

REIMAGINING TRANSFER FOR STUDENT SUCCESS

The National Task Force on the Transfer and
Award of Credit

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ACE would like to thank the many people who contributed to this important work and the production of this final report, which we hope will lay the foundation for improved policies in credit transfer and increase opportunities for students to succeed in the twenty-first century.

Our Task Force members were so generous with their time and dedication to this project during an historically challenging year. Co-chairs Anne Holton and Timothy White played an invaluable role in guiding all stages of the Task Force's work. The ex-officio and advisory board members provided key support and consultation. We also would like to thank our white paper authors, especially Debra Bragg, Gloria Crisp, Jon Fink, Wendy Kilgore, and Kenneth Sharp for their guidance and expertise throughout the process.

Finally, our thanks to Steven Taylor of ED2WORK and ACE Government Relations staff members Terry Hartle, Anne Meehan, and Karina Pineda for organizing the Task Force's deliberations and shepherding the report to completion. A number of other ACE staff members were also instrumental to this work over the past year, including Ally Hammond, Audrey Hamilton, Dasiril Richards, Jon Riskind, Laurie Arnston, and Sarah Zogby.

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LETTER FROM THE TASK FORCE

Dear Colleagues,

The 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 effort 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-officio Task Force members representing several higher education associations, regional accreditors, and experts and practitioners involved with transfer credit at their institutions. The report that follows is the culmination of our work; we ask you to give it consideration to help you identify modifications 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 first time in fall 2011 earned credits from two or more institutions within six years.

We know it can be difficult for students to successfully transfer credit between institutions, and it can be even more difficult for students to receive credit for prior learning acquired outside of an institution of higher education. While some institutions do a good job ensuring that the transfer process does not unnecessarily cost students time and money and recognizes the learning they have already acquired, many do not. The Task Force began its work acknowledging that the higher education community must do better to ensure students receive academic credit for college-level learning, regardless of where it was acquired. This problem is a matter of growing concern to college and university presidents and the entire higher education community, as well as policymakers at the state and federal level.

The need for higher education leaders to reform transfer policies took on a new urgency in 2020. No one could have anticipated that the worst pandemic in a century would place unprecedented stresses on students and their families and the institutions that serve them—and raise awareness of this particular issue. The global health crisis and the resulting economic fallout have widened equity gaps and threaten two decades' worth of gains in access to higher education for first-generation, low-income students, and students of color. In addition, changes in enrollment patterns exacerbated by the pandemic may result in more students moving between multiple higher education institutions, as well as between higher education and the workforce. While improving transfer and award of credit practices is insufficient on its own to address the unprecedented challenges posed by the COVID-19 pandemic, it is a necessary and critical component to supporting student success going forward.

The increased focus on racial injustice and widening socioeconomic gaps also demand that higher education reduce the barriers for underrepresented students to transfer, persist, and complete their degree. Low-income students and students of color are more likely to rely on transfer to decrease cost and time to degree, but this choice requires practices and policies for the award of credit that are easier to navigate.

For higher education to effectively address equity gaps and be more effective 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 effort 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. The impact for students will be to make college more affordable, reduce the time it takes to earn a degree, and increase overall student success.

The result of our work is a set of six concrete recommendations that will enable higher education leaders to carry out a more seamless and efficient transfer and award of credit on their campuses. For each recommendation, the report highlights examples of the strategies and policies other institutions have adopted in their efforts to better serve students. We hope these will provide a useful road map for other institutions looking to improve their policies for the betterment of their students.

We urge institutional leaders to carefully consider each recommendation to determine whether modifications to their existing practices would better support student success. College and university leaders are encouraged to adapt recommendations as necessary to best meet their students' needs and in a way that aligns with unique institutional missions and maintains academic quality and integrity.

Taking a hard look at how institutions can best serve the sizable population of students who move in and out of higher education in a nonlinear fashion and shedding unnecessary barriers to their success can help strengthen public trust in higher education and reaffirm its value as an engine of economic and social mobility. But most importantly, it is simply the right thing to do.

We note our appreciation for the generous grant from Strada Education Network that helped make this work possible, as well as for the additional support from the Charles Koch Foundation that funded a series of white papers examining key issues associated with transfer and award of credit, a national transfer student survey, and a cross-institutional transcript study, which informed the Task Force's work on topics such as student support services and pathways, credit transfer technology, and credit for prior learning.

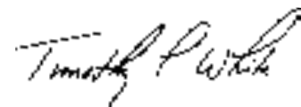
We hope that our fellow presidents and chancellors across the country will consider the recommendations in the spirit they are given: from a cross-section of fellow leaders and with the best interests of students and the diverse needs of institutions in mind.



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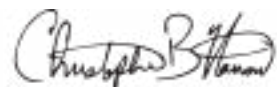
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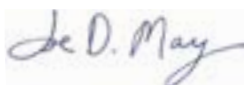
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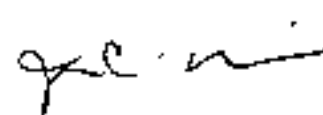
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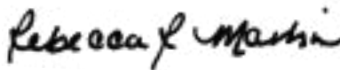
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EXECUTIVE SUMMARY

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 efforts to serve students.

Research suggests that transfer student equity gaps have failed to budge over time, raising questions about the effectiveness of existing transfer policies and practices. The 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. Inefficient transfer of credit policies and practices only exacerbate inequities that already exist and add to the financial 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 reaffirm 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. The Task Force focused its efforts on the central and perhaps most challenging part of this effort—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 specific degree requirements.

The 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. This 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 necessary changes to your transcript evaluation process to make the award and application of prior

learning for credit more transparent and consistent. This 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 efficiency 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-efficient 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. This 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.

THE WORK OF ACE'S NATIONAL TASK FORCE

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 through service in the military or other employment opportunities, as they navigate their path to a degree. Of the 2.8 million first-time undergraduates enrolled in fall 2011, 38 percent took classes from two or more institutions at least once within six years.¹ Of the 2.9 million undergraduate students who enrolled in fall 2019, the Task Force projects that roughly 1.1 million of them will transfer to another institution at some point over the next six years.²

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 efforts to serve students. As challenging as these issues are, they are ones that higher education can and must solve. Urgent action is needed to address these challenges in order to decrease the cost and time to a degree for students, increase student success, and narrow the completion gap that exists for low-income students and students of color.

It is essential to acknowledge that institutional autonomy and academic freedom have long been and will continue to be the bedrock principles of American higher education. Ultimately, colleges and universities must have the final say about the content, scope, and rigor of the learning that must be acquired and demonstrated to have earned a degree from their institution. But at the same time, higher education leaders must recognize the serious barriers that rigid and inflexible transfer of credit policies create for today's learners and the inherent equity issues they raise. Different institutions with different student populations and missions will strike this balance in different ways. That is why improvements to transfer of credit policies and practices are best achieved when they are institutionally led and institutionally driven. Individual colleges and universities, and college and university systems, are far better positioned to know the specific changes needed to support their unique student populations consistent with their missions, while maintaining the academic quality and integrity of their degrees.

Now more than ever, it is imperative that colleges and universities identify the inefficiencies in their systems and chart a course for corrective action to maximize the transfer credit and credit for prior learning that is awarded and applied to the student's chosen degree pathway. For purposes of this report, "credit for prior learning" is defined as learning acquired outside of a formal higher education classroom that is assessed or validated as equivalent to the learning acquired in a formal college setting. It includes learning acquired in the military or through employer training, learning validated by direct assessments, such as CLEP or AP, challenge exams, portfolio assessments, learning acquired through dual enrollment in high school and college, and credit for demonstrating specific competencies.

1 The 38 percent transfer rate includes summer-swirlers (students from four-year institutions who enrolled in other institutions during the summer term and subsequently returned to their original starting institution in the fall). The adjusted transfer rate when all summer-swirlers are excluded is 33 percent.

2 Projection is based on latest transfer rates from Shapiro, D., et al., "Transfer and Mobility: A National View of Student Movement in Postsecondary Institutions, Fall 2011 Cohort," National Student Clearinghouse, July 2018, Retrieved at <https://nscresearchcenter.org/wp-content/uploads/Signature-Report-15.pdf>, and estimated fall 2020 enrollment data from U.S. Department of Education, National Center for Education Statistics, "Digest of Education Statistics," December 2019, Retrieved at https://nces.ed.gov/programs/digest/d19/tables/dt19_303.10.asp?current=yes.

With such shifting realities undergirding the transfer dialogue, specifically around the inefficiencies and transfer credit processes, policies, and practices, ACE convened a National Task Force on the Transfer and Award of Credit. The culmination of the Task Force is a call to action for all of higher education to adopt policies and practices that maximize the award of transfer credit and credit for prior learning applied to a student's chosen degree pathway and that are designed first and foremost to serve students.

A Deliberate Focus on Transfer and Award of Credit

There have been numerous efforts across higher education to explore new and helpful ways to improve the transfer student experience and outcomes, each offering ideas and strategies for institutions to support students through the transfer lifecycle. The ACE Task Force focused its efforts on one of the most challenging parts of this effort—namely, the need to improve the award of credit for college-level learning acquired at another institution or outside of the academy, and to maximize the application of this credit to satisfy specific degree requirements.

The Task Force was charged with crafting a set of recommendations that colleges and universities could adopt to improve the transfer and award of credit, with the ultimate goal of increasing the amount of credit applied to a student's degree requirements. The recommendations are meant to help institutions adopt policies and practices that will reduce the time it takes to earn a postsecondary degree, make college more affordable by recognizing and awarding credit for prior learning that has already been acquired, promote equitable policies and practices, and advance student success and degree completion.

Leadership from Across the Sector

Formed and convened in March 2020, the Task Force consisted of 28 presidents and chancellors of two- and four-year public and private colleges and universities throughout the United States. Further, nine ex-officio members, including executives from six higher education organizations, and several scholars and practitioners deeply engaged in transfer credit at their institutions, bolstered the work of the Task Force.

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The Task Force's inaugural meeting was held in person at the beginning of March 2020, just days before the COVID-19 shutdown, and was followed by five virtual meetings over the remainder of the year, and a final virtual meeting in February 2021. The meetings created a space for dialogue around transfer credit realities, history, pain points, and future direction. Members engaged with leading experts on the identified challenges around the transfer and awarding of credit to coalesce on recommendations for the sector to reduce friction in the transfer and award of credit. The Task Force members believe that the resulting recommendations, if implemented by colleges and universities, will help to promote equity, advance student success, and decrease the out-of-pocket costs and time to degree for students.

Research Informing the Task Force Dialogue

As an initial step in framing the dialogue, ACE commissioned a series of white papers on critical topics related to the transfer and award of credit. ACE asked leading experts in the field to conduct an environmental scan of the existing literature on five transfer-related issues and translate this research into readily accessible background papers on topics central to the transfer of credit conversation. The initial five white papers included a comprehensive portrait of the transfer landscape, the transfer student experience, articulation agreements, credit for prior learning, and technology to facilitate credit transfer.

The Task Force also reviewed publicly available national data sets and reports on transfer students and transfer of credit, including the U.S. Department of Education's Beginning Postsecondary Students Longitudinal Study and Baccalaureate and Beyond Longitudinal Study, a report from the U.S. Government Accountability Office (GAO)³ analyzing those data sets, and additional reports from the National Student Clearinghouse, Community College Research Center, and American Association of Collegiate Registrars and Admissions Officers (AACRAO).⁴

The research reviewed, while instructive, was limited in its ability to provide definitive answers to key questions such as the amount of credit lost in transfer, the factors or institutional policies that make this credit loss more or less likely, the degree to which credit awarded is applied to satisfy specific degree requirements or accumulates as excess credit on a transcript, and the amount of credit awarded for prior learning acquired outside of a higher education institution. The bottom line is while we don't know precisely how much credit is lost, or the reasons why it is lost, we do know that credit loss is occurring to a much larger extent than it should.

3 The 2017 GAO report is frequently cited for the proposition that "students lose, on average, 43 percent of credits in transfer," but there are several caveats worth noting. First, the GAO report is based on 2004–09 BPS data, which is now outdated and may not accurately reflect current trends. Second, the percent of credits lost varies considerably based on the direction of transfer, so the commonly cited "43 percent" can be misleading. For example, students transferring from a two-year public to a four-year public lose approximately 22 percent, as compared to students transferring from a for-profit four-year to a public two-year which lose 93 percent. The third considerable caveat is that the GAO report did not control for certain factors, such as whether the transferring student had informed the receiving institution of having any credits to transfer, whether the student may have changed their program of study and how that impacts the credits that will transfer for the new major, if they met the minimum grade requirement to transfer the credit, if there is a course equivalency at the receiving institution, or how credits were applied toward students' program of study. Despite these and other caveats, the GAO report is generally consistent with other research and what many in higher education already know—inefficient transfer and award of credit policies and practices are resulting in lost credit for too many students, and increasing their cost and time to degree. The report is available at <https://www.gao.gov/products/GAO-17-574>.

4 See for example, Kilgore, Wendy A., Emma Crabtree, and Ken Sharp. 2019. "Excess Credit Accumulation: An Examination of Contributing Factors for First-Time Bachelor's Degree Earners." *Strategic Enrollment Management Quarterly*, vol. 6. no. 4 (January): 41–56, a study of roughly 1,000 transfer students at a large, selective public university in the Southwest led researchers to identify several reasons transfer students cited as the rationale for why their credits did not transfer.

After reviewing the initial papers and available national data sets and reports, the Task Force commissioned two additional papers to inform their deliberations further. The first was a national study on transfer student perceptions conducted by ACE and AACRAO to better understand students' experiences transferring credit. The second was a pilot transcript-level study examining transcripts for more than 300 transfer students across 13 Task Force member institutions. This 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.

The 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

Focusing on the landscape of student transfer and award of academic credit, this paper provides an awareness and understanding of policies and practices that support student transfer and award of academic credit. This includes an analysis of relevant data from the National Student Clearinghouse and other federal data sets to understand the transfer student population and begin to surface gaps in our understanding of the transfer and award of credit. Many promising transfer reforms and practices are so new that relatively limited research exists to document implementation and impact details.

- Aligning curriculum and course equivalencies to learning outcomes is useful for improving transfer policies and practices.
- Deliberate and intentional relationships between higher education institutions that include and go well beyond state-level rules on transfer and articulation agreements help improve transfer student outcomes.
- Engaging faculty in decision-making and action about courses and the conferral of credit is important to improve the transfer process.
- Closing racial and socio-economic equity gaps demands increased use of disaggregated data and a deep understanding of social, cultural, and economic factors to identify where inequities exist and the different ways in which student sub-groups experience different transfer pathways.

DESIGNING A TRANSFER STUDENT EXPERIENCE TO SUPPORT PERSISTENCE AND COMPLETION

John Fink, Community College Research Center, Teachers College, Columbia University

Taking an expansive view of major structural and institutional barriers along the college student transfer pathway, this paper identifies best practices regarding student supports and pathways facilitating transfer students' success toward earning a college degree. 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. 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.

- Institutional barriers to successful transfer include unclear transfer pathways, insufficient transfer advising and support, lack of exploration and concentration into fields of study pre-transfer, and unreceptive policies, practices, and campus cultures post-transfer.
- It is the responsibility of both sending and receiving institutions to ensure that clear transfer pathways exist, and students are provided adequate guidance and support to explore, enter, and progress along those paths.
- Institutions should intentionally organize student intake, educational planning and advising, and teaching and learning to support transfer students, all of which focus on students' end goals.

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 to learners and colleges and universities. This paper focuses on the landscape of credit for prior learning pertaining to the transfer, articulation, and acceptance of academic credit, including how credit for prior learning enables or facilitates the transfer and award of academic credit. The recognition of students' prior learning can be a critical lever to reduce cost and decrease time to completion. Research has enumerated many benefits to credit for prior learning, and these benefits extend to colleges and universities and students. There are, however, some structural barriers that inhibit students' successful pursuit of credit for prior learning and some barriers embedded with how those within academia define quality of instruction.

- Acceptance of credit for prior learning often varies widely by colleges and even within departments at the same college.
- Confusing language and disjointed operations around credit acceptance can make it difficult for learners to navigate.
- Most institutions report having policies that limit the credits which can be earned through prior learning assessment.

- Few institutions have access to student-level demographic data tied to credit awarded through prior learning assessment, so it is difficult to quantify whether inequity issues exist at most institutions.
- About a third of institutions offering prior learning assessment noted that their institution has policies and/or practices which make it more difficult to have their non-classroom learning recognized and that minority, economically disadvantaged, and/ or Pell recipients are more likely to be impacted than other students.

