attention. As of December 2017, 10 states have enacted state-level prior learning assessment policies through either legislation or the state's higher education commission or coordinating board,[15] and 14 states have enacted system-level prior learning assessment policies[16] (Education Commission of the States 2017). In addition to the state-level policies on PLA, nine states o er guidance on PLA costs and associated fees charged to students, and 11 states address limits on the number of credits that may be awarded for prior learning.

Eight in ten percent of institutions responding to the survey used at least one type of PLA with 60 percent charging a fee for at least one of their PLA options (see Figure 1) (Kilgore, forthcoming).

From an institutional perspective, students are made aware of PLA options through many means but primarily through an academic advisor, the college catalog, or website. From the student perspective, they report hearing about PLA primarily from a high school counselor, a college advisor, another student, or a family member.

PLA may be applied across a number of credential requirements (see Figure 2) but the maximum number or percentage of applicable PLA credits may be limited by State regulations, transfer limit policy, and residency credit hour requirement policies. Accreditors do not necessarily provide limits on the number or percentage of credits which may be earned through PLA. In addition, 65 percent of institutions responding to the AACRAO survey will not recognize another institution's evaluation of PLA in transfer; 26 percent will do so under certain circumstances, and just 8 percent will do so as a matter of regular practice.

PLA credit is most likely to be recorded as transfer credit with course equivalency (see Tables 1 and 2).

Table 1

Table 2

CONCLUSION

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APPENDIX E: TECHNOLOGY AS AN ENABLER OF CREDIT TRANSFER

NATIONAL TASK FORCE ON THE TRANSFER AND AWARD OF CREDIT

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ABOUT THE SERIES

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EXECUTIVE SUMMARY

e technology ecosystem related to the transfer of credit is complex and multi-dimensional. ere are a number of solutions that can work independently and/or in conjunction with other technologies to perform one or more of the functions related to transfer of credit. e full implementation of the available technology solutions can improve the transfer of credit process from prospective student to a student who leaves the institution without graduating and returns to a previous institution. However, none of the solutions are a panacea to the di culties some students run into when trying to gure out what credits will transfer and which will apply to their degree. Supportive technologies need be implemented in conjunction with sound, transfer-friendly policies and practices.

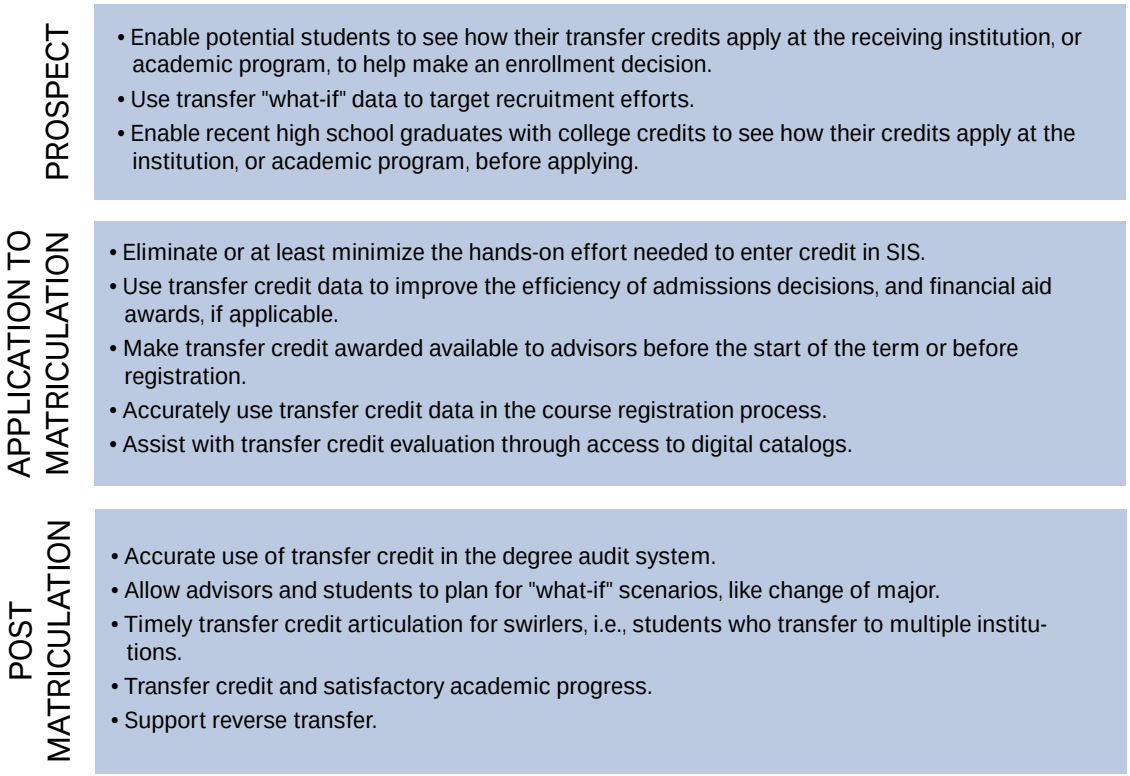
INTRODUCTION

e e ective application of technology is critical to reducing the cumbersome manual interventions otherwise necessary to implement the practices associated with the transfer of credit. Without technology-enabled platforms, prospective and recently admitted students may be limited in their ability to do the following in a timely manner:

- make comparisons between institutions during the college search process as it relates to how credits will transfer
- understand how/if their previously earned credits will transfer
- understand how/if the credits apply to their selected program of study
- be informed of excess transfer credits that will not apply toward their selected program of study but may apply if they change programs
- be advised accurately and before course registration
- register for courses that have co-requisites or pre-requisites
- view an educational plan that indicates how long it will take to complete their educational credential

Although there are various forms of existing technology to meet transfer credit needs across the student lifecycle, there are a number of independent variables that impact the degree to which technology can facilitate e cient student services. ese variables include, but are not limited to, the software solutions available at the institution, percentage of available features implemented for each solution, degree to which sta are trained on these solutions, level of cross-solution data integs avevious9he student lifeo evelrx10.1 (e-r)ociated tthe degreeion of the avtransfer of crWA]TJ0p.2

Figure 1: A student lifecycle view of the application of technology to TOC.



THE TRANSFER TECHNOLOGY ECOSYSTEM

Although enterprise-level student information systems (SIS) are robust and diverse in their capabilities, gaps remain in their functionality around credit transfer. As a consequence, several di erent types of technology are needed to support the functionality described earlier. e various non-SIS based needs are lled by software-as-a-service solutions (third-party providers), supplemental software additions, institution-developed software solutions, or some combination thereof (see Fig. 2).