TECHNOLOGY AS AN ENABLER OF CREDIT TRANSFER

Wendy Kilgore, AACRAO

The technology ecosystem related to the transfer of credit is complex and multi-dimensional. There are a number of solutions that can work independently or in conjunction with other technologies to perform one or more of the functions related to transfer of credit. The full implementation of the available technology solutions can improve the transfer of credit process from prospective students to students who leave the institution without graduating and returning to a previous institution. However, none of the solutions are a panacea to the difficulties some students run into when trying to figure out what credits will transfer and apply to their degree. Supportive technologies that enable or facilitate the transfer and award of academic credit need to be implemented in conjunction with sound, transfer-friendly policies and practices.

- A technology solution, or solutions, that could support electronic data exchange (EDX) that requires little to no programming or complicated configuration at the institution level would greatly increase the likelihood that high schools and colleges would use it, if the cost were reasonable.
- The most challenging aspect of EDX implementation is configuring the student information system receiving transcript data to accept disparate forms of data.
- Blockchain technology is also promising in the way it could remove the need for an intermediary (e.g., higher education institution or transcript vendor) in the electronic records sharing or disclosure process and enable students to have sovereignty over their record.
- The effective and complete implementation of available transfer credit evaluation related technology in conjunction with student-centric policies and practice has the potential to increase accuracy, consistency, and timeliness in the transfer of credit process.

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

Wendy Kilgore, AACRAO; Steven C. Taylor, ED2WORK; Karina Pineda, ACE

The national study on transfer student perceptions, conducted by ACE and AACRAO, sought to understand how currently enrolled transfer students perceived their experience in transferring academic credit to higher education institutions. The study shed 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.

- 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.

The exploratory transcript-level study included 318 transfer students across 13 Task Force member institutions. It aimed to surface how academic advising and transfer of credit policies and practices impacted how earned credit was awarded and applied to a student's program of study. The study was based on individual student transcript evaluation data and transfer credit and advising policies and practices and added to our understanding of the variables related to the percentage of earned transfer credits subsequently awarded and applied to a student's program of study at their new institution. The outcomes are meant to help colleges and universities adopt policies and practices that help track and measure how their institutional practices and policies impact students' successful transfer of credit.

- Change of major at transfer, institutional transcript credit evaluation policies and practices, and transfer student advising models were shown to impact the number of earned credit awarded and applied at transfer.
- Transfer credit evaluation policies and practices between and within institutions are complex, even for institutional staff to navigate.
- Data gaps still exist, but we know enough to see that higher education needs to do better.

WHY IMPROVING TRANSFER AND AWARD OF CREDIT MATTERS

A Matter of Equity

Research suggests that transfer student equity gaps have failed to budge over time, raising questions about the effectiveness of existing transfer policies and practices. Whereas low-income and students of color are more likely to start at a local community college, perceiving this option as more affordable and accessible, they are also far less likely to transfer to a four-year institution and earn a bachelor's degree.^{5,6} In fact, gaps up to 20 to 30 percent exist in transfer rates for lower-income students compared to higher-income students, with lower-income students having lower bachelor's completion rates.⁷ In addition, complicated and confusing transfer of credit systems makes navigating transfer more complicated for these students who are also less able to absorb the increased college-going cost when classes do not transfer.

The increased focus on racial injustice and widening socioeconomic gaps demands that higher education reduce the barriers for low-income and students of color to enable them to transfer, persist, and complete their degree. Improvements in the experiences and outcomes of low-income and students of color will not happen without deliberate action. Closing equity gaps requires increased use of disaggregated data to identify inequities for low-income and students of color and reforming policies and practices to drive solutions.

Improving persistence and degree completion, especially for low-income and students of color, requires having transfer credit practices and policies that work for them. For lower-income students dependent on financial aid, the failure to award credit for their prior learning may force students to retake courses, which inefficiently depletes already limited financial aid resources. This exacerbates inequities among our neediest students.

Addressing inefficiencies and disparities around the transfer and award of credit has the potential to mitigate entrenched systems of privilege for students with better access to resources to navigate the complexities of transferring credit. Making the transfer and award of credit for prior learning more seamless can help level the playing field for low-income and students of color by decreasing their cost and time to earn a degree.

Students Are Increasingly Mobile

Today's learners more frequently transition between higher education institutions and often pursue non-linear pathways on the road to completing a post-secondary degree. These learners bring with them transfer credit and credit for prior learning acquired outside of higher education. Also, with the substantial number of working adults returning to higher education, capturing competencies acquired and demonstrated through professional training and development, military or work experience will be increasingly important.

5 Shapiro, D., et al., "Transfer and Mobility: A National View of Student Movement in Postsecondary Institutions, Fall 2011 Cohort", National Student Clearinghouse, July 2018, Retrieved at <https://nscresearchcenter.org/wp-content/uploads/Signature-Report-15.pdf>.

6 National Student Clearinghouse, "Completing College: 2019 National Report," March 2020, Retrieved at https://nscresearchcenter.org/wp-content/uploads/Completions_Report_2019.pdf,

7 Debra D. Bragg, Theresa (Ling) Yeh, Lia Wetzstein, and Elizabeth Apple Meza (eds.), "Transfer Partnerships for Improved Equity and Outcomes," *New Directions for Community Colleges*, no. 192, Winter 2020, Hoboken, NJ: John Wiley & Sons Inc.

The 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 Then, the pandemic brought the sudden challenges of shifting to remote learning, uncertainty about the future, and resulted in reduced or lost wages and perilous financial 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 The 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 significant drop in “continuing students” (-7.2 percent)—*i.e.*, 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 financial 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 financial difficulties due to the pandemic, and over 30 percent reported that their mental health negatively affected their academic performance.¹³ A study by The Hope Center showed that nearly three in five students experienced food and/or housing insecurity, with approximately 44 percent of students at two-year institutions and 38 percent at four-year institutions

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- 8 See, e.g., Rebecca Klein-Collins, Jason Taylor, Carianne Bishop, Peace Bransberger, Patrick Lane, and Sarah Leibrandt. “The 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 Clearinghouse, May 26, 2020, Retrieved at www.studentclearinghouse.org/blog/pace-of-college-enrollment-decline-slowed-nationwide-prior-to-covid-19-impact.
 - 10 National Student Clearinghouse Research Center, “COVID-19: Stay Informed with the Latest Enrollment Information,” November 12, 2020, Retrieved at <https://nscresearchcenter.org/stay-informed>.
 - 11 This estimate is based on applying NSC’s reported 9.5 percent decrease to the U.S. Department of Education’s fall 2019 community college estimated enrollment, National Center for Education Statistics, “Digest of Education Statistics,” December 2019, Retrieved at https://nces.ed.gov/programs/digest/d19/tables/dt19_303.30.asp.
 - 12 National Student Clearinghouse Research Center, “COVID-19 Transfer, Mobility, and Progress, Fall 2020 Final Report,” December 21, 2020, Retrieved at <https://nscresearchcenter.org/wp-content/uploads/Covid19-TransferMobilityProgress-FinalFall2020.pdf>.
 - 13 The Healthy Minds Network and American College Health Association, “The Impact of COVID-19 on College Student Well-Being,” July 2020, Retrieved at https://healthymindsnetwork.org/wp-content/uploads/2020/07/Healthy_Minds_NCHA_COVID_Survey_Report_FINAL.pdf.

affected 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 offer, 31 percent suffered a decrease in wages, and 37 percent experienced a cut to their weekly work hours.¹⁵ ACE's fall 2020 Pulse Point Survey found that, across sectors, 80 percent of college and university presidents reported increasing student financial aid availability.¹⁶ The current financial challenges experienced by so many students make it critical for institutions to ensure that transfer and award of credit policies work for students.

Improving transfer of credit policies and practices is critical to mitigating disruptions brought by COVID-19. In response to the pandemic, many institutions made accommodations such as pass-fail grades, flexible withdrawal policies, and other responsive policies outlined in the April 2020 Statement of Principles on Acceptance of Credit during the pandemic by ACE and five other higher education associations. As time passes, institutions must not forget the very real hardships many students are experiencing during this pandemic—from financial struggles and food insecurity, to illness and deaths of family members—that warrant these accommodations. Moving forward, institutions need to recognize that future transfer students may bring with them courses on their transcripts that were impacted by COVID-19 accommodations; these students should not be at a disadvantage in the transfer admission or credit award process as a result.

Strengthening Public Trust in Higher Education

Too often, transfer and award of credit policies are written with institutional convenience as the priority. Students face confusing language and disconnected policies and practices around credit acceptance, which makes it difficult for them to receive credit for their prior learning. Moreover, state transfer and articulation policies intended to help students can result in bureaucracies at the institutional level that may exacerbate inequities for the students these systems aim to serve.¹⁷ The failure to consider and appropriately award credit for learning that has already occurred forces students to retake courses, and this raises fundamental fairness concerns. This failure undermines the legitimacy and public trust in the value of our higher education system as a driver of economic and social mobility and increased social justice and equity in our society.

Taking a hard look at how institutions can best serve the sizable population of students who move in and out of higher education in a nonlinear fashion and shedding unnecessary barriers to their success can help strengthen public trust in higher education and reaffirm its value. Improving transfer of credit policies and practices is a tangible way to demonstrate an institution's commitment to student success. But most importantly, it is simply the right thing to do.

14 Goldrick-Rab, Sara, Vanessa Coca, Gregory Kienzl, Carrie R. Welton, Sonja Dahl, Sarah Magnelia, “#RealCollege During the Pandemic,” The Hope Center, Retrieved from <https://hope4college.com/realcollege-during-the-pandemic/>. The data come from an electronic survey administered mid-April to mid-May 2020 and completed by 38,602 students attending 54 colleges and universities in 26 states. This includes 39 two-year colleges and 15 four-year colleges and universities.

15 Aucejo, E., et al., “The Impact of COVID-19 on Student Experiences and Expectations: Evidence From a Survey”, National Bureau of Economic Research, June 2020, Retrieved at https://www.nber.org/system/files/working_papers/w27392/w27392.pdf.

16 Turk, J., and Ramos A. M. “College and University Presidents Respond to COVID-19: 2020 Fall Term Survey”, October 2020, Retrieved at <https://www.acenet.edu/Research-Insights/Pages/Senior-Leaders/College-and-University-Presidents-Respond-to-COVID-19-2020-Fall-Term.aspx>.

17 Bragg, D. “How Transfer Partnerships Support More Equitable Transfer Attainment” (pp, 11–20), *New Directions for Community Colleges*, no. 192, Winter 2020. Hoboken, NJ: John Wiley & Sons. Inc.

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, insufficient automation and use of technology, limited transparency to students about credit award decisions, unclear transfer pathways, insufficient transfer advising and support, and insufficient coordination and articulation between frequent transfer partners.

The result of these barriers is that students have difficulty 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 to solve these issues, not a mere awareness of the issues that exist.

How an institution implements one or more of the recommendations in this report will depend on its mission and student population and the role it serves in its students' transfer pathways, e.g., primarily as a sending or receiving institution. A community college with a primary focus on preparing students to transfer to a local university to complete upper-division coursework is likely to implement the recommendations differently than a four-year private institution focused on serving adult learners who have amassed prior learning from multiple sources. Higher education leaders are encouraged to modify them as necessary to best meet their students' needs and align with their unique institutional missions.

A commitment to supporting students who transfer from one institution to another or acquire college-level learning outside of higher education requires leaders and their institutions to take steps toward implementing some or all of the recommendations in this report, if your institution has not already undertaken them.

RECOMMENDATION 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, including students transferring directly from another college or university, students returning to higher education after previously stopping out, and students entering college with prior validated learning in the workplace, military, or other non-classroom settings. Changing the institution's culture to be more transfer-friendly includes engaging faculty and staff as student success champions and investing in resources and supports that transfer students need to be successful. Creating a climate that destigmatizes the transfer pathway is necessary to develop a transfer-friendly culture at your institution.

Prioritizing transfer credit and credit for prior learning 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. For example, creating a dedicated office of transfer services that supports a community of transfer students, offers transfer student resources and specialized transfer student advising, and provides orientation

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

The 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 efficient pre-transfer experience. It includes ongoing efforts to understand whether transfer students perceive the climate at your institution as supporting or hindering their continued success.

The National Institute for the Study of Transfer Students (NISTS), located at the **University of North Georgia**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. The coaches are available via phone, email, or virtual one-on-one appointments. Financial aid counselors offer individual guidance to students planning to transfer or who have already transferred to efficiently plan for financial 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.

Montana State University hosts transfer-student orientation at the beginning of every semester, offering sessions and resources on transfer-specific issues, support services, and policies to augment standard onboarding programming. These events bring the university employees most directly involved with transfer credit in direct contact with new transfer students and provide the foundation for community building. Each session is followed up with surveys to students used to enhance future orientation activities.

Western Michigan University (WMU) created a Transfer of Credit Committee (TCC) and a Transfer Student Services (TSS) unit to demonstrate WMU’s commitment to transfer student success. As a Faculty Senate subcommittee, the TCC is charged with reviewing, researching, and recommending best practices for transfer credit evaluation and acceptance. The committee has recommended changes to the departmental credit approval process to make it more student-friendly, standardized the process for articulation agreements, and proposed a policy change to make it easier for transfer students to earn institutional honors. The TSS unit created an orientation program for transfer students and developed online resources and workshops to ensure a smooth transition. The unit also serves as a primary point of contact for transfer students and provides regular communication throughout their first semester. TCC and TSS have effectively worked with staff and faculty from across campus to advocate for transfer students and minimize barriers to their success.

18 Task Force member institutions are noted in bold.

In the summer of 2020, **California Lutheran University** began construction for a newly established Transfer Center, which will house various resources to serve transfer students at the institution. This space will open its doors in January 2021 and be a focal point for the transfer student experience. Additionally, transfer-specific 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. This competitive scholarship can range up to full-tuition coverage and mirrors a program that has been in place for first-year students for some time.

Some schools have made recognition of prior learning a cornerstone of supporting student mobility by expanding prior learning assessment (PLA) and ensuring students with prior learning receive appropriate credit toward their degree program. These schools recognize the importance of not awarding PLA credits that do not help a student meet specific degree requirements or lead a student to earn excess credits beyond what is needed to earn the degree. The **California Community College System** launched a Credit for Prior Learning initiative to build capacity in the system and expand the recognition of prior learning for transfer credit across its colleges as a way to help students get credit for what they already know and can do, saving them time and money to earn a degree. At **SUNY Empire State College**, more than half of the students who complete an associate or a bachelor's degree receive PLA credits. Empire State recognizes that students may have college-level learning from multiple sources but only applies those credits that best meet the degree requirements and awards advanced standing credit in the context of a degree program, where appropriate. An industry-standard process developed by ACE enables these integrated PLA efforts to evaluate learning for college credit equivalency. The process pairs structured frameworks to review the content, scope, rigor, breadth, and depth of non-institutional learning, leveraging the disciplinary expertise of college faculty.

Because of their ability to coordinate and facilitate standard policies and practices across multiple campuses, systems are uniquely positioned to lead—as many are already doing—in developing transfer initiatives that achieve equitable student mobility, support students' success across a system's campuses. The **National Association of System Heads** developed its Commitment to Transfer initiative to engage member systems in making transfer student success an integral component of their work.

RECOMMENDATION 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 your institution's transcript evaluation process and implement necessary changes to make the award and application of prior learning for credit toward the student's chosen major or degree program more transparent and consistent.

2A: Review your institution's policies and practices regarding the evaluation, award, and application of transfer credit and credit for prior learning to identify gaps and address any inconsistencies.

Taking stock of the existing policies and practices around the transfer of credit will help identify if and to what extent these policies map to supportive practices or procedural norms for working with and evaluating credit for transfer students and students entering with prior learning acquired outside of higher education. The

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 influence 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 staff align with all of the stated policies?

Capella University 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. This team can appropriately apply transfer credits to meet students' specific 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.

2B: Remove unnecessary obstacles that prevent students from accessing their transcript to continue their education at another institution.

Withholding a student transcript causes serious harm to any student attempting to transfer to another institution. Institutional policies for withholding transcripts should reflect a proportionate response, and transcripts should only be withheld for the most severe situations and as a last resort, not in the ordinary course of business. Institutions are encouraged to consider adopting policies that make clear transcripts will not be withheld for outstanding balances of less than a specified amount.

The **American Association of Collegiate Registrars and Admissions Officers (AACRAO)**, in its 2020 white paper "Stranded Credits: Another Perspective on the Lost Credits Story," put forth recommendations specifically pertaining to withholding student's transcripts.¹⁹ AACRAO recommends reconsidering the practice of withholding a transcript for an outstanding balance of \$25 or less. Institutions might establish an internal fund to eliminate these small debts or develop debt elimination and debt forgiveness programs if none exist. In cases where a transcript is withheld, only withhold the academic transcript related to the academic work with the debt (e.g., undergraduate or graduate). Regardless of the steps an institution takes to remove unnecessary barriers, colleges and universities should make their policies on transcript holds clear for students to access and understand and provide a formal avenue for students to appeal a transcript hold.

19 Kilgore, W. "Stranded Credits: Another Perspective on the Lost Credits Story", AACRAO, August 2020, Retrieved from <https://www.aacrao.org/docs/default-source/research-docs/aacrao-stranded-credits-report-2020.pdf>.

2C: Evaluate how your institution's transfer of credit policies and practices align with guidance from accreditors, state and federal agencies, and other higher education bodies.

Colleges and universities should review the AACRAO-CHEA-ACE Joint Statement on the Transfer and Award of Credit (updated 2017)²⁰ and the Statement of Principles on Acceptance of Credit by ACE and five other higher education associations (April 2020)²¹ to ensure consistency with those recommendations. These recommendations can facilitate conversations among the academic and student services leadership and staff on campus to build support for developing a culture and supportive policies and practices that balance the need for institutional autonomy with the need to support transfer students of all kinds. The regional accreditors have endorsed both of these statements and several of the regional accreditors are reviewing their standards and policies to ensure they are appropriately supportive of transfer of credit.

It is also important to review your accreditor's standards regarding transfer of credit policies to ensure you are aligned with them. Work with your accreditors to ensure that transfer and award of credit policies are adequately considered during the course of an accreditation review (as aligned with institutional mission). Accreditors should also consider how they can adjust their standards to encourage institutions to support the award of credit for prior learning. The **New England Commission of Higher Education (NECHE)**, for example, revised its standards to add a subheading for "Transfer Credit" to its standard on "The Academic Program." Grouping the existing statements with a subheading gives greater prominence to transfer credit so that it will get more attention in the self-study and by the visiting team. NECHE also added a statement that, "the institution does not erect barriers to the acceptance of transfer credit that are unnecessary to protect its academic quality and integrity," to the academic program standards section. Transfer of credit issues are included as part of NECHE workshops for institutions and visiting teams.

By serving as commissioners on regional accrediting commissions, presidents and chancellors have an opportunity to shape accreditation standards to ensure that institutions are prioritizing the transfer and award of credit for prior learning in an effort to support student success and in alignment with institutional mission.

2D: Conduct your own transcript study to examine the impact of your policies on how incoming transfer credit and credit for prior learning is evaluated, awarded, and applied at your institution.

A self-study of transfer students' transcripts to determine how incoming credits were applied at transfer identifies the extent to which credit evaluation and transfer student advising policies and practices impact if and how credit is applied toward a student's program of study, including if and why credit loss occurs. Mapping specific policies and practices to explain credit loss on a course-by-course level at scale helps identify the strengths and weaknesses of your credit transfer policies and practices and the advising models that support or hinder a student's ability to transfer credit successfully. The ACE/AACRAO Transcript Study provides a model for how a single institution or consortium of institutions might carry out a similar study.

Building from the pilot transcript study undertaken by ACE's Task Force, an effort is now underway to replicate the study in northeast Texas. **Dallas College**, the region's largest community college district, is working with four of its primary transfer receiving universities in the region to examine the transcripts of

20 Accessible at <https://www.acenet.edu/Documents/Joint-Statement-on-the-Transfer-and-Award-of-Credit.pdf>.

21 Accessible at <https://www.acenet.edu/Documents/Statement-Acceptance-of-Credit-Principles-041620.pdf>.

students transferring among these five institutions. The institutions include Dallas College, Texas Woman's University, Texas A&M University at Commerce, University of North Texas at Dallas, and **University of Texas at Arlington**.

2E: Survey your students to better understand their experiences having their prior learning evaluated for credit at your institution.

Surveying students bringing transfer credit or credit for prior learning to your institutions will help identify the extent to which your policies align with your students' expectations about their credits that were awarded in transfer. Ideally, this survey should include the same students whose transcripts are evaluated as part of a transcript self-study. This comparison between a student's perceived experience transferring credit with the reality of how credit was awarded and applied is an important aspect that is often missing in efforts to understand if and why credit loss occurs. Outcomes from a student survey and accompanying transcript study could help identify certain credit evaluation or transfer student advising policies or practices that more often lead to credit loss or the inconsistent awarding and application of transfer credit. The ACE/AACRAO National Student Perceptions Survey provides a model for conducting this type of student survey.

RECOMMENDATION 3: Leverage innovative technologies to facilitate the review of credit, to provide greater consistency across credit award determinations, and to increase the efficiency and timeliness of the process.

Technological innovations can facilitate the transfer and credit award process for students and institutions 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 information to appeal decisions about a denial of credit or how it was applied. Utilizing skills-denominated achievements, aligned to published frameworks, rich in metadata, and published in an open standard(s) format promises to remove subjectivity and provide for more automated articulation of credit.

The first step in automating the articulation and award of credit is to engage faculty early in the process to make decisions about course equivalencies and determinations about the award and application of transfer credit toward degree programs. It may be beneficial to engage faculty at your institution and your most frequent sending or receiving institutions to align curriculum, making it easier to determine course equivalencies.

Having identifiable criteria, minimum requirements, and limitations for evaluating transfer credit allows for the deployment of technology and other automated processes to streamline the credit award process for prior articulated courses. For example, institutions still physically receiving hard-copied transcripts or digitally receiving PDF transcripts can increase efficiency by using machines to automate the scanning and review of these transcripts. These machine-readable transcripts can then be integrated with an automated degree audit system that is virtually accessible to the student, staff, and advisor with real-time information on how credits apply to the program of study. Machine-readable technology supplemented with a virtual degree audit system where students can interact with advisors about credit decisions should be simple and easy to navigate.

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

The 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-effective strategies to use existing technologies or modify current practices to create more efficient processes to maximize the number of credits that apply toward a student's program of study. The 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 efficient.

Arizona State University (ASU) serves as an exemplar of leveraging technology to its maximum potential. ASU's "Transfer Guide" is an efficient 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. Their 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 fulfill the degree requirements. Intuitively, it also has the flexibility for the prospective transfer student to see how an academic pathway would change based on different programs of study.

Another way to expedite the transfer process, though it would involve a whole new dimension of challenges and steps, is to build systems that allow students to connect and control access to their learning records with and across institutions in real time. This would eliminate the arduous step of requesting and receiving hard-copied transcripts. There is already some traction in building these sorts of networks using blockchain technology. **Central New Mexico Community College** (CNM) in 2018, partnered with IBM to become the first community college in the country to issue digital diplomas through blockchain technology to produce a verifiable record of individuals with specific learning and skills certifications.

Similarly, **Western Governors University** (WGU) and CNM partnered with IBM and the National Student Clearinghouse in 2020 to demonstrate how achievements and learning outcomes could be aligned to the National Institute of Standards and Technology. WGU and CNM also looked to the National Initiative for Cybersecurity Education framework to identify how it could be represented on a blockchain Learning and Employment Record to provide greater transparency for a learner to understand how credit may transfer and to automate credit transfer.

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.

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. Regardless of how credit is awarded and applied, the process for appealing credit award decisions should be clearly communicated to make it simple for students to navigate.

In some cases, it may not be beneficial for a student to have all prior learning transcribed at the receiving institution. For example, suppose prior learning is awarded for elective credit that does not meet a degree requirement and would lead a student to have excess credits. In that case, this might cause the student to be ineligible for federal or state financial assistance for future academic terms. Advisors should communicate the rationale for these decisions so students have full visibility of how excess credits might impact them in the future.

California State University, Northridge provides a Degree Progress Report (DPR) that includes transfer credit evaluation and degree progress using an extensive articulation database called u-Achieve. Once a prospective student applies to the university, new applicants can access the DPR through their student portal to see what courses are transferred and how long it will take them to graduate. This process serves as an essential resource for academic advisement, course registration, and degree completion before starting their first semester.

At **Foothill-De Anza Community College District**, the De Anza Transfer Center website is a rich source of information, advice, and encouragement. It conveys extensive internal support of transfer as well as access to support from numerous receiving institutions. The Center hosts a Transfer Fair, offers transfer workshops, and provides opportunities for students to meet individually and in groups with representatives from California State University and University of California campuses, California private colleges, and out-of-state institutions.

RECOMMENDATION 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.

Developing and supporting a quality advising infrastructure is critical to ensuring successful outcomes for students who bring with them transfer credit or credit for prior learning. The award of credit for learning obtained at another institution or outside of higher education is complex. 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-efficient manner. While we encourage institutions and states to work toward clearer and more straightforward transfer policies, for the foreseeable future, successful outcomes will not be possible without quality advising, personalized to the student's unique situation and degree completion goal.

When developing advising systems, we strongly encourage institutions to consider the benefits 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 staff at sending institutions.

A cross-institutional advising approach aims to increase access to timely and accurate information about transfer requirements and specific programmatic changes that impact the courses a student will need to complete to successfully transfer credits that meet degree requirements at the receiving institution. Faculty are most likely engaged in determining course equivalencies, directly impacting how advisors or registrars make transfer credit award determinations and confer transfer credit. Advisors should regularly consult with faculty at their institution to understand changes to program of study requirements that impact if and how transfer credit can be applied to a program of study, including special prerequisite and corequisite course requirements.

Sending institutions should advise students appropriately about program-specific requirements that may limit the transferability of credits into academic programs at key partner receiving institutions. Students at two-year institutions often focus on taking their general education courses without giving thought to a specific major pathway, causing them to take the wrong courses, which cannot be corrected with better articulation policies; advisors at two-year and four-year institutions should be mindful of that issue. Sending institutions might place greater emphasis on exploring majors early in each student's career and making degree mapping an intentional part of an ongoing student-advisor relationship.

Receiving institutions should build strong advising partnerships with their primary transfer sending institutions. This includes regular communication between advisors concerning changes to transfer policies or practices and requirements. Receiving institutions should ensure all prospective transfer students have the opportunity to meet with an academic advisor after their credits have been evaluated and before first-term registration.

Academic advisors at both sending and receiving institutions should also help students understand if and how credit for prior learning, including dual credit earned in high school, will be accepted and applied toward their program of study. Students may continue to acquire credit for prior learning while they are enrolled at the institution, and advisors should ensure that this credit is taken into account, particularly if it could help speed a student's path to a degree.

Notably, not all advisors within or across institutions have the same responsibilities or formalized student-advisor relationship, especially if advising is a collateral duty. For example, a faculty member has a teaching load and serves as a student advisor, or a student advisor doubles as a financial aid advisor. It is important to understand how the transfer student academic advising model at your institution impacts credit acceptance and how credit is awarded. This includes when transfer credit evaluation occurs and by whom.

As one of the many reforms in transfer at **Governors State University (GSU)**, students at 17 metro-Chicago community college partners enrolled in the Dual Degree Program (DDP) have access to joint advising from the college and university. GSU peer mentors, who have themselves transferred from the community college, provide advice and counseling to DDP students throughout their community college experience. Students are assisted in selecting academic majors that are right for them, learning early about the special requirements of

selective major programs. This 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. This statewide infrastructure for seamless transfer across the Florida College and State University Systems provides efficient and effective progression for transfer students. **Florida International University (FIU)** continuously seeks to strengthen the transfer pathway, including its three largest sending institutions: **Miami Dade College**, Broward College, and Palm Beach State College. Connect4Success is a guided transfer pathway that includes benefits like fast-track enrollment, dedicated advising, scholarships, and transition workshops. The Connect4Success transfer pathway includes Bridge Advisors at the three primary sending institutions. The 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.

Valencia College 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 benefit from joint advising from UCF and Valencia staff and assistance from both schools with admissions, financial 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. This 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. This information sharing helps both institutions regularly evaluate and improve articulation agreements, policies, and practices to minimize credit loss while ensuring transfer credits are applied efficiently and toward the student's degree requirements.

6A: Implement articulation agreements with key transfer institutions to create structured pathways for students to have their prior learning apply to their 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 advisers can proactively

22 This 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_affairs_reports.

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

There 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. The 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 **George Mason University** and **Northern Virginia Community College (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 fields 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. This includes access to several Mason resources such as career services and student health insurance to equip **ADVANCE** students for holistic success. This program continues to welcome a remarkable number of students, serving more than 1,800 students from diverse racial and socioeconomic backgrounds. Equity in student participation is at the forefront of the **ADVANCE** model. The most recent demographic data about **ADVANCE** transfer students shows that 60 percent are students of color, 61 percent are Pell-eligible, and 48 percent are first-generation.

At **Clemson University**, the Bridge to Clemson Program is an example of how a strong cross-institutional team approach can lead to transfer student success. In partnership with Tri-County Technical College (TCTC), this program provides a structured pathway for students to begin their academic careers at TCTC. With the support of staff at both institutions who provide early and knowledgeable advising and other services, transfer students can seamlessly transition to Clemson at the start of their second year. With the continued support of Clemson's Transfer Student Program, these students earn their degrees at similar rates compared to those who began as freshmen at Clemson.

The **University of Maryland Global Campus (UMGC)** has developed clear articulation/alliance agreements with all the community colleges in Maryland. The state of Maryland maintains a course transfer database, Articulation Systems for Maryland Colleges and Universities (ARTSYS), where students can access transferability of courses from Maryland community colleges to various Maryland four-year universities, including UMGC. Degree mapping is understandable and designed for specific two- to four-year programs to outline a linear pathway with courses for students to complete. This provides a seamless path to dual enrollment and guaranteed admission along with transfer-friendly policies, which allow UMGC to be able to state that any graduate of a community college partner would be able to transfer all credits from their associate degree to UMGC and receive standing as a junior. Additionally, students can access prescribed recommended transfer pathways at their community college based on their desired school and major.

Some institutions have developed articulation agreements with online learning providers who offer 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, **Excelsior College** and **SUNY Empire State College** are among more than 100 accredited colleges and universities that have specific course-level articulation agreements with the low-cost online course provider, StraighterLine, in which students can transfer credit for StraighterLine's ACE credit-recommended courses and ensure the courses count toward their degree requirements at one of the partner institutions.

Fayetteville State University and **Southern New Hampshire University (SNHU)** are among nearly three dozen colleges and universities with similar course-level articulation agreements with Saylor Academy, a free online course provider whose courses are recommended for college credit by ACE. And SOPHIA Learning, an online provider of college equivalent courses, has direct course-level articulation agreements with several accredited colleges and universities, including Capella University and SNHU.

6B: Establish or join consortia or existing networks of transfer-friendly institutions.

Networks and voluntary consortia allow participating institutions to share best practices regarding credit articulation from colleges and universities or other validated sources such as military or workplace learning, challenge exams, or alternative credit providers. Institutions who participate in networks can leverage cross-institutional data and technology to better facilitate institutions' determinations about course equivalencies and award of credit.

Regional higher education compacts can ease the process for students who transfer out-of-state, where a student might not benefit from a statewide articulation agreement. In the case of transfer students who cross state lines, multi-state regional compacts can play a role in advancing robust transfer pathways through shared course equivalencies and articulation agreements to create a more seamless transfer process for students who pursue transfer across state lines among member states. The Midwestern Higher Education Compact, New England Board of Higher Education, Southern Regional Education Board, and Western Interstate Commission for Higher Education (WICHE) are examples of such regional compacts. The WICHE Interstate Passport®, for example, focuses on block transfer to meet general education requirements based on agreed-upon learning outcomes to grant transfer credit.

To strengthen transfer pathways and completion for students with prior learning acquired outside of higher education, ACE is developing a prior learning network of colleges and universities that will, through the use of ACE credit recommendations, enable learners to more easily apply their prior learning toward completion of a degree or credential. This effort expands on the quality and integrity of ACE's Learning Evaluations services to leverage a network focused on supporting and awarding credit for prior learning experiences, such as apprenticeships, corporate training, and other forms of education obtained outside of the classroom. Founding network members will guarantee the acceptance of validated prior learning experiences from participating organizations toward a postsecondary credential, relying on the expertise of ACE to assure the quality of learning delivered by those organizations.