- “faster transfer of student records”
- “timely and appropriate placement into educational programs”
- “increased reliability & consistency interpreting records”
- “increased security over other exchange methods”
- “reduced direct and indirect costs”
- “promotion of greater national compatibility” (Sierra Systems Consultants 1997, pg. 5)

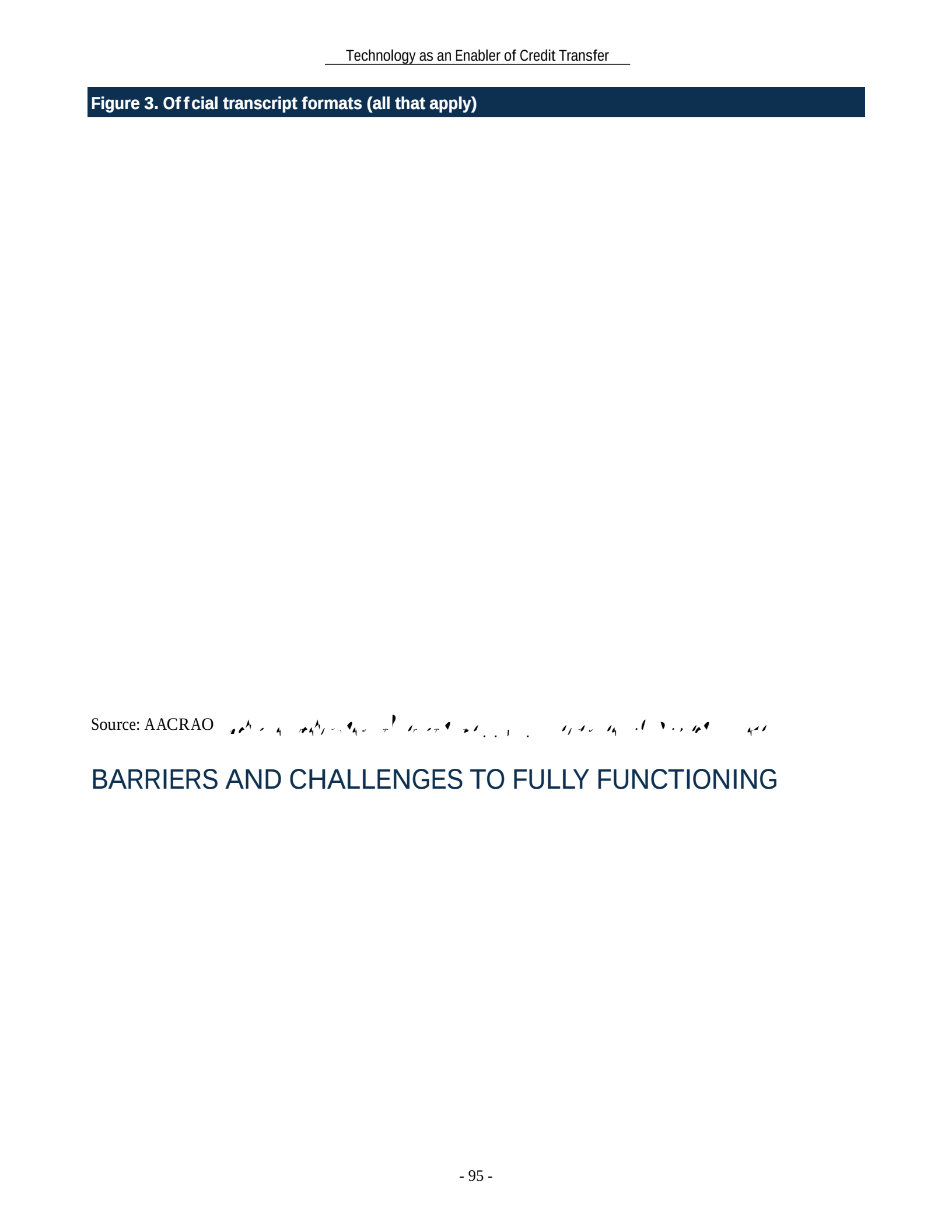
To be clear, EDX in this context is not merely the exchange of a PDF version of a transcript from one institution to another. Although a PDF transcript can be sent and received quickly, the receiving institution often processes PDFs manually just like a paper transcript unless: 1) the institution implements software that can read the PDF transcript and convert it to an electronic record (which is limited in its adoption and functionality), or 2) the institution uses PDF with embedded XML[2] (also not widely used).

e solutions with the most potential are the electronic data exchange (EDX) formats, which include the electronic data interchange (EDI), extensible markup language (XML), JavaScript Object Notation (JSON), or any exchange of data between two computer systems (AACRAO 2019). EDX includes all of the functional bene ts listed by the ExPRESS task force. However, even after 30 years, fewer than one third of institutions responding to a recent survey use any of the EDX formats to send or receive transcripts (AACRAO 2019) (see Fig. 3). In absolute terms, only 220 institutions (~5% of the ~4,000 higher education institutions) to date actively generate and send transcripts that may be consumed digitally through the AACRAO SPEEDE Exchange Server[3] (National Student Clearinghouse 2019).

2 XML is the Extensible Markup Language format and the exchange of data using this format.

3 e Standardization of Postsecondary Education Electronic Data y the

Figure 3. Official transcript formats (all that apply)



Source: AACRAO

BARRIERS AND CHALLENGES TO FULLY FUNCTIONING

As stated earlier, electronic data exchange (EDX) technology has the greatest potential to positively impact the student experience pertaining to transfer of credit. However, implementation of EDX is not without its challenges, including associated costs, lack of understanding of the bene ts, lack of time, lack of information technology support, system incompatibility, and lack of institutional demand for the functionality (AACRAO 2019). ese challenges contribute to why the percentage of institutions using EDX has remained virtually unchanged for more than 30 years.

> "One of the major hurdles higher education institutions face is the need to develop the means to generate and consume the academic data per the technical standards. In addition, there exists a strong dependency between sending and receiving institutions. at is, both parties, the sender and the receiver, must be using the same le format. Independence (from identical le formats) will allow institutions to move in a more quick and agile manner toward the generation and consumption of electronic credential data since they will not be forced into a codependent state"
> Mark McConahay, associate vice provost and registrar, Indiana University Bloomington, and vice president of information technology, AACRAO Board of Directors.