Over the last five years, the **University of Colorado Denver (CU Denver)** joined with education and industry partners to create the nonprofit Denver Education Attainment Network (DEAN), a consolidated effort aimed at cross-sector transfer pathways, stackable degrees, and workforce alignment for low income and minority students. Through DEAN, CU Denver offers postsecondary academic representation on a larger

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 efforts. In spring 2020, CU Denver and DEAN partners finalized the state’s first 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 specific 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, The Carnegie Corporation of New York, Bill & Melinda Gates Foundation, Lumina Foundation, U.S. Department of Education
- <http://interstatepassport.wiche.edu/>

NEW ENGLAND INDEPENDENT COLLEGE TRANSFER GUARANTEE

- NEBHE, CCIC, AICUM, AICURI
- Funded by Teagle Foundation, Davis Educational Foundation
- <https://nebhe.org/policy-research/grant-consulting-technical-assistance/transfer-initiatives/the-guarantee/>

TACKLING TRANSFER

- The Aspen Institute, HCM Strategists, SOVA
- Funded by Ascendium Education Solutions, ECMC Foundation, Joyce Foundation, and Kresge Foundation
- <https://highered.aspeninstitute.org/tackling-transfer/>

TRANSFER PLAYBOOK

- The Aspen Institute, Columbia University's Community College Research Center (CCRC)
- Funded by Carnegie Corporation, the Bill & Melinda Gates Foundation, and The Leona M. and Harry B. Helmsley Charitable Trust
- <https://www.aspeninstitute.org/publications/transfer-playbook/>

Resources on Transfer of Credit

ACE-AACRAO-CHEA JOINT STATEMENT ON THE TRANSFER AND AWARD OF CREDIT (2017)

- <https://www.acenet.edu/Documents/Joint-Statement-on-the-Transfer-and-Award-of-Credit.pdf>

HIGH-PERFORMING PARTNERSHIP STUDY

- <https://www.washington.edu/ccri/research/transfer/>

JOHN N. GARDNER INSTITUTE FOR EXCELLENCE IN UNDERGRADUATE EDUCATION

- <https://www.jngi.org/foundations-of-excellence>

NATIONAL INSTITUTE FOR THE STUDY OF TRANSFER STUDENTS (NISTS)

- <https://www.nists.org>

NATIONAL STUDENT CLEARINGHOUSE RESEARCH CENTER

- <https://nscresearchcenter.org/>

STATEMENT OF PRINCIPLES ON ACCEPTANCE OF CREDIT (2020)

- <https://www.acenet.edu/Documents/Statement-Acceptance-of-Credit-Principles-041620.pdf>

TEACHERS COLLEGE, COMMUNITY COLLEGE RESEARCH CENTER (COLUMBIA UNIVERSITY)

- <https://ccrc.tc.columbia.edu/student-persistence-completion-and-transfer.html>

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



A Portrait of Student Transfer and the Awarding of Credit Toward Degree Completion

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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

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 financial 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 differ 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 differ 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 typified 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. These students are considered “post-traditional transfer students”¹ because their characteristics and behaviors differ substantially from college students of the past (Santiago 2013; InsideTrack 2016). Knowing more about the profile 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.

This paper summarizes research on transfer students and transfer policies and practices in higher education in the United States, defining 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. The paper concludes with some final thoughts on the importance of transfer to meeting the needs of America’s increasingly diverse college students.

1 Bragg and McCambly (forthcoming) argue “nontraditional” is an outdated conception of transfer identity that should be replaced with the term “post-traditional transfer students.” Updating terminology to better reflect current and future transfer student identity may help to reduce misunderstanding about how transfer works for these increasingly diverse students and potentially close gaps in inequities in college outcomes for racially marginalized students compared to White and higher-income college students, an important topic discussed later in this brief.

FORMS OF STUDENT TRANSFER IN HIGHER EDUCATION

VERTICAL TRANSFER	LATERAL TRANSFER	REVERSE 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 actively transfers from a four-year college or university to a community college or transfers credits earned at a four-year institution to a community college to earn an associate degree	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 defined before moving into research results on transfer student enrollment and outcomes. As such, a prominent definition of transfer reflects 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.” This 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 reflects 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 *credit* transfer” because it represents a more accurate label for this latter transfer pattern, also suggesting that this term would clarify how this transfer pattern differs from the earlier one referenced by Townsend and Dever.

“Alternative credit transfer” is yet another form of transfer that deserves recognition. Similar to reverse *credit* 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 enable students to attain both the associate's and bachelor's degrees from an institution historically designated to confer associate's degrees as their highest college degree (Bragg and Soler 2017; Bragg 2019). Often referred to as community college baccalaureate (CCB) degrees, this form of transfer happens when students elevate from the associate's degree to the upper-division within a predominantly associate-degree-granting institution. Currently, 23 states permit colleges designated by the Carnegie classification as predominantly associate degree-granting to confer baccalaureate degrees.⁴ The number of states that confer CCB degrees has grown in recent years, with six states authorizing community colleges to confer CCB degrees in the last two years.⁵

Last, it is important to mention student movement between multiple institutions where students may or may not attain a substantial enough number of credits to be designated formally as transfer students. Also referred to as “swirling,” using a definition developed long ago by de la Santos and Wright (1989), the number of students who participate in multiple institutional attendance patterns (MIAP) is also growing, particularly among racial minority students. Little information exists on students who swirl but recent results suggest inequities in outcomes for racial and ethnic minority students who attend multiple institutions (Crisp, Potter, Robinson and Carales, forthcoming; Soler and Meza 2019), further complicating an already complex pattern of student progression through higher education toward attaining the baccalaureate degree (Soler 2019).

COLLEGE STUDENT ENROLLMENT DEMOGRAPHICS

The incidence of transfer between higher education institutions is extensive and increasingly varied across the United States. Of the 16.8 million 18- to 24-year old undergraduate enrollments in postsecondary institutions (in fall 2017), 5.9 million of these students were enrolled in community and technical colleges (also referred to as associate degree-granting institutions in this paper) according to the National Center for Education Statistics (McFarland et al. 2019).⁶ Looking at enrollment for the years from 2000 to 2017, we see an increase in enrollment in baccalaureate-granting institutions from nearly 8 million to nearly 11 million, and we see relatively level enrollment in associate degree-granting institutions at about 6 million, with the exception of the years associated with the Great Recession when enrollment in associate degree-granting institutions increased to nearly 8 million. Over this 17-year period, growth in enrollment in public postsecondary institutions grew from just over 10 million to over 13 million, with enrollment growing at a slower pace in private nonprofit institutions (approximately 2 million to 3 million) and showing a similar trend for private for-profit institutions as associate degree-granting institutions in that a larger enrollment was evidenced during the Great Recession than in other years, although at no time does the enrollment of private for-profits come close to associate degree-granting institutions. Enrollment in private for-profit reached 1.2 million by 2017, compared to nearly 6 million for associate degree-granting institutions.

3 Credit for prior learning and the award of alternative credit for transfer is discussed at length in a separate ACE white paper written for the National Task Force on the Transfer and Award of Credit.

4 The 23 states that permit predominantly associates-granting institutions to confer baccalaureate degrees are: California, Colorado, Delaware, Florida, Georgia, Hawaii, Idaho, Indiana, Michigan, Missouri, Nevada, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, South Carolina, Texas, Utah, Vermont, Washington, and West Virginia (Soler 2019).

5 Six states that took action to authorize predominantly associates-granting institutions to confer baccalaureate degrees in 2018 or 2019 are: Idaho, Missouri, Ohio, Oregon, South Carolina, and Wyoming.

6 Statistics in this section are drawn from the NCES report on *The Condition of Education in the United States 2019*; specifically, the sections on College Enrollment Rates, 150–152, and Undergraduate Enrollment, 154–160.

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. This trend may reflect 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.

The 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/Pacific Islander, and 124,000 were American Indian/Alaska Native (see figure 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/Pacific 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 figure 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/Pacific Islander students remained virtually unchanged at 1.1 million. Despite the variations in enrollment by sub-group over the 2000 to 2017 period, the resultant undergraduate student population (age 18-24) was more diverse in 2017 than at any other time in our nation's history, and diversification is expected to continue to rise into the foreseeable future.

FIGURE 1: Fall 2017 Undergraduate Enrollment by Race

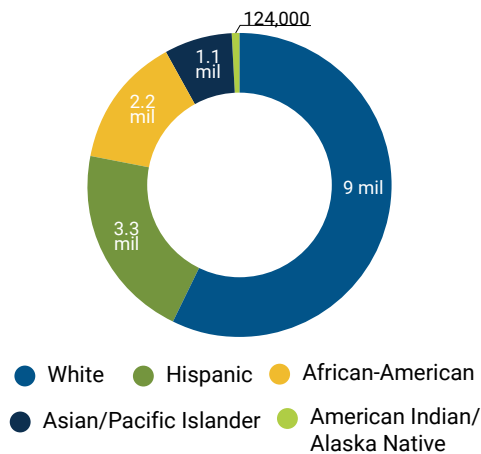
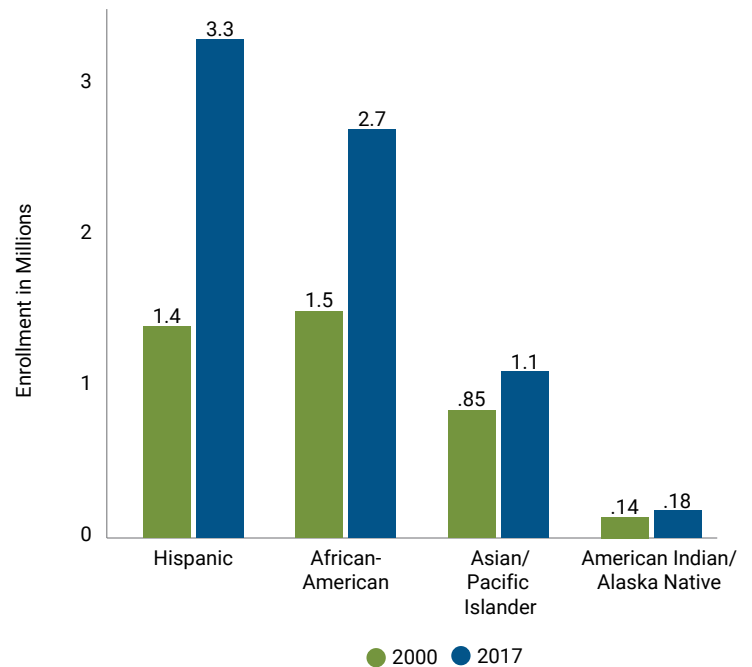


FIGURE 2: Undergraduate Enrollment by Race, 2000–17



Transfer Student Enrollment

Whereas most of the research reported thus far focuses on college students generally and specifically 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. These results suggest transfer pathways differ by student sub-group and point to the need for more research on transfer pathway and baccalaureate attainment by student demographics.

Also, the incidence of reverse credit transfer is growing in the United States, with over 16,000 students receiving credits through reverse credit transfer policies associated with their engagement in Credit When It's Due and a later initiative called Degrees When Due (Wheatle et al. 2017). This research points the importance of credit mobility to enable students to attain college degrees for which they have generated credit to be eligible for the associate degree or baccalaureate degree. Complementing these results is a study by Soler and Meza (2018) who found sizeable numbers of students who attend more than one higher education institution, who could also be considered “swirlers” who were excluded from previous national transfer research. Soler and Meza reported results for swirlers in two states (Minnesota and Ohio), and found one-third or more of students who attended two or more associate degree-granting institutions before transferring to a baccalaureate-granting institution were excluded from prior research on transfer student enrollment and completion, and masking their results. More understanding of multiple institutional attendance patterns (MIAPs) are complex but necessary to ensure that transfer pathways are working for students of color. Leaving these students out of research leads to a misleading and inaccurate picture of how transfer works for post-traditional transfer students.

Transfer Students Lose Credits in the Process

Despite the prevalence of transfer students among college and university enrollments, the successful transfer and award of credit remains problematic, notably for students who lose credits during the transfer process. A 2017 study by the United States Government Accountability Office (GAO) used data from the Bureau of Postsecondary Statistics to examine students transfer patterns from 2004 to 2009. The GAO study found that students who transferred from one school to another school (for a period longer than four months) between 2004 and 2009 lost an estimated 43 percent of their college credits – or roughly 13 semester credits – upon transfer (GAO 2017, 15). The loss of 13 semester credits upon transfer is roughly equal to a full-time student load (typically 15 semester credit hours), which means students (and potentially government vis-à-vis state and federal funding) are losing out on a full semester coursework for which they paid tuition.

Further, the loss of credits upon transfer varied by institutional type. The GAO report found that students transferring from one public school to another public school (about two-thirds of students), lost fewer credits (37 percent of credits transferred) in the process than students transferring from a public to a private institution. Students who transferred from a private-for-profit institution to a public school (about 4 percent of students) lost almost of all their credits (an estimated 94 percent of credits, on average) upon transfer (GAO 2017, 15).

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's 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 differently 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 different higher education systems and governance structures. These 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 benefit from the full marketplace value of their college credentials (associate and baccalaureate degrees). Employers may also be disadvantaged as they struggle to secure qualified employees who reflect 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 The gap between these groups in terms of the six-year baccalaureate completion rate is approximately 20 percentage points higher for White students compared to African-American students (45 percent versus 25 percent, respectively), and 12 percentage points higher for White students compared to Hispanic students (45 percent versus 33 percent, respectively). Such equity gaps have failed to budge over time, raising questions about the effectiveness of existing transfer policies and practices.

These sobering results point to a perpetual transfer equity gap for racial minority college students who choose to move between institutions, remembering one in three college students attend multiple colleges and universities during their postsecondary career. Reports on transfer using NSC data show large percentages of community college students — over half of Hispanic students and 41 percent of African-American students enrolled in higher education, or approximately 25 percent of all community college enrollees and 650,000 higher education students total — aspire to but do not transfer or do not complete the baccalaureate degree after transferring (Shapiro et al. 2017).

Other research that explicitly examines transfer by racial and ethnic students suggests a student's sense of belonging and validation as a legitimate college student impacts the transfer experience and outcomes (Bensimon and Dowd 2009). To counter racial transfer inequities, these researchers point to the importance of “transfer champions” who guide and support racial minority students in pursuing their transfer pathways. Jain et al. (2011) also offer important insights into the ways the transfer experience differs for students of color compared to white students. They argue for better understanding of institutional culture and climate and greater focus on reforming support services to be more appreciative of the complexity of transfer students' lived experiences as college learners.

These findings suggest that severe inequity levels exist in transfer and college completion that deserve attention. Unfortunately, the preponderance of empirical articles on transfer says very little about the experiences and outcomes of racial minority students, except to point out that completion outcomes for minority populations lag behind majority students. Further, research on transfer that uses income as a proxy for race and ethnicity inequity, without

⁷ See Brint and Karabel 1989 as an example.

unpacking the unique characteristics and experiences of students of color, masks understanding of what researchers call the “racial equity gap” (see for example Crisp and Nunez 2014). This race-neutral orientation to transfer masks our understanding of the ways racial minority students experience and benefit from the transfer process, potentially perpetuating inequities rather than offering equitable reforms.

RESEARCH ON TRANSFER POLICIES AND PRACTICES

The role of transfer grew substantially over the last several decades as states and systems of higher education began to “negotiate the requirements for students’ movement from institution to institution” (Anderson et al. 2006, 263). A portfolio of policies and practices has emerged that represents the current state, though this varies from state to state. Within this portfolio, we see policies and practices pertaining to transfer and articulation agreements, both statewide and institution to institution; statewide common course numbering; transferable core (or block) of lower-division courses that are guaranteed for credit; statewide guaranteed transfer of the associate degree; and reverse transfer (Anderson 2015; Smith 2010).

Over the last two decades, states have expanded transfer and articulation agreements substantially with some states advocating for statewide articulation agreements to increase transfer student attainment of a baccalaureate degree, some promoting institution-to-institution arrangements, and some advocating for both. Anderson et al. (2006) examined baccalaureate attainment rates for students enrolling in states with statewide articulation agreements compared to states without such agreements. The results of this analysis showed no statistical effect on baccalaureate attainment for states having statewide agreements after controlling for student characteristics known to explain variation in degree completion. However, recognizing the complexity and limitations of this analysis, Anderson et al. did not discourage statewide agreements but rather encouraged an even more comprehensive approach to transfer and articulation. The research conducted by Ignash and Townsend (2000) suggested state-level transfer systems need comprehensive policies and practices that complement the kinds of administrative rules that accompany state-level agreements. They recommend processes that engage faculty in decision-making and action about courses and the conferral of credit to count toward baccalaureate degree attainment by transfer students, as well as enhanced advisement and student services focusing on transfer student success.