Other considerations pertaining to policy, practice, and technology con gurations that pose a higher likelihood of negatively impacting transfer of credit, if not aligned properly, include:

- e breadth and depth of articulation rules built into the transfer system impacts credit transfer.
  - e larger the number and years of articulation rules built, the broader the range of applicants who have earned college credit prior to being admitted that can be served through automatic articulation rather than manual processes.
  - Adding descriptions, stated learning outcomes, and other metadata to the course records exchanged between institutions would enable better and faster (perhaps automated) processes for credit evaluation by the receiving institution.
  - With the right technology, these articulation rules can be used by prospective students to see what courses will transfer and how those credits will apply toward the degree.
- e extent to which receiving institutions document " available credits or just credit directly applied to a student's academic program of study at the time of admission, or the extent to which receiving institutions accept transfer credit up to the allowable transfer credit limit.
  - Institutions that only document available credit up to the credit limit or that apply to the program of study at admission most often require a student to ask for their transfer credits to be reevaluated if they change academic programs.
  - ese practices also eliminate the ability for a student to run "what-if" analyses in the degree audit system to see how their time to degree is impacted if they change academic programs.

In 2019, AACRAO conducted a survey of transcript practices that included a question about how transfer credits were evaluated (AACRAO 2019). Data included the following:

- 39% of institutions transfer all eligible transfer credits regardless of major/degree at admission and transfer credit limit (credit limits were applied to the degree program as needed after enrollment);

- 31% only transfer the credits that apply to the major/degree at admission and up to the transfer credit limit; and
- 30% transfer all eligible transfer credits up to the transfer credit limit and regardless of major/degree at admission.

- e extent to which: a) a degree audit system exists at the institution; b) that system is the trusted source for degree audits; c) if it exists for a su cient number of catalog years to account for most transfer students applying in any particular academic year.
  - e lack of a trusted and fully implemented degree audit system removes the value proposition for

CONCLUSION

e e ective and complete implementation of available transfer credit evaluation related technology in conjunction

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Applicant:

Admitted student:

a) Credit transfer-related technology can support:

   i) Accurate and timely advising by making the transferred credits and degree audit evaluation available to advisors soon after a student is admitted
   ii) Accurate, seamless and self-service-based course registration if the credit transfer, course catalog and registration system rules are built to recognize transfer credits as meeting course co-requisite or pre-requisite rules, if applicable.

b) Interrelated **c e** include:

   i) e o cial source of the degree audit
   ii) Pre-requisite and co-requisite course requirements

c) Interrelated **ac ce** include:

   i) Academic advising practices
   ii) Course registration practices

Matriculated:

a) Credit transfer-related technology can support:

   i) A student looking for courses to take elsewhere to determine how/if the course(s) will transfer back to the home institution
   ii) e automated articulation of the credit earned elsewhere once the transcripts have been received
   iii) "What-if" scenarios for a student seeking to understand how transfer and institutional credit will apply if he or she changes majors at any point during the tenure at the institution

b) Interrelated **c e** include:

   i) How credit taken elsewhere during the course of continuous enrollment at the institution is treated
   ii) How transfer credit is evaluated at the point of admission (i.e., all prior credit is transcripted or only credit that applies directly to the program of study at admission is transcripted)

c) Interrelated **ac ce** include:

   i) Transfer articulation rules
   ii) Transfer credit evaluation practices at admission, when a student takes credit elsewhere, or when he or she changes majors

Transfer out/Reverse transfer:

[7]

a) TOC related technology can support:

   i) e speedy transfer of electronic transfer credit data to another institution

b) Interrelated **c e** include:

   i) Reverse transfer agreements

c) Interrelated **ac ce** include:

   i) Outbound transcript practices

7 Reverse transfer is the process of a student taking credits from an institution where he did not complete an educational credential back to a previous institution to apply the credits to a lesser or di erent credential to meet graduation requirement at the previous institution.

APPENDIX F: A NATIONAL SNAPSHOT: HOW STUDENTS EXPERIENCE AND PERCEIVE TRANSFERRING EARNED CREDIT

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S e e Ta is the founder and CEO of ED2WORK®, a national advocacy, research, and strategy rm that partners to create conditions necessary for working learners to succeed and adapt for the future of work. Taylor teaches in the human resource management program at Wilmington University. He also serves as managing consultant for ACE's National Task Force on the Transfer and Award of Credit and previously served as director of education attainment and innovation at ACE.

Ka a P eda is a policy research analyst at ACE and contributes to ongoing advocacy and policy work through data analysis to support the understanding of current and proposed federal legislative and regulatory policies on colleges and universities. She also worked as a research and data analyst at the University of South Florida, where she graduated with her bachelor's and master's degrees.

e American higher education system serves a diverse student population through a vast network of colleges and universities with distinct institutional missions and values. e diversity of institutional types that a ord learners with choice in the kind of education they receive also means there is variation in how students experience movement from one institution of higher education to another. Simply put, the transfer function in higher education can be complex to navigate and inevitably leads to ine ciencies in the transfer of credit process.

Today's college student is highly likely to transfer institutions or credits (Taylor and Jain 2017), and transfer students comprise a sizeable number of students enrolled in postsecondary education. In fall 2018, roughly 1.38 million students were enrolled in postsecondary institutions as transfer-in students, according to the U.S. Department of Education's National Center for Education Statistics.[1] However, in a working paper for the American Council on Education (ACE) on student transfer and award of credit, Bragg (2020) surmises the successful transfer and award of credit remains problematic, notably for students who lose credits during the transfer process.

e present paper is focused speci cally on the transfer student experience, the perceived enablers and barriers transfer students face when attempting to transfer credits from one institution of higher education to another, and students' attitude about any credits that did not transfer in the process. To that end, Taylor and Jain (2017) identi- ed three critical dimensions of ine cient and ine ective transfer pathways: credit loss, inadequate articulation, and structural and institutional barriers.

In this paper, the authors highlight a recent study by ACE and the American Association and Collegiate Registrars and Admissions O cers (AACRAO) on students' perceptions about how transfer credit was applied towards their academic program of study and the potential accumulation of excess credits at graduation. e study sheds light on transfer students' opinions about the application and award of their transfer credit, including credit loss, the information that helped or hindered their decision-making in the transfer process, the barriers and enablers to their successful transfer of credit, and how they felt about the credits that did not transfer.

Understanding how students make decisions about the transfer process is vital to ensuring that institutions do not

Regardless, the four observations that are currently known about successful transfer of credit are (1) there is a disconnect between students' perception of credit acceptance and the reality of what and how credits actually transfer, (2) the percentage of credit loss varies by transfer path, (3) credit loss could be due to a variety of reasons, and (4) the type of institutional accreditation plays a major role.

e disconnect around students' perceived credit acceptance versus actual transfer credit applied is evident by comparing data from two national student studies. In the portion of the 2016-17 B&B study, 95 percent of baccalaureate recipients who attended more than one institution reported having attempted to transfer credits, with nearly all of them reported having success in transferring "some" or "all" of their credits. Only less than 1 percent reported having "none" of their credits transfer. Conversely, the most recent from a BPS study (2004-09 cohort) showed that less than half of the time (37–41 percent) "all" credits transferred, and 20–30 percent of the time, "none" had transferred.

Regarding how transfer credit is actually applied to students' transcripts, evidence shows that credit loss varies by

Methodology

Researchers from AACRAO, ACE, and ED2WORK partnered with the survey platform partner, Qualtrics, to deploy a survey to over 1,000 current college students in the U.S. through the various survey panels available to Qualtrics. Using survey logic, Qualtrics narrowed the number of respondents to individuals with the following characteristics:

- Domestic students[3]
- Currently enrolled in only one academic institution
- At least 18 years old
- Not currently in high school
- Not a graduate student
- Earned credits from more than one institution
- A mix of public and private institutions

e survey was incentivized, and the data self-reported. Self-reported data are known to have limitations on empirical outcomes; for example, objective data such as GPA or course grade are known to be misreported (Rosen, Porter and Rogers 2017). Still, it is a widely used method to gather attitudinal and factual data from students (e.g., National Survey of Student Engagement (NSSE), Cooperative Institution Research Program (CIRP), High School Longitudinal Study of 2009 (HSLS:09)). Gonyea (2005) asserts that the usefulness of self-reported data "in high-stakes policy decisions is open for discussion," but also notes that self-reported survey instruments provide broader options than other research methods (74). e researchers applied several methods in developing and administering the survey to minimize self-reporting bias, including:

- Participation validation questions
- Limiting the length of the survey to be completed within 5–7 minutes
- Using a generic college student experiences title to identify the survey
- Randomizing all response choices
- Separating the questions about current institutional type, location, and name to minimize order and carry-over e ect
- Not asking any potentially embarrassing questions such as questions about GPA, speci c letter grades, or other similar questions
- Actively reviewing the data on current institutional type, location of institution, and name of the institution as it was being collected to identify and remove mismatched data from the pool of responses

3 Respondents were U.S. citizens or those with other legal domestic status, which excluded students enrolled in a U.S. postsecondary institution whose legal resident is something other than U.S. citizen, permanent resident, or citizen of a U.S. territory.

In order to gain a broad perspective on students' experiences with transferring credit, the survey included questions about the following:

- High school experience with taking college-level courses
- Military experience and military credit-equivalent learning
- Current and immediate previous institution type, speci cally identifying public and private institutions
- Description of the transfer credit process
- Perceptions and understanding of why some credits did not transfer
- Personal feeling about credits that did not transfer
- Perceptions of what, if any, institutional resources support the transfer of credit
-

The Initial Request for Transfer Credit Evaluation

Once a student has earned academic credit, the first potential point of credit loss occurs when a student has to navigate the institutional transfer policies and process to have their credits evaluated by the receiving institution. Initial credit loss may occur at this point in the funnel for at least two reasons: 1) the student makes a purposeful decision not to send any or all of their transcripts to the institution they plan on attending; 2) the institution may require that the student request their prior credit be evaluated rather than automatically evaluating prior credit, and students may be unaware that the request for credit to be evaluated rests upon them. These two factors play a role in the percentage of credits reported as being lost in the transfer process and are not readily explained or accounted for in much of the current research. Research that relies solely on the evaluation of transcript data (i.e., comparing the incoming credit to the credits awarded) lacks the context to explain one of the two reasons identified above.

Almost all students in this sample (96 percent) sent all of their previous college transcripts to the transfer institution for evaluation; the remaining 4 percent chose not to send all of their transcripts for one reason or another not captured by this research. Reasons a student would not send all transcripts for evaluation might include earned credit for courses not applicable to their major at the transfer institution, not earning an acceptable grade to meet the requirement for earned credit at the new institution, or a student could choose not to send a transcript for personal reasons.

23% of students had to ask the receiving institution to evaluate their transcripts for potential transfer credit

77% of students had transfer credit evaluations occur automatically

Among those who recalled the process for having their transcript evaluated for academic credit, 23 percent had to ask the receiving institution to evaluate their transcripts for potential transfer credit, and transfer credit evaluation for the other 77 percent occurred automatically. There is a subtle but statistically significant relationship between public and private institutions and practice for evaluating transfer credit. Private institutions are more likely to require an incoming transfer student to request their credit be evaluated.[6]

Only 27 survey respondents indicated they had military experience, and just 13 requested their Joint Services Transcript be sent to their current institution. Of those, only four respondents earned all of the credit they expected to earn, six earned some credit, and three received no credit for learning documented on the Joint Services Transcript.

6 P= .0283; Cramer's V: .0765; n=860

Evaluating the Transcript to Award Academic Credit

ere are several factors, both policy and practice, that in uence transfer of credit at the next stage of the transfer credit evaluation funnel. Any policy or practice on its own can impact the number of credits subsequently accepted by the receiving institution and awarded on a student's transcript. Here we o er examples of some in uencing factors:

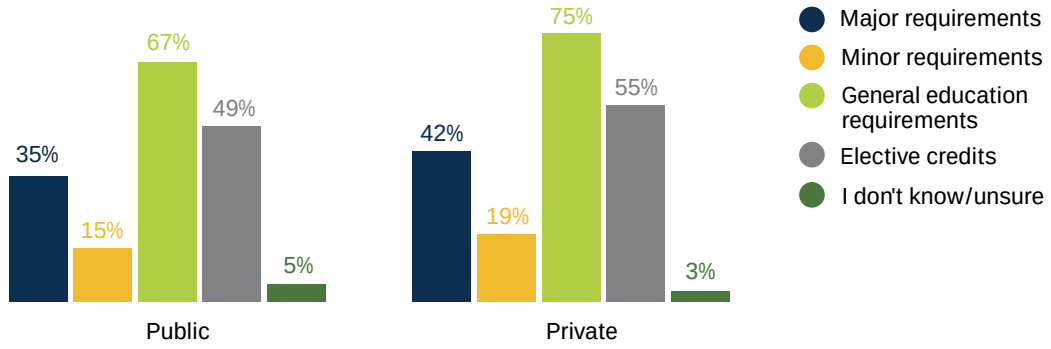
- Whether the receiving institution evaluates possible credit only for the major at the time of admission or all possible equivalencies, or whether the institution transcripts credit only up to the number of credits eligible to be transferred, or all possible credits and applies them as needed
- e 2019 AACRAO academic records and transcript practice report noted that
  - "39% of institutions transfer all eligible transfer credits, of major/degree at admission and transfer credit limit (credit limits applied to the degree program as needed after enrollment),
  - 31% only transfer the credit that to the major/degree at admission and the transfer credit limit, and
  - 30% transfer all eligible transfer credits the transfer credit limit regardless of major/degree at admission" (2019, pg. 10).
- Policies that limit the number of credits that can be awarded by the course level (e.g., 100, 200, 300, 400)
- Policies that limit the percentage or number of credits that can be awarded in transfer and applied to a degree (e.g., meeting residency requirements)
- Curricular policies that impose limits on speci c courses that can be awarded in transfer as opposed to being earned at the institution to which the student transferred (e.g., awarding transfer credit for ENG101 but requiring that ENG102 be residential credit)
- e receiving institution excludes college credit earned while still in high school if it can be identi ed as such on the transcript from the sending institution
- A 2016 AACRAO report on dual enrollment noted that 14 percent of institutions do not accept dual enrollment credit in transfer, and private institutions are less likely than public institutions to accept dual enrollment credit in transfer (Kilgore and Taylor 2016).
- Course equivalency does not exist at the receiving institution
- A grade earned in a course is not eligible for transfer
- A course was repeated for credit, and the repeated credit is not accepted in transfer
- A course is repeated to earn a better grade and the initial credit with the lesser grade is not accepted in transfer
- e receiving institution sets a time limit on the age of credit that can be transferred in, either broadly or for speci c subjects or majors.