A more recent study of the impact and articulation agreements on baccalaureate attainment by LaSota and Zumeta (2016), using a rubric created by Smith (2010) that categorizes state transfer and articulation policy, found a positive impact of some aspects of state-level articulation policies on baccalaureate attainment. They concluded that states having transfer guides and common course numbering had a positive impact on baccalaureate completion, but other aspects of state-level transfer and articulation had little or no effect. This study also supported earlier recommendations of Ignash and Townsend (2000), claiming that state-level articulation agreements are unlikely to produce positive results without faculty engagement shaping the teaching and learning process for a transfer student.

In a more recent analysis of statewide transfer and articulation policy, Hodara et al. (2016) gathered data on transfer policies and practices and concluded that a more comprehensive approach that couples system-wide transfer initiatives to local-level institution-to-institution approaches yield more positive transfer student outcomes, including attainment of transfer credit and baccalaureate degrees. These researchers recommended that states increase their investment in research on the impact of transfer policies, practices, college completion outcomes, and also intentionally and strategically use these results to improve state transfer systems.

Researchers have also begun to examine how associate degree-granting institutions and baccalaureate-granting institutions can pair up to form transfer partnerships, working together to improve degree completion for transfer students (Wyner et al. 2016). Recognizing that post-traditional transfer students have different needs and expectations than traditional transfer students, the notion of a continuum of partnering strategies was documented in a

study including Colorado, Minnesota, and Ohio (Yeh and Wetzstein 2019). This 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. This 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. Efforts to improve transfer often focus on a set of reforms that are coordinated (sometimes mandated) by state education agencies that have fiscal responsibility for flowing state funds to colleges and universities. Evidence of the impact of these efforts vary considerably, with some but not all improving transfer student outcomes. Even with their fiduciary 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 effects on student transfer pathways.

PROMISING PRACTICES

This 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. The 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.

Advanced Transfer and Articulation Agreements

Evolving transfer policies and practices operating at the state or institutional level that strengthen transfer and articulation may create more comprehensive and effective changes to the transfer function. Though 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 This 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 The most prevalent pattern of transfer is 2+2 where the equivalent of the first two years of college coursework is completed at the associates-granting institution and the second two years at the baccalaureate-granting institution. This 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.

Course or Learning Equivalencies

Learning outcomes assessment initiatives related to transfer offer promising results. The 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 efforts 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 benefit by having their competencies recognized toward degree attainment.

State- or System-Level Transfer Blocks

State- or system-level efforts to establish and endorse general education transfer courses that confer credits for a block of courses toward specified 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).

Multi-state Transfer Initiatives

In recent years, states have joined together to learn from one another about how to implement reforms intended to improve the transfer function. Though 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. The 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. The WICHE Passport links learning outcomes to proficiency 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

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.

Transfer Partnerships

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). These 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 staff 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. These collaborative efforts 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.

Pathway Initiatives

System- or institution-level efforts 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. This 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 efforts, it may help to improve transfer rates and degree attainment.

Higher education systems and institutions that actively engage in transfer reforms such as course and learning outcomes alignment initiatives, transfer partnerships, and transfer pathways are well-positioned to address persistent gaps in transfer student outcomes, including inequities that detrimentally impact minority and socio-economically disadvantaged students who are prominently represented among post-traditional transfer students, but who represent the new majority population served by higher education.

Improvements in the experiences and outcomes of racial minority transfer students will not happen without deliberate action. Failure to understand how students of color access and navigate higher education, including recognizing the tendency to participate in transfer pathways (e.g., lateral pathways) that do not lead to baccalaureate completion at the same rate as the transfer pathways experienced by majority students. Closing equity gaps demands increased use of disaggregated data to identify where inequities exist for racial minority and other marginalized groups (Dowd and Liera 2018). Closing gaps also requires deeper understanding of social, cultural, and economic factors that manifest in the different ways in which student sub-groups experience different transfer pathways (Taylor and Jain 2017). Efforts to change institutional culture to better support diverse transfer students are understood as increas-

ingly important, with greater recognition that state transfer policy and infrastructure consistent with institutional reform must happen to support systemic change in student success.

Given the growing interest in improving transfer, it is important to consider how state and institutional policies and practices can reframe and reform the transfer function in a way that unmask and reveals systematic barriers that perpetuate inequities in the transfer student process. By reforming policies and practices that result in increased degree completion outcomes for all, it may be possible to improve the transfer function in real and meaningful ways. For the future of higher education and the many transfer students who comprise the student population currently, and in the future, higher education can advance an agenda that makes students' transfer across institutions more transparent, reduces the loss of credit, and makes transfer more easily navigable by students, faculty, and staff.

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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



Designing a Transfer Student Experience to Support Persistence and Completion

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ABOUT THE SERIES

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EXECUTIVE SUMMARY

For many students, transferring between higher education institutions is a complicated and confusing process. The 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.

This 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, insufficient transfer advising and support, lack of exploration and concentration into fields 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. Through 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 finish 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 different 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 efficiency and cost-savings for students, institutions, and taxpayers (Belfield, 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 difficulties 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.

The transfer student experience can be improved. Though 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

to improve the transfer student experience through efforts to build momentum for transfer, align programs to maximize credit transfer, and support students along the way through proactive advising and transfer-friendly campus cultures. This brief presents research on institutional barriers that work against transfer student momentum and describes how colleges are addressing these barriers by redesigning the transfer student experience.

How Would You Fare as a Transfer Student?

Imagine you are just starting out as a community college student with a desire to transfer and earn a bachelor's in marketing. Take a few minutes and try to figure out the following (try it on your phone, which is likely how most students are looking at the website):

- What are the local university transfer destinations that offer a bachelor's in marketing? What are the local career opportunities for marketing graduates, and what is the typical starting wage?
- For a particular university you are interested in, what are the requirements and timeline for transfer admissions? What courses do you need to take at the community college that you know will apply to the marketing degree at the university? What courses should you take this first semester at community college?
- Whom can you contact for more information or assistance at the community college, and is that information available? What about at the university?

After completing this exercise, consider the following: How easy or difficult was it to find this information? How accurate or updated was the information?

TARGETING INSTITUTIONAL BARRIERS FOR REDESIGN

Much research on the transfer student experience examines it through the lens of academic and social integration, following the early student retention scholarship (Tinto 1993; Townsend 2008).¹ In this literature, the student experience is primarily examined post-transfer, for example, the well-described “transfer shock” phenomenon (Hills 1965; Flaga 2006).² Yet the vast majority of community college students aspiring to earn a bachelor's, even those who make substantial progress accumulating college-level credits, do not transfer.³

Given that such a high proportion of entering community college students aspire to transfer and a complete bachelor's degree, and that in fact much of the leakage from the transfer pipeline occurs pre-transfer, efforts to redesign the transfer student experience require a more expansive view, beginning with students' initial connection to the community college (which is more and more as high school students through dual enrollment, as discussed later in this paper).

1 For a review, see Bahr, Toth, Thirolf, & Massey, 2013.

2 For a half-century researchers have observed a temporary dip in students' grade point averages immediately post-transfer, attributed to a transitional period of adjustment to the new academic environment. Scholars have argued that this phenomenon has drawn more attention than warranted, given subsequent research showing the dip to be relatively small, temporary, and concentrated in certain disciplines (Bahr et al., 2013).

3 Xu, Jaggars, and Fletcher (2016) tracked a cohort of Virginia community college entrants who indicated that they intended to earn a bachelor's degree; they found that after eight years only 23 percent ever transferred to a four-year institution (authors used National Student Clearinghouse data to also track both transfers in- and out-of-state). The transfer rate was only slightly higher (36%) for students who had completed between 40-59 college-level credits at the community college, and about a third of students who completed a transfer associate degree still did not transfer.

Transfer paths are confusing and unclear, advising inadequate.

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 different 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 find 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 sufficient 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).

Entering students are offered a mundane curriculum and lack exposure to potential fields of interest

Students make sacrifices 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 first-term curriculum consisting of math (typically algebra taught in same abstract way as in high school), English composition, a student success course, and another course without prerequisites such as intro to computers or self-development. With this uninspiring initial course schedule and in many instances the lack of a clear pathway to a bachelor's or graduate degree leading to career-path employment, it is perhaps not surprising that we observe nearly half of entering community college students leaving higher education altogether by the second year (Crosta 2014).

Students intending to transfer are often advised to complete general education coursework first with the belief that it will provide students more flexibility, and the assumption that all of the general education coursework students will take while they are figuring out their plan will count toward the path they eventually select (Bailey, Jaggars and Jenkins 2015b, 27-31). However, research suggests that loading up on general education credits early on at the community college before transferring is associated with excess credits for transfer students who complete a bach-

4 Using National Student Clearinghouse data on a national cohort of students who entered higher education through a community college in the fall of 2007 and completed a bachelor's degree at any institution within six years, I analyzed student enrollment patterns between two- and four-year institutions (Fink, 2017). Of the roughly 100,000 community college entrants who earned a bachelor's degree in that six-year timespan, only eight percent enrolled at a community college for two years, transferred and enrolled at a four-year for two years, and then completed a bachelor's degree (commonly described as the 2+2 transfer pathway). Other patterns (e.g., 2+3, 3+3) were slightly more common, but there is not one clear enrollment sequence among these successful transfer students.

5 For example, a national survey of more than 90,000 community college students in 2017 found that 50 percent of transfer-intending students reported never having utilized transfer advising (Center for Community College Student Engagement, 2018).

elor's degree (Fink, Jenkins, Kopko and Ran 2017). The 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 field of interest at a specific university (e.g., knowing early on whether a potential transfer university's business program requires statistics or calculus).

Students who successfully transfer encounter unreceptive university environments.

Despite comprising large shares of undergraduate enrollment at many universities, transfer students can be a neglected student population. In addition to difficulty transferring credits and progressing into junior-level major coursework, transfer students may have less access to co-curricular enrichment activities, institutional aid, and scholarships. For example, transfer students report less informal interaction with peers and faculty and are less likely to participate in high-impact practices such as study abroad and undergraduate research or engage in leadership development activities (Terris 2006; Ishitanti and McKittrick 2010). The lack of engagement activities may result from policies and practices that, in effect, limits transfer students' engagement explicitly (e.g., transfer students ineligible for student government leadership) or implicitly (e.g., faculty preference for research assistants starting as freshman or sophomores) (Wyner et al. 2016).

Additionally, transfer students might experience unreceptive campus climates manifested in perceptions of stigmatization, such as generalizations that transfer students have less academic potential than non-transfers. Scholars argue that transfer—in particular community college transfer—is experienced differently by students of different races (e.g., predominately white institutions receiving transfers from predominately black/Latinx-serving community colleges), and therefore transfer reforms might consider how this perspective is manifest in such reforms (Jain, Herrera, Bernal and Solórzano 2011). One challenge for advancing a transfer-receptive culture is reframing work on transfer from focusing on student deficits (and institutional barriers) to student assets. Researchers have laid the groundwork for a reframing of transfer students as assets to institutions. By matching transfer students to equivalent samples of non-transfers, researchers have complicated the transfer-shock phenomenon and other deficit-minded myths that transfer students are less capable than non-transfers freshman-admits (Melguizo, Kienzl and Alfonso 2011; Xu, Jaggars and Fletcher 2016).⁶ Colleges and universities have started advancing a transfer-receptive culture by using data to dispel myths about transfer students on their campus specifically (Wyner et al. 2016).⁷

High school dual enrollment programs not designed as an on-ramp to college programs.

In the past two decades, the number of high school students participating in some type of “dual enrollment” program has expanded tremendously to more than a million high school students annually (Marken, Gray and Lewis 2013, Table 1). The growth has been particularly pronounced in the community college sector where high school students accounted for 15 percent of all new community college students in fall 2010 (Fink, Jenkins and Yanagiura 2017). As is the case for community college entrants, generally, most dual enrollment students are seeking a bachelor's degree and therefore encounter many of the same barriers as community college transfers who enter post-high school. Yet, dual enrollment course-taking can be haphazard, reliant on course and instructor availability, which practitioners have described as “random acts of dual enrollment” (Wyner et al. 2016). Despite the rapid spread of dual enrollment nationally, many high schools, colleges, and states have not carefully tracked the data on dual

6 For example, when Xu et al. (2016) compared Virginia community college transfer students to a group of similarly matched peers at public universities in Virginia, transfer students did experience a drop in GPA immediately post-transfer. Still, the drop was down to the level of their matched peer sample. Following this initial shock, the community college transfer students continued to earn higher grades on average than did their matched peers who started at a university.

7 For example, at Colorado State University (CSU), administrators developed a top 10 transfer myths report that used recent data on CSU transfer students to dispel common misperceptions, such as the misperception that transfer students were a relatively small population (in reality transfers represent 43 percent of undergraduates) or that transfer students primarily students who were not accepted immediately out of high school (only 7 percent of transfers had first been denied as new freshman applicants). See Wyner et al. 2016, page 7.

enrollment students, including course enrollments, institutions to which students matriculate post-dual enrollment, how dual enrollment credits are transferred and applied toward their degree programs, and the extent to which these credits reduce their time to degree. As more high school students matriculate to four-year institutions having already earned transfer credit through dual enrollment, colleges and universities seeking to improve the transfer student experience must not overlook students for which dual enrollment serves as their on-ramp into college.

GUIDED PATHWAYS: REDESIGNING THE TRANSFER STUDENT EXPERIENCE AT SCALE, WITH THE END IN MIND

Reflecting on years of community college reforms under the “completion agenda,” Bailey, Jaggars, and Jenkins (2015) made the case in their book, *Redesigning America's Community Colleges*, that many student success efforts in the past did not result in substantial gains in student outcomes because they either effected a small segment of a college's student population or they were only directed at one aspect of the student experience (e.g., developmental education reform). Similarly, innovative reforms to improve the transfer student experience are limited either in scale (e.g., programs or initiatives that serve a portion of the transfer student population) or in scope (e.g., programs targeted at one part of the transfer student lifecycle, like university integration post-transfer). Bailey et al. (2015) argued that, in order to move the needle on student success, colleges need also implement more comprehensive reforms with the aim of transforming the student experience at scale, from connection and entry through persistence, completion, and post-college outcomes. Such reforms, which the authors named “guided pathways” reforms, aim to provide students with clearer paths to their end goals (including adequate support to explore, enter, and progress along those paths).

The guided pathways reform has taken off as a comprehensive student success framework since 2015, with over 300 colleges and universities formally organizing student success initiatives around the framework (Jenkins, Lahr, Brown and Mazzariello 2019). CCRC is currently working with 110 community colleges across the country to study the practices and policies colleges are changing as they implement guided pathway reforms, as well as understanding how these changes are implemented and their effect on student outcomes. Colleges implementing guided pathways reform focus on four areas of practice:

1. Mapping pathways to student end goals of direct employment or transfer into a major (with no loss of credit), and organization of college programs into broad fields (meta-majors) to facilitate exploration and student engagement
2. Helping all students explore and enter a path by building a personalized educational plan as soon as possible upon entry (e.g., in the first 1-2 terms)
3. Monitoring student progress along their plan and providing proactive, holistic support to keep students on their pathway (or helping them switch if needed)
4. Ensuring that all students are learning what they need to know to be successful post-graduation/transfer (e.g., general and program-specific learning outcomes, prepared to be successful in upper-level major coursework) and gaining program-relevant experience, skills, and connections (Jenkins, Lahr and Fink, 2017; Jenkins, Lahr, Fink and Ganga 2018; Jenkins et al. 2019)

Guided pathways reforms provide a framework to address longstanding institutional barriers to transfer student success, particularly pre-transfer barriers that have resulted in a limited number of transfer-aspiring community college students being able to access clear transfer pathways, systematic guidance and support, and opportunities to develop interest and momentum within a field of study. The work underway at community colleges that are redesigning the transfer student experience can be described as a shift from transfer gatekeepers to transfer catapults,

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

Community college redesign: From gatekeepers to transfer catapults.

Community colleges implementing guided pathway reforms have partnered with primary transfer partners to backward-map faculty-recommended course sequences for specific 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 specific 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 first 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 first 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.

Four-year redesign: From passive reception to proactive transfer recruitment and support.