ese practice and policy decisions can result in equivalent credits being left on the table. As such, some loss of equivalent credits is unaccounted for in the research informed solely by transcript data. e AACRAO May 2017 60-second survey focused on the content of transfer credit policy (Kilgore 2017). As evidenced by the contents of the undergraduate transfer policy summarized in Figure 2 from that report, the breadth and depth of policies that impact whether credit will be accepted in transfer are numerous.

Applying Awarded Credit to the Degree

Institutional curricular policies that impose limits on the applicability of equivalent credit to a particular component of a degree, percentage, or credit count, and not others (e.g., major, minor, general education, electives) also contribute to loss of credit in transfer. Seventy-four percent (74 percent) of students reported that their transfer credit was applied to meet general education requirements, 55 percent applied as elective credits, 41 percent towards major requirements, 18 percent towards minor requirements, and 4 percent were unsure how their transfer credits were applied to their program of study. Despite the small percentage of students reporting that they do not know how their transfer credit was applied, [illegible]. Figure 4 highlights the di erence between public and private institutions in this sample.

FIGURE 4: DEGREE APPLICABILITY OF TRANSFER CREDIT BY INSTITUTION TYPE



Known Reasons Why Earned Credit Did Not Transfer

Students who reported that only “some” or “none” of their credits transferred were asked if they knew the reasons why; 57 percent said they knew the underlying reason(s). However, the fact that 43 percent indicated they did not know why their credits did not transfer is indicative of an institutional gap in practice. Students who attempt to transfer credit and who are not awarded all the possible credit should be provided with reasons for why the credit did not transfer.

As noted above, reasons for losing credit in transfer can be rooted in institutional policy and practice or student choices or student academic outcomes. In this sample, under half (47 percent, n=247) of students who lost credit in the transfer process knew why credit had been lost. Of those, 47 percent noted that some credit was lost due to there not being an equivalent course at the institution to which they transferred (Figure 5).[8] What we do not know from this data is whether no course equivalency exists because the credit earned was specialized, such as college preparatory or technical credit.

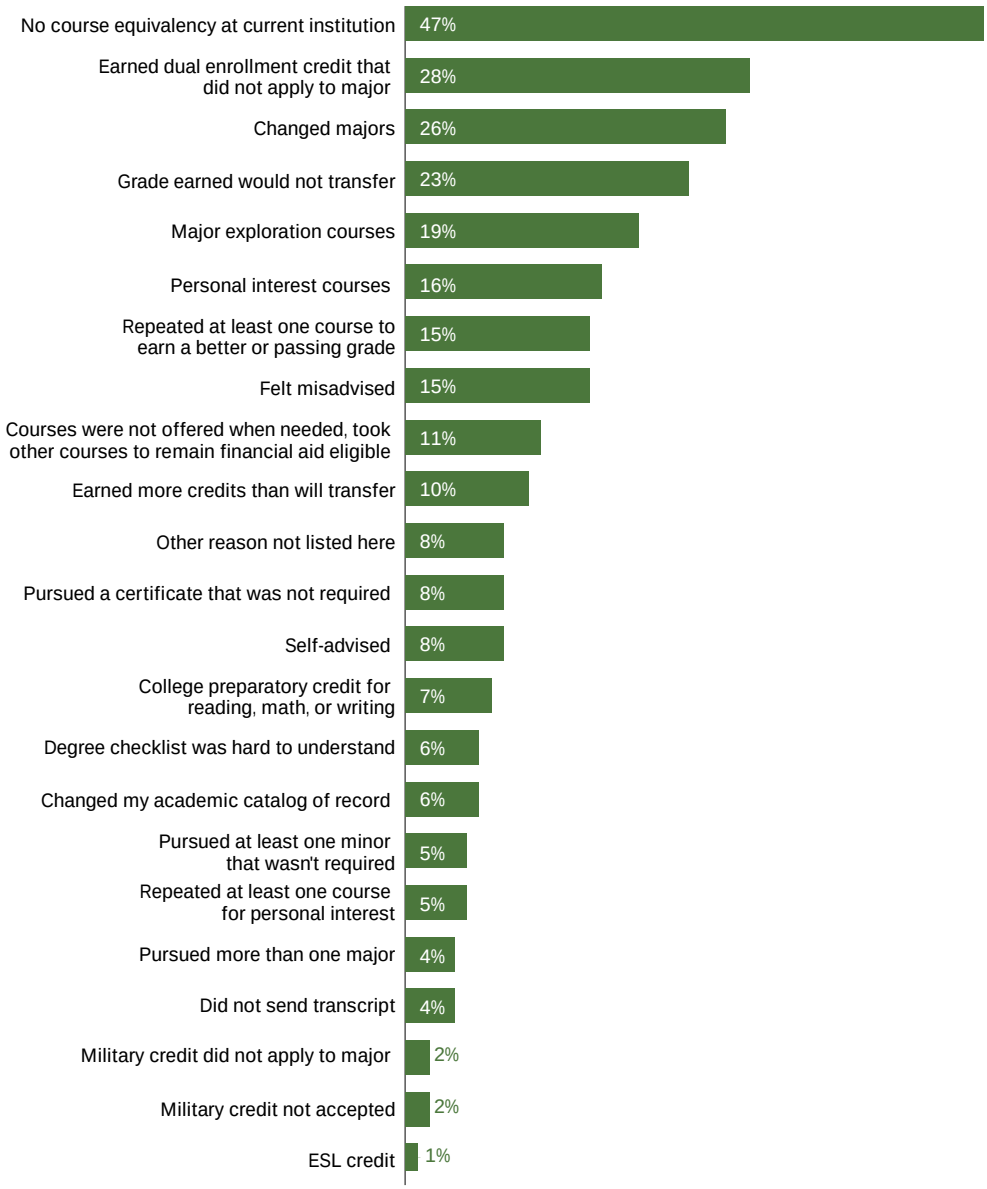
Students’ course taking choices may or may not be based on an understanding of how their course taking choices will impact the transferability of the credit. For example, 28 percent report that at least some of the credit they earned through dual credit while in high school does not apply to their major now that they are in college. It is likely that many of these students, who can often start taking dual enrollment as sophomores while in high school, either do not know what they want to major in when they get to college or do not understand the transfer eligibility entirely or degree applicability of the dual enrollment courses they enroll in. It is worth noting that dual enrollment credit also meets high school graduation requirements and is often earned at no cost to the student. However, as noted above, this credit is not always accepted in transfer.