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-affirming" 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 specific 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) identified 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 effectively 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, deficit perspectives, stigmatization, and other biases that transfer students encounter as they matriculate, particularly to predominately white institutions.¹² These multifaceted efforts to transform the transfer student experience exemplify a shift in perspective among leaders, faculty, and staff at four-year institutions to recognize transfer students as a valuable asset to their institutions—not just as another enrollment stream but as outstanding students who enrich their community of learners.

CONCLUSION

Despite the community college transfer pathway as a potential driver of social and economic mobility, students experience transfer as a confusing, frustrating process, riddled with barriers as they progress toward a bachelor's degree. Improving the transfer student experience requires collective action from both sending and receiving institutions to ensure that not only do clear transfer pathways exist, but that students are provided adequate guidance and support to explore, enter, and progress along those paths. Drawn from observations of colleges implementing guided pathways reforms, one promising approach to redesigning the transfer student experience is to more intentionally organize student intake, educational planning and advising, and teaching and learning, all of which focus on students' end goals.

With a redesigned focus on students' end goals, four-year receiving institutions are crucial partners to help entering community college students explore and make concrete their educational aspirations, in addition to ensuring that students enter their transfer institution with an affirming and supportive environment. Moving the needle on transfer student success will require redesign that both effects the entire student population at scale and the entire student experience from initial connection with potential transfer students through their completion of their degree.

10 In our work studying guided pathways, we have described this type of active collaboration between community colleges and local universities, school districts, and employers as efforts to develop regional talent supply chains (Jenkins et al. 2017), with notable examples including the transfer/dual enrollment partnership between school districts in Northern Virginia, Northern Virginia Community College, and George Mason University, and the DirectConnect transfer pathway between Valencia College and University of Central Florida (Jenkins, Kadlec, & Votruba, 2014).

11 For additional examples of programmatic investments between transfer partnerships identified nationally for having strong outcomes for transfer students, see Wyner et al. 2016.

12 Scholars detailing how colleges can build transfer-receptive cultures emphasize the need for an explicit focus on racial equity in institutional reforms, including centering race in transfer programming, partnerships, and other student supports. UCLA's Center for Community College Partnerships is a model program for building a transfer-receptive culture with a particular focus on serving historically underrepresented students through advocacy and programming designed to validate students racial/ethnic and other identities (for more detail, see Herrera & Jain, 2013a; 2013b or <http://www.cccp.ucla.edu/>).

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APPENDIX C: AN OVERVIEW OF TRANSFER AND ARTICULATION AGREEMENTS



NATIONAL TASK FORCE ON THE TRANSFER AND AWARD OF CREDIT



An Overview of Transfer and Articulation Agreements

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ABOUT THE SERIES

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EXECUTIVE SUMMARY

Articulation agreements are formal arrangements that establish course equivalencies and the transferability of academic credit in an effort 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, 2018). Transfer partnerships improve transparency for students to clarify the sequence of courses and major-specific prerequisites the student should complete prior to transfer.

Studies on the overall effectiveness of statewide articulation policies have found statewide agreements may have, at best, a minimal effect 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). Although articulation policy may be assumed to help facilitate transfer, the intended purpose of articulation policy is typically not to increase transfer rates. Rather, it may be more appropriate to expect that policy will reduce credit loss and time to degree for students who transfer as well as potentially improve degree completion for transfer students (Roksa and Keith 2008, 237). Few studies have focused on active collaborative partnerships between institutions, however, some evidence suggests institutional agreements may have greater impact on student transfer than statewide policies. Findings also bring attention to 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

Some states have been successful in overcoming challenges associated with developing, implementing, and maintaining these agreements. Washington and California, for example, have created successful state/system articulation models, and Fink and Jenkins (2017) identified high-performing transfer partnerships in Colorado, Connecticut, Florida, Louisiana, Massachusetts, and Washington. The practices of effective transfer partnerships share these characteristics:

- Institutions make transfer a priority
- Partners provide transfer maps and high-quality instruction
- Students receive advising from both the sending and receiving institution

Promising developments in articulating transfer credit include articulation between public and private institutions, articulation of non-credit and vocational training to equivalent credit-bearing coursework, articulation of applied associate degrees, and articulating credit based on stated learning outcomes.

From these findings 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 Officers (AACRAO), transfer articulation practices, policies, and agreements are one of the most actionable ways higher education leaders can support student success (2019, 4). In the absence of established agreements, the transfer of credits across institutions is often messy and unpredictable, leaving students and advisors confused and frustrated (Handel 2008, 4). Students often lose credits when they transfer from a community college to an in-state or out-of-state four-year college or university. A national study of community college students by Monaghan and Attewell (2015) found that less than 60 percent of students were able to transfer 90 percent or more of credits, and 14 percent of students were able to transfer a minimal number credits. Moreover, students who lost credits were later shown to be significantly less likely to complete a bachelor's degree (Monaghan and Attewell 2015, 83). Importantly, credit loss raises students' cost and increases time to degree (Hodara et al. 2016, ii).

Articulation agreements are formal arrangements that establish course equivalencies and the transferability of academic credit in an effort to facilitate seamless transfer of students' credit across postsecondary institutions. According to the Education Commission of the States, in 2018 at least 40 states¹ provided a foundation for articulation through common course numbering systems, transferable core curricula, or the transfer of associate degrees (ECS 2018). Statewide articulation guarantees that the transfer receiving institution will accept students' credit. However, state policies do not necessarily ensure that courses will count towards students' major requirements (Le et al. 2019, 10). Institutional agreements may be used to support articulation for institutions in states that do not have state-level policies as well as with independent institutions or those in other states (Holod et al. 2019, 30). Institutional agreements may potentially be more effective than state policy in ensuring transferable credits can be applied towards students' majors. Notably, transfer partnerships also provide guidance to students regarding the sequence of courses or major-specific prerequisites needed prior to transfer (Spencer 2019, 461).

Articulation policies and practices can offer benefits to students, faculty and institutional leaders. Transfer policies support access for students to earn a bachelor's degree by removing barriers to transferring credit, reducing credit loss and costs for students. Carefully designed and well-implemented agreements provide guidance to students in moving towards completing a bachelor's degree by outlining clear transfer pathways including major-specific prerequisites that students should complete prior to transfer (AACRAO 2019, 5). Articulation can also benefit faculty by providing insight into emerging issues and curricular content at partnering institutions and by affirming the relevance of the existing curriculum. Transfer agreements provide a way for community colleges to serve their constituents

1 Alabama, Alaska, Arizona, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nevada, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, Wyoming

by offering 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 profile of the institution (AACRAO 2019, 5).

Though well-designed and implemented articulation agreements prove beneficial for students and faculty and staff, these agreements are only as good as they are visible for students to access and benefit from them. A 2017 study by the United States Government Accountability Office (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). The same study revealed that articulation agreements were more commonly available on websites of public schools, yet noted that many private non-profit and for-profit schools also had established articulation agreements.

This paper provides an overview of the landscape of transfer articulation practices, policies and agreements to facilitate the award of academic credit and is based off 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. The 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 differ 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

The following section provides an overview of the different types of transfer articulation practices, policies, and agreements. Definitions and structures of agreements are guided by state legislation, accreditation bodies, institutional mission or transfer agreements with partner institutions. Agreements may be broad or specific and may include all institutions in a state or system or may be limited to specific 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 specific course to an entire associate degree and may be incentivized through guaranteed or joint/dual admission or enrollment with a partnering institution.

Course articulation

Course articulation is possible when courses at two or more institutions are determined to be equivalent. Although specific 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 offerings 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 specifically 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-profit institutions within the state (Le et al. 2019, 6).

Transferable core curricula

Transfer agreements and articulation policies may also facilitate the articulation of a core curricula or set of lower-division courses. For example, block transfer occurs when a student transfers a “block” of agreed-upon or articulated general education courses as a set or whole (AACRAO 2019, 7). As of June 2018, 37 states had some form of a transferrable core of general education courses that were agreed upon across all public postsecondary institutions in the state.³ Within these states, where a common course numbering system is not available, a crosswalk of transferable general education courses is provided to students. Additionally, Nebraska, Michigan, and Vermont have institutional or system partnerships that facilitate the transfer of a general core that is not legislatively mandated (ECS 2018).

Similar to course articulation, there is tremendous variation across states and institutions in how the transfer of a core set of courses looks and functions. For example, in Idaho, any student who completes an associate degree from an institution in the state which is accredited by a regional accrediting body will be considered as satisfying the general education requirements after transfer and is not required to complete additional requirements. Pennsylvania has a 30-credit transfer framework (PA TRAC) that allows for the transfer of up to 30 general education credits to participating Pennsylvania community colleges and universities in the state system.⁴ Similar to common course numbering, these systems are typically limited to public institutions in a single state.

Regarding interstate transfer, nearly one in five community college students and one in four students who initially enroll at a four-year institution subsequently transfer across state lines (Shapiro et al. 2015, 4). In response to the sizeable interstate transfer population, the Western Interstate Commission for Higher Education’s (WICHE) established a task force of representatives from its 15-member states to develop the first nationwide network of institutions (public and private) that provides students the option of a block transfer of lower-division general education credit across member states (WICHE 2014, 12).

Transfer of associate degrees

Transferable associate degrees, also referred to as 2+2 programs or transfer pathways, provide students an opportunity to transfer an entire two-year degree to a four-year institution and matriculate with junior-level status (Kisker, Wagoner and Cohen 2011, 1). A well-designed transfer pathway also ensures that associate degree credits fulfill important general education and major-specific requirements to facilitate timely degree completion (Le et al. 2019, 10). As of June 2018, 33 states had some form of a transferable associate degree.⁵ For instance, although the policy is not statewide, Delaware State University allows transfer of associate degrees from select community colleges in

2 Arizona, Arkansas, Colorado, Florida, Indiana, Kansas, Louisiana, Minnesota, Missouri, Nevada, New Mexico, North Dakota, South Dakota, Tennessee, Texas, Utah, Wyoming

3 Alabama, Alaska, Arizona, Arkansas, California, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Mississippi, Missouri, Montana, Nevada, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin

4 Excludes universities in the Commonwealth System of Higher Education (i.e., Pennsylvania State University and affiliated campuses) and private universities in the state.

5 Arkansas, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Mississippi, Missouri, Nevada, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Virginia, Washington, West Virginia, Wisconsin, Wyoming

the state (ECS 2018). Other states like Arizona have institutional agreements that offer 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 effective, it should be noted that many students transfer before earning an associate degree and therefore may not benefit from these types of agreements (Le et al. 2019, 8).

Guaranteed or joint/dual admission or enrollment

The 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. These 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 qualified 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 effectiveness of statewide articulation policies found statewide agreements may have, at best, a minimal effect 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 effects of the Student Transfer Achievement Reform Act (California Senate Bill [SB] 1440) (Baker 2016). The 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 find the implementation of ADTs had a significant effect on transfer rates, however, there was evidence to suggest effects 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).

There have been a few state-specific studies of the effects of statewide articulation and transfer policy. Findings by Boatman and Soliz (2018) showed mixed findings, specifically, students who completed the Ohio transfer module (TM) were more likely to vertically transfer and bring more credits with them when they transferred to a four-year institution. At the same time, TM students were found to be more likely to take slightly longer to complete a bachelor's degree (467–8). Similarly, Kisker, Wagoner and Cohen (2011, iv) used a case study design to analyze the development of transfer associate degrees in four states – Arizona, New Jersey, Ohio, and Washington. Findings revealed that transfer degrees in these states may lead to system efficiency and may yield cost savings for students and

⁶ In 2018 (after Baker's study was published) an agreement was signed that expanded ADT to include partnering independent, non-profit colleges and universities in and outside of California.

the state. Early outcomes data show improved transfer rates and degree completion in Ohio and Washington as well as reductions in time and credits to earn a degree in Arizona and Washington.

A few observations should be noted regarding research findings to date. First, Roksa and Keith (2008) state that although articulation policy may be assumed to help facilitate transfer, the intended purpose of articulation policy is typically not to increase transfer rates. Rather, the researchers argue that it may be more appropriate to expect that policy will reduce credit loss and time to degree for students who transfer as well as potentially improve degree completion for transfer students (237). To that end, there is some evidence to suggest that statewide agreements may decrease credit loss (Giani 2019) or increase bachelor's degree completion (Stern, 2016). Importantly, scholars have noted that the lack of support for articulation policy may be the result of researchers using methods that are not sensitive enough to measure the impacts of relatively broad policy interventions (Handel and William 2012, 59). Moreover, Giani (2019) points out that the reason for the disconnect between student outcomes and the impacts of articulation agreements is that state policies are not a panacea. Rather he notes, "these policies may serve as a necessary but insufficient foundation for facilitating the transfer and application of student credits from one institution to another (1117)." Nearly all studies to date have focused on articulation agreements rather than active collaborative partnerships between institutions (Kisker 2007, 284). This is particularly notable given findings by WICHE (2010) that suggest higher education communities may not view statewide approaches to articulation as positively as more collaborative processes (viii). Findings from interviews with transfer coordinators suggest that institutional articulation agreements may have more impact on student transfer than statewide policies (Handel and Williams 2011, 25).

Although current research provides limited guidance with regard to the specific effects or outcomes of articulation, study findings bring attention to challenges associated with developing, implementing, and maintaining articulation agreements:

- **Articulation agreements and policies do not always reduce credit loss.** For example, even though a course is articulated, a student may still lose credit if the receiving institution accepts the course as elective credit rather than towards the student's degree plan (Hodara et al. 2016, ii).
- **The complexity of students' transfer behaviors doesn't always align with articulation policies and practices.** Articulation agreements and practices are still largely set up for students who follow a traditional transfer pathway (Le et al. 2019, 3). An increasing number of students are transferring multiple times or across institutional types or state lines. Moreover, many community college students transfer from community colleges before completing the required threshold of core credits (Spencer 2019, 458).
- **The language of agreements can be complicated to understand and navigate.** Findings by Taylor (2019, 67) suggest that 63 percent of articulation agreements between community colleges and four-year institutions are written at or above a 16th-grade reading level. The large majority (93 percent) of articulation agreements are written at a level that is not easily understood by community college students.
- **Articulation is designed for a particular type of student – those who have identified a major and a path to transfer.** The transfer process "offers students extraordinary choice but insufficient guidance" (Handel and Williams 2012, 41). Students' uncertainty about their transfer path early on is a major factor in credit loss (Hodara et al. 2016, iv).
- **Agreements can be challenging to support and maintain** (Holod et al. 2019, 30). Although web-based information is appealing, maintaining the accuracy of data relies on institutions to continuously update information (Bers 2013, 21). Most community college advisors have extremely high advising loads and an equally high number of agreements from different colleges and programs to make sense of and keep up with (Hodara et al. 2016, iii).

- **A lack of trust and communication between community college and four-year institution faculty can impede articulation.** 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 different cultures that can make it difficult for students to navigate the transfer pathway (Handel and Williams 2012, 11).

THE POTENTIAL OF TRANSFER ARTICULATION

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

Successful state/system articulation models

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). The 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. The state has a transfer council, *Washington Student Achievement Council* (WSAC), that includes representatives from all institutional types and serves as the state’s transfer liaison. The council works closely with faculty to develop and maintain agreements that provide clear degree pathways for students (9). The 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 offer 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). That same year an MOU was signed between California Community Colleges and the University of California (UC) system that guarantees community college students a spot in the UC system who complete a pathways curricula and meet a minimum grade point average. This agreement builds upon previous MOUs that have been effective in increasing the number of community college students enrolled at UC institutions (Kamidi 2018). Moreover, the state of California has its own program called the *Articulation System Stimulating Interinstitutional Student Transfer* (ASSIST). Students can access ASSIST online and assess how their credits from a California community college will transfer to a UC or CSU campus. Findings suggest that ASSIST can be an effective tool in helping students understand their transfer options and plan out a transfer pathway (Le et al. 2019, 8–9).

High-performing transfer partnerships

Transfer partnerships are collaborations between one or more community colleges and bachelor’s degree institutions focused on improving transfer and bachelor’s attainment (Kisker 2007, 284). Innovative partnerships have emerged among higher education institutions to address limitations in state articulation policy. High-performing collaborations are also responsive to student and local community workforce needs (Holod et al. 2019, 30). Fink and Jenkins (2017) identified high-performing intrastate transfer partnerships across six states:

- Front Range Community College and Colorado State University
- Manchester Community College and Eastern Connecticut State University
- Broward College, Florida International University and Florida Atlantic University

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

These 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 offered 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

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 independent institutions (AACRAO 2019, 8). The successful articulation models in California and Washington extend articulation to private institutions. Similarly, the *Illinois Articulation Initiative* is a statewide transfer agreement that is accepted among more than 100 Illinois public and independent institutions (EPC 2018). Moreover, recent findings by Jensen and Horohov (2018) show that although state legislation does not include private institutions in Kentucky, most private colleges develop agreements that facilitate articulation in order to remain competitive with public institutions (449).