8 Appendix A disaggregates the data in Figure 4 by institutional control.

Students also choose to take courses that will not transfer for cogent reasons, such as pursuing one major for a period of time and then changing majors (26 percent), exploring a major (19 percent), personal interest (19 percent), to earn a better grade (15 percent), and pursuit of a certi cate (8 percent) or minor (5 percent) that was not required. Further, as noted earlier, policies limit the transferability of some earned credit, and the student may only become aware of the transfer credit limits after the credit has been earned. For example, a student earned a grade that will not transfer (23 percent) or earned more credits than will transfer (10 percent).

e e ect of academic advising and related resources should not be discounted as a contributing factor to credit loss. Students selected three factors directly related to academic advising that contributed to their loss of credit in transfer: 15 percent reported feeling misadvised, 8 percent chose to self-advise, and 6 percent noted that the degree checklist was hard to understand.

FIGURE 5: KNOWN REASONS FOR LOSING CREDIT IN TRANSFER

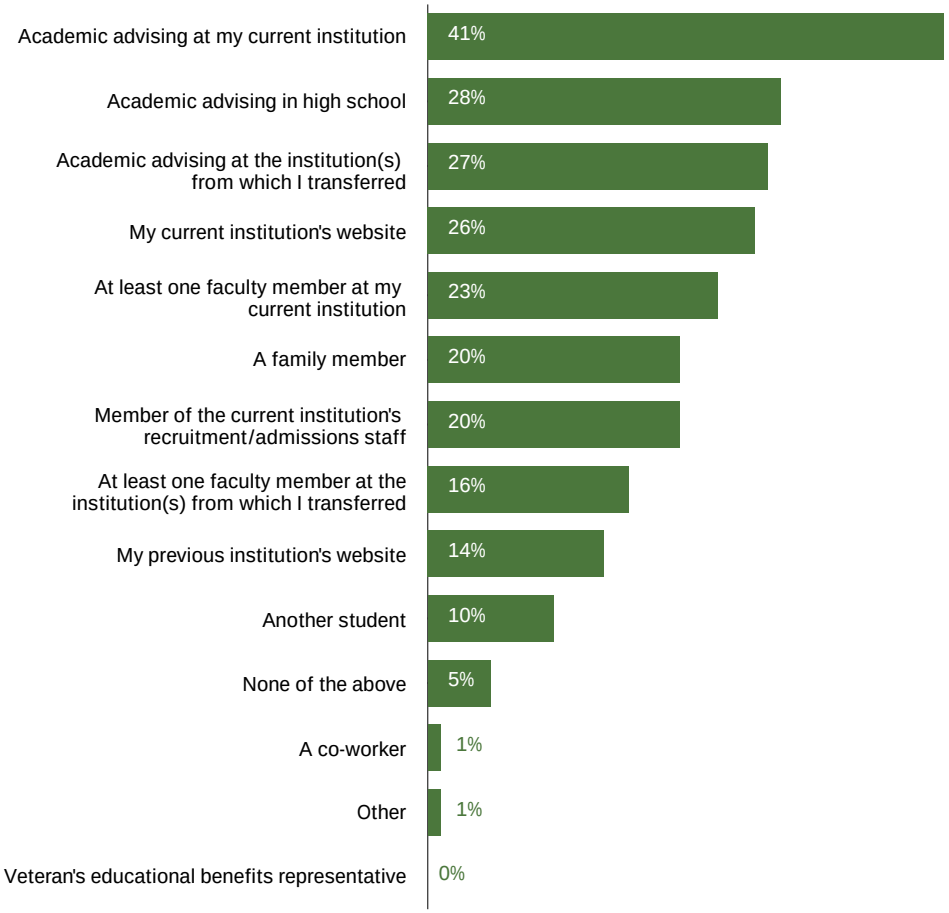


e average percentage of students in the present study who strongly agree or somewhat agree (77 percent collectively) that both previous and current institutions have resources to support transfer is on par with the percentage of students not displeased with loss of credit plus those that did not lose any credit in transfer (79 percent; n=797).

Part of the transfer experience narrative informed by limited data is around understanding how students who are not able to transfer all their earned credit feel about that outcome. Given the data in Figure 5, students app1T31(student56 ar)6 (c

e researchers aimed to compare transfer resources identi ed by students who were able to transfer all of their credits with the resources identi ed as lacking among those who could not. Students who transferred all of their credit were asked to identify from a list of resources that were most useful to them. For those who were able to transfer all of their credit, academic advising was at the top of the list of resources that helped ensure all of their credits transferred (Figure 7).

FIGURE 7: RESOURCES IDENTIFIED AS MOST USEFUL IN THE TRANSFER CREDIT PROCESS



As stated earlier, one of the goals of this study was to examine if a national sample of transfer student experiences and perspectives replicates the outcome and ndings of the 2019 AACRAO single-institution survey. In the present study of 1,003 students nationally, we found that students' experiences with credit transfer and their perceptions of institutional resources associated with the process are very similar to those in the single-institution study. e ndings in the present study give further credibility to the validity of the conclusions drawn in the single-institution study.