Another promising development is the articulation of vocational/technical courses and applied associate degrees. Recent efforts have been made to expand articulation to vocational associate degrees that were previously considered as terminal for the vocational field (Jensen and Horohov 2018, 448). This type of articulation is evident in Washington, which provides students with options to transfer a technical or applied science degree towards a bachelor's degree (WSAC, 2019). Additionally, four-year institutions are beginning to assess the articulation of blocks of non-credit career and technical courses for alternative credit for students who desire to pursue a bachelor's degree (AACRAO 2019, 11). Alternative credit is discussed in a separate ACE-commissioned paper in this series on transfer and award of credit.

Until recently, the currency of articulation has been limited to course equivalency. However, the growth of students transferring across institutions has made course and program articulation more complex and increasingly less manageable (WICHE 2014, 11). In response, community colleges and four-year institutions in fourteen Western states have agreed to participate in the *WICHE Interstate Passport Network* (WICHE, 2019). Through this network, students who achieve evidence of proficiency of agreed-upon learning outcomes earn a passport. Students who earn a passport can transfer to another public or private passport institution and receive credit for having satisfied the college's lower-division general education requirements – regardless of if the courses or credits are different from the sending institution (WICHE 2014, 12).

BEST PRACTICES TO DEVELOP, IMPLEMENT, AND MAINTAIN ARTICULATION AGREEMENTS

- **Promote transfer articulation as a shared responsibility.** Both community colleges and four-year institutions are essential to successful articulation and bachelor's degree completion efforts (Handel and Williams 2012, 16). Articulation is most likely to be effective when faculty at both the sending and receiving institutions understand the benefits of transfer and are willing to collaborate in the development of transfer maps and pathways (WICHE 2014, 8).
- **Build collaborative transfer partnerships.** Kisker (2007) found transfer partnerships that are more collaborative may face less internal resistance from participants and may be more likely to accomplish articulation goals. If partnerships are jointly developed and maintained, stakeholders work together to establish trust among faculty and administrators at the institutions – ideally before agreement activities are implemented (298).
- **Involve the right people.** Presidential or system leadership and support is critical. College and university presidents are influential in encouraging faculty and staff involvement and provide necessary and visible leadership to transfer reforms across the state (Kisker, Wagoner and Cohen 2011, iv). Successful articulation also depends on faculty participation (Jaeger et al. 2015, 629), and is most effective when it is a faculty-led process (Kisker, Wagoner and Cohen 2011, iv). Institutional staff (e.g., marketing, registrar, transfer advisors/counselors) are also important in the development, implementation and management of articulation agreements. In the case of implementing state policy, it is recommended to develop a standing articulation committee that includes representatives from all participating institutions. When appropriate and necessary, it may also be useful to appoint a state-level office or individual whose primary role is facilitating articulation throughout the state (WICHE, 2010, ix-x).
- **Provide advising support to promote and sustain articulation agreements.** The success of articulation agreements relies on providing students with early, knowledgeable and personalized transfer advising (Hodara et al. 2016, iii). An adequate number of academic advisors are needed at both the sending and receiving institution.
- **Establish a process to share agreements with campuses and students.** Articulation agreements should be proactively shared with students and advisers early in the enrollment and advising process. Agreements should also be integrated into college catalogs and documents and outreach initiatives (AACRAO 2019, 9). A strong presence for articulation is also required on college websites for students who self-advise (WICHE, 2010, ix-x).
- **Make agreements readable and accessible.** Existing and new agreements should be carefully reviewed for readability to make sure they are easily accessible and can be easily understood by community college students (Taylor 2019, 68). Using online systems like California's ASSIST along with personalized advising can maximize the benefits of articulation agreements (Le et al. 2019, 9).
- **Regularly evaluate and improve articulation agreements, policies, and practices.** Include student feedback in the evaluation process (WICHE, 2010, ix-x) and routinely update and make improvements to agreements and processes as needed. When possible, decrease the number of agreements to reduce the amount of information advisors and students need to review and make sense of (Le et al. 2019, 9).

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 effective 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 meant to direct leaders to a particular model or strategy, these findings and best practices provide practical guidance for developing, implementing, and maintaining articulation agreements that can more readily enable the award of credit.

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



NATIONAL TASK FORCE ON THE TRANSFER AND AWARD OF CREDIT



Enabling the Transfer and Award of Academic Credit for Prior Learning

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ABOUT THE SERIES

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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. The recognition of students' prior learning can be a critical lever to reduce cost and decrease time to completion and enhance students' self-confidence 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 qualified faculty to assess the content, scope, rigor, assessments, and college-level equivalency. Research has enumerated many benefits associated with recognizing students' prior learning for credit, these benefits extend to colleges and universities, students, and society. There 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 embedded with how quality of instruction is defined by those within academia. This paper elicits some of the most recent survey data of college and university administrators and staff regarding institutional practices and policies related to prior learning, as well as students' perceptions about and experience with credit for prior learning. The paper ends with an overview of policy and practice considerations to guide discussions around ways to better enable the transfer and award of credit for prior learning.

INTRODUCTION

In recent years, policymakers have turned to America's higher education institutions to increase national education attainment rates. Still, efforts have focused mostly on the traditional undergraduate degree-seeking population, i.e., students moving into postsecondary education immediately following high school graduation. For the conventional undergraduate degree-seeking population, transfer credit is often considered from a vertical or lateral transfer pathway where a student's transfer credits earned through formal classroom learning at one accredited college or university are accepted by another accredited postsecondary institution.¹

Though transfer solutions and reforms are gaining increased attention among higher education leaders and policymakers, existing solutions may be incomplete or insufficient when it comes to educating post-traditional learners, a population comprised of adults aged 25–64 already in the workforce who lack a postsecondary credential but are determined to attain their education while balancing school with work and life commitments (Soares 2013). It should be noted that post-traditional learners provide an enormous enrollment opportunity for colleges and universities, as they comprise a potential market of up to 80 million students who may utilize some of the \$500 billion invested in postsecondary education as well as non-institutional learning (Soares 2013). Moreover, employers are placing pressure on colleges and universities to develop innovative models that connect non-institutional learning to high-quality recognized credentials such as college degrees and certificates (Everhart, Bushway and Schejbal 2016).² One strategy for colleges and universities to respond to the emerging needs of post-traditional learners is to recognize the relevant college-level learning they have acquired in non-classroom settings for academic credit.

1 Vertical transfer refers to students transferring from a community college to a four-year college or university, whereas lateral transfer refers to students transferring to a similar institutional type, for example, from one community college to another community college.

2 Non-institutional learning, or extra-institutional or non-classroom learning, refers to validated learning that occurs outside of a traditional college or university setting in which learning outcomes are assessed.

Credit for prior learning (CPL), sometimes used interchangeably with the term prior learning assessment (PLA), refers to assessment and evaluation of one's prior college-level equivalent experience for the purposes of granting academic credit towards a postsecondary credential (Klein-Collins and Hudson 2018). This includes credit by exam, evaluation of military training and occupations, work-based learning, portfolio or individualized assessment of students' prior learning, and experiential learning (Lakin, Nellum, Seymour, and Crandall 2015), as well as apprenticeships and other forms of validated learning³ in which academic credit is granted where learning outcomes are demonstrated and documented to show the level of competency attained (Taylor and Soares 2020). When prior learning assessment is done well by institutions, for instance, when faculty or subject matter experts are engaged in the evaluation of prior learning that follows quality standards, it makes it easier to crosswalk prior learning to credit-bearing courses and credentials.

Credit for prior learning provides an on-ramp for adult learners who have acquired college-level equivalent learning through military or work-based settings, or job and skills-based training through community-based and civic organizations to have their college-level knowledge and competencies assessed, articulated and applied towards a credit-bearing credential.⁴ The recognition of students' prior learning can be a critical lever to reducing cost, decreasing time to complete a degree, and it validates that a learner is college material, which may in turn boost their self-confidence and enhance motivation. As higher education explores solutions and reforms to improve the transfer and award of academic credit, this ought to include an expanded view of how institutions can facilitate the transfer and award of credit regardless of how and where the student acquired learning, as long as the content, scope, rigor, and assessments are comparable with that of postsecondary institutions.

SOURCES OF PRIOR LEARNING

Credit by Exam

Credit by exam or challenge exams are an alternative to enrolling in and completing a course. These exams allow students to earn college credit by demonstrating mastery of knowledge in a given subject area by passing an examination. Examples include standardized exams such as Advanced Placement (AP), College-Level Examination Program (CLEP), UExcel® Credit By Exam (Excelsior College), and Defense Activity for Non-Traditional Education Support (DANTES) Subject Standardized Tests (DSST). The GED® test, a high school equivalency test, is aligned to college- and career-readiness standards and has earned ACE credit recommendations in four subject areas when a student scores high enough on a particular subject exam. In addition, credit may be awarded based on passing an institution's faculty-developed or departmental challenge exam. The examples provided are not exhaustive of all standardized tests or challenge exams available.

Individualized or Portfolio Assessment

A portfolio of learning experiences and noncredit learning for faculty with subject matter expertise to assess and determine the amount of credit to be awarded. This assessment may also be in the form of a skill simulation/demonstration or an interview.

Military Training and Occupations

Service members and veterans receive immense amounts of training that span diverse fields. Credit for prior learning allows these individuals to apply the skills they have already demonstrated towards a degree or certificate ("Credit

3 Validated learning occurs when a student has demonstrated and documented mastery of learning outcomes or competency attainment for a particular learning activity, course, or experience.

4 Examples of community-based and civic organizations providing skills-based and job training programs include Jobs for the Future, Year Up, and Goodwill Industries.

for prior learning” 2019). ACE has been evaluating military training across the armed services since the 1950s and military occupations since the 1970s. ACE utilizes faculty from colleges and universities across the country to make determinations about course-level equivalencies and issue credit recommendations for military training. Faculty also examine the official documentation for the military occupational specialty or rating and validate the occupation’s critical tasks and skills during interviews with service members to issue credit recommendations. Service members are issued a Joint Services Transcript that lists all of their training and the associated ACE credit recommendations, for which colleges review to make credit award determinations. Many colleges have developed sophisticated crosswalks between military credit recommendations and their existing courses to facilitate the transfer credit award process and make it more transparent for the student.

Non-accredited Education Providers

Non-accredited education providers consist of education and training providers that are not officially higher education institutions but offer synchronous and asynchronous programs aligned either to a specific workplace need or more broad general education curricula. Such providers include boot camps (e.g., Lambda School and DevMountain), training companies (e.g., ALEKS Corporation and American Management Institute), professional associations (e.g., Project Management Institute and Association for Talent Development), online general education providers (e.g., Straighter Line and Sophia Learning), and higher education content creators (e.g., Pearson or Lumen Learning). Given the nature of their flexible, asynchronous format, these programs are uniquely positioned to serve the needs of adult learners.

Workplace Learning

Workplace learning consists of learning experiences that occur in the workplace and which involve formal elements associated with documenting and measuring the learning that occurs. This type of learning includes apprenticeships, training programs, and on-the-job training, and generally aims to provide employees with knowledge, skills, and abilities to succeed in current or future work. Workplace learning has grown in prevalence in recent decades, with explosive growth among corporate universities from the 1990s to present, largely in response to companies needing to remain competitive globally (Soares 2013). The broad term “workplace learning” also encompasses programs offered by community-based organizations that offer job readiness training and job skills programs to help individuals transition into the workplace⁵; these types of programs are also evaluated by third-party quality assurers like ACE’s College Credit Recommendation Service (CREDIT®) to assess the college-level equivalency to issue credit recommendations.

QUALITY ASSURANCE OF PRIOR LEARNING

Much of the learning evaluation that occurs to make determinations about awarding credit for prior non-institutional learning happens at the institution that is awarding the credit (i.e., the credit receiving institution). When determinations are made at the institutional level and do not utilize a third-party or external evaluators (discussed later in this section), practitioners look to external quality standards to guide their evaluation of learning for things like individualized portfolios, challenge exams, and review of external learning.

Campus practitioners may look to the Council for Adult and Experiential Learning (CAEL), a national nonprofit association that helps adult learners gain recognition for their relevant prior work and other experience for academic credit. To help learners and colleges and universities better understand and assess prior learning, CAEL developed

5 Examples of community-based organizations include Jobs for the Future, Goodwill Industries, and Year Up.

and promulgates *Ten Standards for Assessing Learning* which many colleges and universities use—directly or indirectly⁶—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. The 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 certifications, and other non-credit course providers to make determinations about creditworthiness that result in credit recommendations for individuals who successfully complete the training or certification (Lakin et al. 2015). These entities range from programmatic and national accreditors, industry and vocational standards-setting bodies, and nonprofit 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®)

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 objective and subjective measures and independent faculty evaluators to assess the content, scope, rigor, and assessments of learning that takes place in the workplace and through non-accredited education providers to determine alignment with current postsecondary education standards. Faculty evaluators make college credit recommendations that ACE publishes and which institutions may accept for transfer credit and apply toward a student's degree

6 Schools may utilize the CAEL standards either directly, because they seek these standards out and apply them to their practice, or indirectly, as most of the regional accreditors reference the CAEL standards, or a version of them, in their PLA policies.

7 CAEL's Ten Standards for Assessing Learning can be accessed at <https://www.cael.org/ten-standards-for-assessing-learning>.

program. Over its four-plus decades, CREDIT has evaluated over 35,000 courses and training programs, paving the way for adult learners to apply work-based learning towards a degree.

National College Credit Recommendation Service

The National College Credit Recommendation Service (NCCRS) emerged from a 1973 pilot study initiated by the Board of Regents of the University of the State of New York to assess the potential of a college credit advisory service. In 1974, NCCRS began using college faculty to evaluate non-college training and education programs and translating them into college credit equivalencies. Since its inception, NCCRS has evaluated and recommended for college credit approximately 5,200 courses, exams, and educational programs from more than 500 organizations across the United States.

ADVANTAGES OF AWARDING CREDIT FOR PRIOR LEARNING

There is a national consensus around the need to significantly increase college degree completion to meet the nation's workforce development needs, yet degree completion has been slow to improve, and national attainment goals are left unmet. Credit for prior learning is an important and contributing factor to meeting the nationwide efforts to raise education attainment levels in the United States (Ryu 2013). This is especially important for the 36 million Americans that have some postsecondary education and training but have not completed a degree and are no longer enrolled (Shapiro, Ryu, Huie and Liu 2019).⁸ Providing adult learners with the opportunity to have their prior college-level equivalent learning and experience recognized for transfer credit to earn a college degree is one strategy to help close the nation's degree attainment gap.

Colleges and Universities

A 2019 American Association of Collegiate Registrars and Admissions Officers (AACRAO) survey of colleges and universities in the United States captured institutions' self-reported reasons for offering PLA. The reasons provided were distilled into four themes: 1) attracting students, 2) assisting students with getting the credit they deserve, 3) improving degree completion/student success, and 4) reducing student costs and time to degree (Kilgore, forthcoming).

Among the institutions with at least three years of experience in offering credit for prior learning, 38 percent increased how students can earn credit in that same timeframe. The expansion of PLA at these institutions was driven by several factors including: an expansion of how military credit is accepted at the institution; changes to how advanced placement exam and international baccalaureate program credits are accepted; state or institutional-level initiatives aimed at intentionally increasing options to increase completion and remove barriers, an attempt to attract more students; and an increasing request for PLA credit from students, in particular adult students.

"We have to recognize the fact that individuals learn outside of the classroom and we are looking for a way to match what we are required to do for accreditation and what we think meets the same student learning outcomes for the program or the courses."

Anonymous survey respondent
2019 AACRAO Survey

⁸ Data is based on individuals included in the National Student Clearinghouse database and may not capture all students. Notably missing from this number would be adult learners who have acquired college-level learning outside of the traditional classroom but have yet to transfer their credit-equivalent learning to a college or university.

Students

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 they have already demonstrated outside of the classroom. Further, research shows that students who earn credit for prior learning have higher persistence and degree completion rates compared to their peers who enter without prior learning credit and receiving credit for prior learning can be a motivating factor and validate for learners that they are college materials (Klein-Collins and Hudson 2018).