From the present study, we identi ed several key takeaways:

- Most students feel that their transfer institution and their current institution have resources in place to help with the transfer process.
-

is study only looks at currently enrolled transfer students' perceptions about transferring credit at a given point in time and does not look at how transfer credit was applied to a program of study at the point a student graduates. To that point, if students in the present study change their major, their credits may apply di erently at the time of graduation based on a new degree audit.

e researchers made an intentional decision to include only currently enrolled domestic undergraduate students

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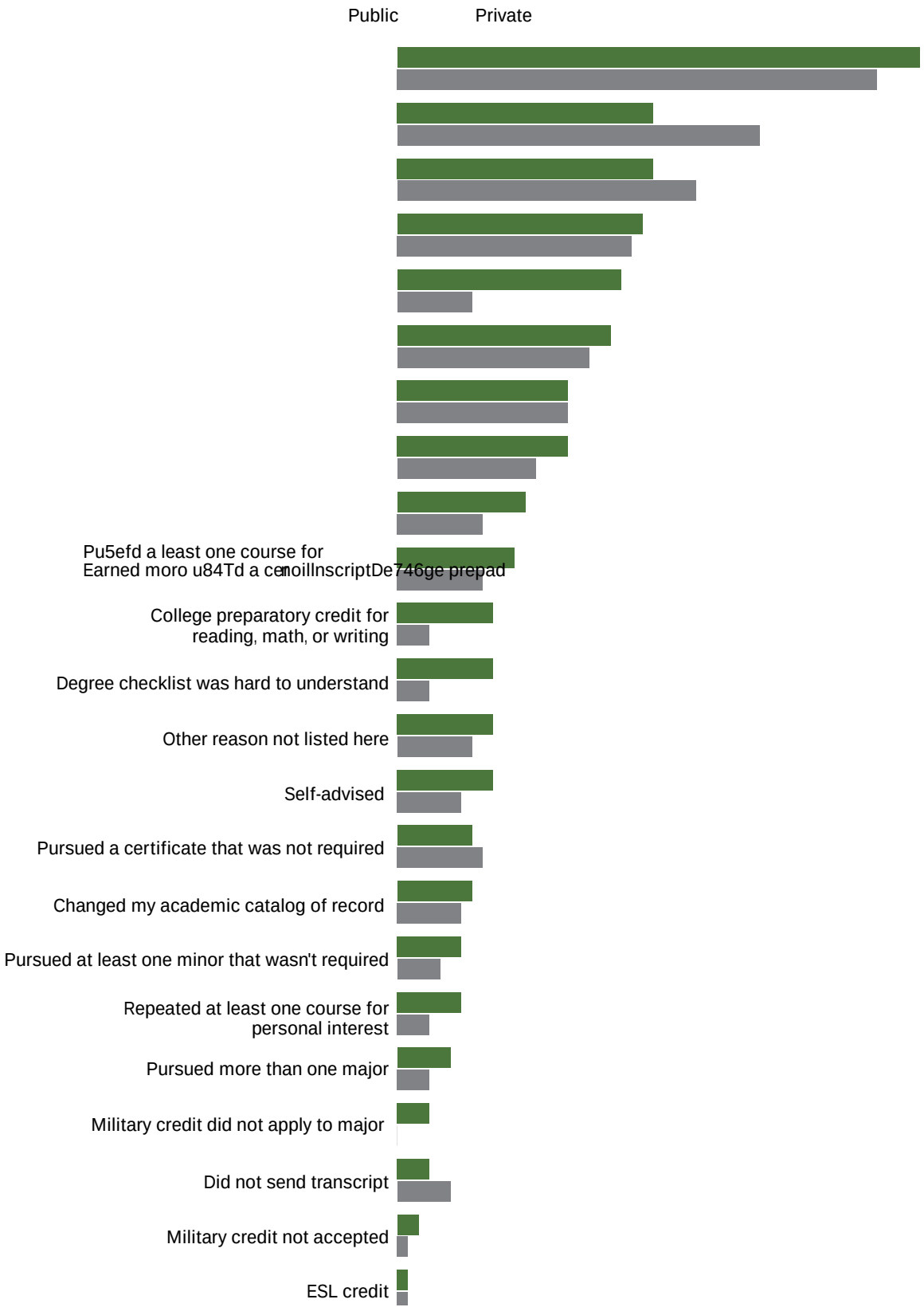
Public
Private
Pu5efd a least one course for
Earned moro u84Td a cenoillnscriptDe746ge prepad
College preparatory credit for
reading, math, or writing
Degree checklist was hard to understand
Other reason not listed here
Self-advised
Pursued a certificate that was not required
Changed my academic catalog of record
Pursued at least one minor that wasn't required
Repeated at least one course for
personal interest
Pursued more than one major
Military credit did not apply to major
Did not send transcript
Military credit not accepted
ESL credit

APPENDIX G: A PILOT TRANSCRIPT STUDY: EXPLORING THE IMPACTS OF INSTITUTIONAL ADVISING AND CREDIT EVALUATION POLICY AND PRACTICE

NATIONAL TASK FORCE ON THE TRANSFER AND AWARD OF CREDIT

ABOUT THE SERIES

is paper is among a series of white papers commissioned by the American Council on Education (ACE) as part of the National Task Force on the Transfer and Award of Credit, launched in 2020, with foundation support from Strada Education Network. e series of white papers on the transfer of credit, written by subject matter experts from across the academy, is made possible with support from the Charles Koch Foundation.

S gge ed c a : Kilgore, Wendy, and Kenneth Sharp. 2021. [illegible]. Washington, DC: American Council on Education.

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- **M ed** advising involves a mix of the advising models listed above may occur where transfer students may, depending on major, department, college, or other di erentiating characteristics, experience a di erent advising model from another student, :
  - IF the institutional policy is ed, each student could experience active passive blended, e :
  - A student sees more than one advisor during the transfer process, and the advisors seen do not use the same advising model, then this student receives a mixed advising code.

RESEARCH DESIGN

irteen institutions representing various institutional characteristics of size, type, and control participated in the study (Table 1). Participating institutions provided transcript-level data for 25 transfer students[6] and identi ed their transfer credit evaluation and transfer student advising policies or practices that applied to any lost credits, and also indicated the advising model experienced by each student whose transcript was evaluated for the study.

Table 1: Characteristics of Participating Institutions

Carnegie Classi fcation	Region	Control	Level	2018 19 12-month UG Enrollment

e unit of record for this project is an individual student record. In this study, the independent variables are tied to data from the student's transcript, data from the student information system at the receiving institution, policy and practice categorical variables identi ed using insights from similar research, and new variables based on the research questions above. is research aimed to identify factors (e.g., institutional characteristics, policy or practice) that statistically di erentiate the percentage of credits awarded and applied in transfer from one student to another. e dependent variables are the percentage of earned credits awarded and the percentage of earned credits applied.

6 is sample was limited to transfer students with earned credit from a single previous institution.

Participating institutions' self-reported policy and practice data highlight the complexity and high degree of variation of transfer credit evaluation policies and practices between institutions, and the ways in which transfer credit is awarded and applied at each institution. With over 35 di erent known policies and practices, rather than attempt to analyze each unique variable, policies and practices were grouped into related "clusters." ese clusters provide a more coherent structure to examine the connection between related categories of policies/practices and the degree to which these policies in uence the amount of credits awarded and if awarded, the degree to which the credit is applied to a program of study. e resulting policy clusters are as follows:

Cluster #1: Credit Limits or Excess Credits

- Maximum credit exceeded
- Type of credit exceeded (i.e., lower division, upper division)
- Credit age limit exceeded
- Limit exceeded for applicability to major
- Limit exceeded for applicability to general education
- Limit exceeded for applicability to electives

Cluster #2: Credit Ineligible for Transfer

- Minimum grade not met
- Credit unit conversion
- Accreditation of sending institution
- College preparatory/remedial coursework
- Does not apply to the program of study
- Course equivalency does not exist
- Repeated course credit applied only once

Cluster #3: Includes Pre-college Coursework (advanced placement, international baccalaureate, dual credit)

Cluster #4: Includes Prior Learning Assessment Credit

ANALYSIS AND RESULTS

Descriptive and inferential analyses[7] were completed to examine the relationship between the percentage of earned credits awarded and applied to the student's program of study in transfer and the various institutional policies and practices described in the research questions.

After the data was cleaned, we ended up with a sample of 318 students from the 13 institutions. On average, these students:

- Brought with them 62 credits from their previous institution.
- Seventy- ve percent of these credits were applied to their program of study.
- Just 28 percent of these students had **a** of their earned credits applied to their program of study.
  - In other words, 72 percent "lost" credits in transfer.
  - Excluding those who did not lose any credit, the average number of credits lost in transfer was 24.

Students experienced a mix of changes in institutional type and control (Table 2).

Table 2: Change in Institutional Control and Type

Change in Control	Percent

Change in Type	Percent

Forty-two percent of students had none of their earned credits applied to meet a major requirement in their program of study. Including those with no credit applied to meet various program of study requirements, on average 28 percent of earned credits were applied to meet a major requirement, 52 percent were applied to meet a general education requirement, and 21 percent of earned credits were applied to meet an elective requirement.

Among the students who did not have all credits earned apply to their program of study, 44 percent lost credits in transfer for reasons associated with Policy Cluster 1: credit limits on age, type, or count exceeded. Ninety percent lost credits in transfer for reasons associated with Policy Cluster 2: credit ineligible for transfer. e number of students who lost credits due to reasons associated with policy clusters 3 and 4 was too small to form a basis for analysis.

Regarding advising models, most transfer students (63 percent) experienced a mixed advising model[8] when they rst entered the institution. Of the remaining students, 19 percent experienced an active advising model, 7 percent passive, and 12 percent a blended model.

7 e analyses used were four logistic regressions with odds ratios and one ordinary least squares.

8 A mix of advising the advising models listed above. is means that transfer students may, depending on major, department, college, or other di erentiating characteristics, experience a di erent advising model from a student with other characteristics. **O f** the institutional policy is **ed**, each student could experience active passive blended **e** a student sees more than on advisor during the transfer process and the advisors seen do not use the same advising model then this student receives a mixed advising code.

Statistically Significant Variables

Several independent variables were statistically related to the percentage of earned transfer credits awarded and applied to a student's program of study.

e research questions were addressed using descriptive statistics and a series of statistical models. Four dichotomous dependent variables were examined, and one continuous variable:

1. Awarded credits equal to earned credits vs. not equal
2. Awarded credits equal to 75 percent or more of earned credit vs. <75 percent[9]
3. Applied credits equal to earned credits vs. not equal
4. Applied credits equal to 75 percent or more of earned credits vs. <75 percent
5. Percentage of credits applied as a continuous variable

e dichotomous variables for 1-4 were created from continuous variables to examine di erences between groups of students. Logistic regression was selected for the rst four analyses as it provides a method for examining the relationship between independent variables and a dichotomous dependent variable. By its nature, logistic regression compares the independent variables' relative e ects instead of the direct e ects. For ease in interpretation, the results of the logistic regression were converted from log odds ratios to standard odds ratios.

A student is more likely to have ALL earned credits awarded* in transfer when:

- Automated articulation decisions: 3.1 times more likely, P<.1
- Four-year to four-year transfer: 2.7 times more likely, P<.01 (when compared to two-year to four-year transfer)
- Registration, admissions, or specialized staff conduct transfer evaluation: 2 times more likely, P<.1 (when compared to a shared model of responsibility with academic units)

A student is less likely to have ALL earned credits awarded* in transfer when:

- Transfer from a four-year to a two-year institution—6.7 times less likely, P<.1 (when compared to two-year to four-year transfer)
- Change in credit type: 5.6 times less likely, P<.01
- Change of major: 1.92 times less likely, P<.05

A student is more likely to have ALL earned credits applied to their program of study when:**

- Automated articulation decisions: 19.5 times more likely, P<.05
- Block transfer: 5.6 times more likely, P<.05
- Registration, admissions, or specialized staff conduct transfer evaluation: 4.2 times more likely, P<.01 (when compared to a shared model of responsibility with academic units)

9 If a student was awarded 100 percent of their transfer credit, they were excluded from the 75 percent or more analyses because as no credit loss occurred.

- 10 percent decrease in credits applied if a student changes major at transfer (P<.05)
- 9 percent decrease in credits attributed to policy cluster #1: limits exceeded (P<.05)

LIMITATIONS

- Small sample size (n=318).
- Too few students had PLA or pre-high school graduation earned college credit to be meaningful variables.
- e original institution's major code was unknown for 68 of 318 students, so the change in major proxy was null for these students.
- ere are only two two-year institutions in the sample.
- We were only able to include students with one prior institutional transcript and did not examine other sources of credit (e.g., JST, ACE).
- We were unable to di erentiate who among the registrar's sta , admissions sta , or specialized transcript evaluation sta complete the evaluations as these were grouped as one variable.
- Unable to di erentiate the type of mixed advising models to which students are exposed.

DISCUSSION

e survey results on transfer credit evaluation and transfer student academic advising policy and practice and the one-on-one discussions during the transcript data cleaning process were revealing. From these activities, we concluded that transfer credit policies and practices are non-homogeneous and not always applied uniformly within the same institution. Practice and policy may vary within an institution depending on a student's discipline, the number of credits at transfer (i.e., few enough to be considered a "new" student), and academic advisors' personal preferences, among other reasons. Students may also experience multiple advising types at the same institution during the rst engagements with advising at the institution. Sta across the same institution are not always sure of the institution's transfer student advising policies, practices, and models.

Our study showed, in general, quite high percentages of credit awarded and applied, which cuts against some of the prevailing narratives suggesting that students lose signi cant amounts of credit in transfer. In addition, to the best of our understanding we have identi ed some statistically signi cant independent variables not previously examined in similar research. 1.364 Td[(the one-on-o-u v)6 1 (aliables nr)10 (e :]TJ01.36.-1.773 Td(•)Tj1.227 0 Td[(Cange if mijor pn tra