AACRAO surveyed over 1,000 currently enrolled college students in late fall 2019 and of those, most are aware that they can seek academic credit for non-classroom-based experience, more than half had already done so, and 90 percent were successful in earning credit (Kilgore, forthcoming).⁹ Mirroring the institutional perspectives on why

One in four who earned PLA credit indicated that PLA “made it possible for them to complete a degree/program they otherwise would not have.”

they offer PLA, two-thirds of the students selected “shortening the time to their degree” as a reason for pursuing PLA. Half noted that PLA reduced the cost of their degree. One in four who earned PLA credit indicated that PLA “made it possible for them to complete a degree/program they otherwise would not have.”

Institutional respondents to the AACRAO survey perceived there to be certain student characteristics that made one student more likely than another to be able to take advantage of PLA. Common characteristics include:

- “Academically prepared
- Adult students
- Active military
- Middle to upper socio-economic-status
- Recent high school graduates with AP and IB
- Returning adult students
- Veterans”

From the student data AACRAO learned that “Asian students were more likely to attempt to earn credit while American Indian and Native Hawaiian/Other Pacific Islander students were less likely. A similar pattern was found among the students who were successful in earning credit for their prior learning. There were no distinct differences from the sample averages for other populations of students (i.e. Black, White, Hispanic/Latino)” (Kilgore, forthcoming).

Klein-Collins and Hudson (2018) examined student outcomes of various prior learning methods and found that some prior learning methods were associated with higher levels of degree completion than others, notably portfolio assessment and standardized exams; however, they cautioned that further study is needed because student characteristics and institutional policies and practices could have been a significant contributing factor in their study.

⁹ In 2020, *An Examination of Prior Learning Assessment Policy Practice as Experienced by Academic Records Professionals and Students*, by Wendy Kilgore, will be published by American Association of Collegiate Registrars and Admissions Officers (AACRAO) and Western Interstate Commission for Higher Education (WICHE).

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 fiscal year budget request in the *National Defense Authorization Act* included \$601 billion—roughly 55 percent of the total NDAA budget—of taxpayer dollars for military training, force readiness, and associated equipment (NDAA 2017).¹⁰ Military education and training is evaluated by ACE and credit recommendations awarded for which colleges and universities consider accepting for transfer credit. However, service members often face an uphill battle when attempting to secure academic credit for their prior military training and experience (Ferris-McCann 2017). A 2012 study by the U.S. Department of Veterans Affairs revealed that less than a quarter of the 773,000 veterans using GI bill benefits benefited from receiving credit for their military training, education, or experience (Ferris-McCann 2017). When colleges and universities do not recognize military training for credit, taxpayer dollars are inefficiently utilized to pay for the same learning when service members and veterans must use their GI bill benefits to enroll in courses at a postsecondary institution. As the rise of learning in non-institutional settings becomes more commonplace, this necessitates a shift in how the quality of learning is perceived, that is, destigmatizing prior learning acquired outside of the classroom and focusing on what was learned as opposed to where the learning occurred.

BARRIERS TO AWARD CREDIT FOR PRIOR LEARNING

Even though there is a well-developed methodology for assessing the college-credit equivalence for prior college-level learning acquired in non-classroom settings, ranging from military training to registered apprenticeships and employer-sponsored training, several inefficiencies exist. Most colleges offer some kind of PLA like AP credit, CLEP credit or at least some credit for military training. But options are usually very limited in terms of the types of PLA methods as well as how PLA credits can be applied to a student's degree program. There can be strict limits on the number of PLA credits that can count toward a degree, or they could be limited to just elective or general education credits. In addition, students earning PLA credit through institutionally evaluated methods like portfolio or review of external training can discover that these credits do not easily transfer to other institutions.

While it is easier for learners to request their records from one college and translate that learning to another, still usually without guarantees that credit will transfer, it is even more difficult for students to gain credit for their prior learning for a number of reasons:

- Alternative credit accepted for transfer at one institution may not be accepted for transfer at a subsequent receiving institution¹¹
- There is uncertainty by college faculty and staff regarding the content, scope, and rigor of non-institutional learning and assessments
- Lack of understanding by college faculty or staff regarding course descriptions or equivalencies for which a student is requesting transfer credit
- Colleges may not recognize the pass/no pass nature of non-college training assessments

10 The NDAA does not separate out the line item amount for education and training. This figure includes spending on related activities for the Army, Marine Corps, Navy, Air Force, and Coast Guard.

11 This would most likely occur when a student transfers either vertically or laterally and has alternative credit on their transcript from the sending institution but is not recognized by the receiving institution; this would lead the student to lose credit and possibly need to retake a course for which they already received credit.

- 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

There are some barriers to offering PLA internally at an institution; for example, faculty may have concerns about the rigor of a course they did not teach themselves or staff and administrators may have concerns over the perceived loss of revenue by awarding prior learning credit. These barriers may be compounded when introducing other structural barriers surrounding the transferability of PLA credit. That said, perspectives on PLA need not be limited by focusing only on the issue of transferability of PLA credit earned at a different 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 offer PLA methods and services at your institution as well.

MAKING PRIOR LEARNING MORE ACCESSIBLE AND EQUITABLE

Making learning more accessible has significant 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 field 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. This 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 different categories of barriers to PLA (Kilgore, forthcoming). The first are barriers against offering any type of PLA options for students. “Institutions with one or more of these characteristics are statistically¹³ less likely to offer PLA options to students: small, identified as rural-distant by IPEDS locale, private not-for-profit, or admit 49 percent or fewer applicants. However, the effect size¹⁴ associated with the differences 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.

The second type of barriers exist in PLA practice and policy that may negatively impact students' ability to earn PLA at institutions where it is offered. Few institutions have access to student level demographic data tied to credit awarded through PLA so it is difficult to quantify whether issues of inequity exist at most institutions. However, about a third of institutions offering PLA noted that their institution has policies and/or practices which make it more difficult 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:

12 The 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.

13 In the context of this report, the term “statistically” means there is a statistically significant difference from the mean as measured by a Chi-Squared test unless otherwise stated. If the term statistically is not used to describe a difference, then the value is different descriptively but not statistically.

14 Effect size = Cramer's V unless otherwise stated.

- “The amount of work required of a student to get their prior experiences evaluated
- Limits on course applicability
- Limits on both AP and IB applicability specifically
- Lack of faculty buy-in of the value and academic rigor equivalency associated with PLA
- Lack of student awareness and difficulty 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 *most institutions report having policies that limit the credits which can be earned through PLA* 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 specific conditions”

POLICY AND PRACTICE CONSIDERATIONS

Acceptance of credit for prior learning often varies widely by colleges and even within departments at the same college, and confusing language and disjointed operations around credit acceptance can make it difficult for learners to navigate (Lakin et al. 2015). A step toward achieving greater acceptance of credit is for college faculty and administrators to gain a deeper understanding about how third-party evaluation of the content, scope, rigor, and assessments of non-institutional learning translates into learning outcomes that can be appropriately connected into credit-bearing courses at the right level (Taylor and Soares 2020).

As college and university leaders and states consider how to integrate or strengthen credit for prior learning as a recognized transfer pathway, it is beneficial to understand the current landscape of policy and practice that enables learners to move to and through learning pathways and ultimately degree attainment. It is also important for college leaders to identify, track, and report on metrics that demonstrate transparency of credential outcomes, as discussed in the next section of this chapter.

State-Level Policies

State policymakers are increasingly aware of the value of PLA in improving students’ education attainment, decreasing time to completion, and lowering the cost of a degree (Sherman and Klein-Collins 2015). Some states have undertaken efforts to encourage and streamline the processes that regulate the provision of credit for prior learning to allow students to earn college credit for skills and knowledge gained outside the classroom. State policies regarding the transfer and award of credit for prior learning help to provide consistency among institutions and help students better navigate the transfer pathway between schools within the state (“Credit for prior learning,” 2019).

About two-thirds of all states have established policies pertaining to the recognition of prior learning for skills and training military-connected students have acquired through their military service (Sherman and Klein-Collins

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 policies¹⁶ (Education Commission of the States 2017). In addition to the state-level policies on PLA, nine states offer 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.

Institutional Policies and Practices

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

If and/or how PLA is recorded on the transcript PLA category

	Transfer credit	Residential credit	Not recorded on the transcript	Count
Standardized exams	76%	18%	6%	278
Individual Assessments	54%	39%	7%	180
Evaluation of non-college education and training	70%	21%	9%	256
Conversion of institutional noncredit to credit	70%	28%	2%	47
Faculty-developed exam, not standardized at the institutional level	40%	53%	7%	136

Source: Kilgore, forthcoming

¹⁵ Arkansas, Colorado, Connecticut, Hawaii, Illinois, Maryland, Oregon, Tennessee, Washington, and West Virginia have enacted state-wide PLA policies.

¹⁶ Alabama, Alaska, Idaho, Indiana, Kansas, Minnesota, Montana, Nevada, North Dakota, Oklahoma, South Dakota, Utah, Vermont, and Wisconsin have enacted PLA policies at the system-level.

Table 2**Type of credit assigned to individualized learning assessments**

	Course equivalency credit	Block credit	Other type of credit	Count
Portfolio assessment	89%	6%	4%	178
Skill simulation	87%	3%	10%	30
Skill demonstration	81%	6%	13%	48
Interview-based assessment	82%	6%	12%	49

Source: Kilgore, forthcoming

Voluntary Multi-State and Multi-Institutional Consortia**ACE Alternative Credit Project™**

In 2015, ACE developed a voluntary consortium of 58 regionally accredited public and private, two- and four-year colleges and universities from across the U.S. that would articulate ACE-credit recommended courses from non-institutional providers and guarantee acceptance of some or all of the 104 low-cost, online general education courses for direct transfer credit. This guaranteed acceptance was made possible by building a transparent quality assurance process where the project's founding institutions, course providers, and ACE co-developed a course quality assessment rubric and specific outcomes of the quality assurance review (Steele 2018). The transparent process allowed learners with varying degrees of prior knowledge or preparation about navigating higher education to search by course providers, subject areas, or participating institutions, and quickly identify how each institution would accept courses for direct transfer credit toward their degree. Over the three-year duration of the project, 646 unique students participated in the project and transferred at least one course to a participating institution (Steele 2018).

Consortium for the Assessment of College Equivalencies

The Consortium for the Assessment of College Equivalencies (CACE) is a consortium of five colleges and universities that facilitate adult learners' degree completion.¹⁷ CACE members promote rigorous common quality standards to evaluate college-equivalent learning from organized, structured non-credit learning experiences, including training, certifications, and licenses. Through a reciprocal agreement, CACE members award credit to students according to evaluations conducted by other CACE member institutions.

Multi-State Collaborative on Military Credit

The Multi-State Collaborative on Military Credit (MCMC) is an interstate partnership of 13 states¹⁸ focused on advancing best practices designed to ease the transition of veterans and their families from military life to college. Member schools emphasize the translation of competencies acquired by service members through their military training and experiences toward meaningful college credits. Participating states share best practices regarding articulation of credit, certification and licensure, communications, and data and technology.¹⁹

¹⁷ CACE members include Community College of Vermont, Charter Oak State College (CT), Granite State College (VT), SUNY Empire State College, and Thomas Edison State University (NJ). More information is available at <http://www.cacereviews.org/>.

¹⁸ Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin

¹⁹ For more information on MCMC, visit <https://www.mhec.org/policy-research/multi-state-collaborative-military-credit>.

CONCLUSION

Developing a better understanding of and trust in, namely among faculty and academic leaders, credit for prior learning pathways may help colleges to better position these as pathways toward degree attainment. For college administrators and faculty, building trust in these pathways begins with seeking to understand how QAEs assess learning in non-institutional settings to, in turn, champion these efforts on their campus. This also means third-party quality assurers need to be transparent regarding how they assess learning so credential issuers can easily articulate learning that occurs in various contexts into and across credentials offered by different educational providers. Institutions who have developed and implemented effective prior learning practices and policies have noted the positive benefits for students, which include lowering cost, accelerating degree completion, and eliminating the need to take classes in subjects they have already mastered (Klein-Collins 2015). The value proposition for institutions will differ based on each institution's guiding principles around prior learning and the appropriateness of prior learning for its students and aligned to the institution's mission.

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APPENDIX E: TECHNOLOGY AS AN ENABLER OF CREDIT TRANSFER



NATIONAL TASK FORCE ON THE TRANSFER AND AWARD OF CREDIT



Technology as an Enabler of Credit Transfer

WENDY KILGORE, AMERICAN ASSOCIATION OF COLLEGIATE REGISTRARS AND ADMISSIONS OFFICERS

ABOUT THE AUTHOR

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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 of and Award 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

The technology ecosystem related to the transfer of credit is complex and multi-dimensional. There 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. The 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 difficulties some students run into when trying to figure 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

The effective 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 efficient student services. These 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 staff are trained on these solutions, level of cross-solution data integration, and institutional policies or practices that impact the implementation of transfer credit. Appendix A details the interdependency of technology, policy, and practice and how each can impact the degree to which technology enables efficient, accurate, and student-centric credit transfer.

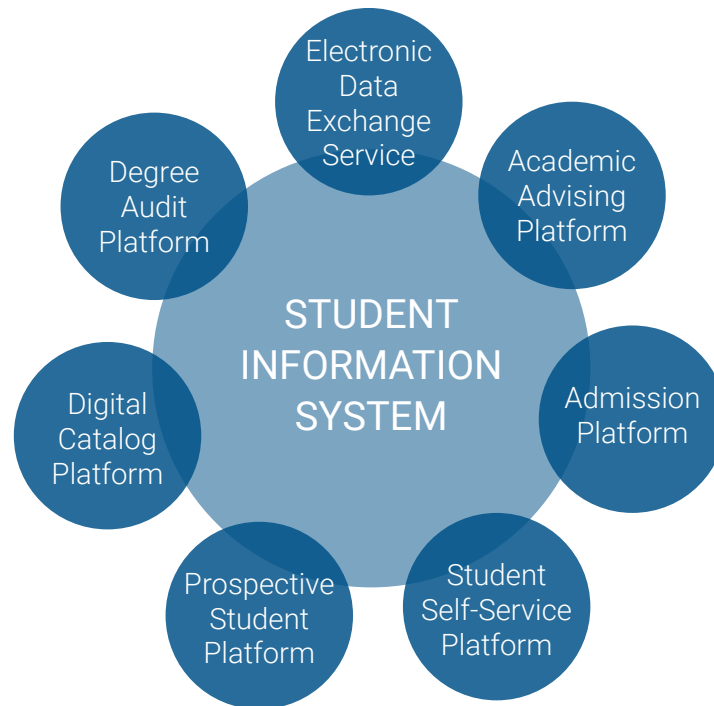
When policy, practice, and technology fully align to support transfer of credit, it is quick, accurate, mostly automated, and widely visible to facilitate navigation by students, advisors, and others regarding enrollment choices and educational credential pathways (see Fig. 1).

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

PROSPECT	• Enable potential students to see how their transfer credits apply at the receiving institution, or academic program, to help make an enrollment decision. • Use transfer "what-if" data to target recruitment efforts. • Enable recent high school graduates with college credits to see how their credits apply at the institution, or academic program, before applying.
APPLICATION TO MATRICULATION	• Eliminate or at least minimize the hands-on effort needed to enter credit in SIS. • Use transfer credit data to improve the efficiency of admissions decisions, and financial aid awards, if applicable. • Make transfer credit awarded available to advisors before the start of the term or before registration. • Accurately use transfer credit data in the course registration process. • Assist with transfer credit evaluation through access to digital catalogs.
POST MATRICULATION	• Accurate use of transfer credit in the degree audit system. • Allow advisors and students to plan for "what-if" scenarios, like change of major. • Timely transfer credit articulation for swirlers, i.e., students who transfer to multiple institutions. • Transfer credit and satisfactory academic progress. • Support reverse transfer.

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 different types of technology are needed to support the functionality described earlier. The various non-SIS based needs are filled by software-as-a-service solutions (third-party providers), supplemental software additions, institution-developed software solutions, or some combination thereof (see Fig. 2).

Figure 2: An example of a transfer technology ecosystem.

Electronic data exchange¹ (EDX) is the existing technology with the most potential to change transfer of credit positively; it has been around for more than 30 years but is not widely used. In 1996, Sierra Systems Consultants, Inc. was contracted by the U.S. Department of Education's National Center for Education Statistics to ensure a project called *The Statistical Networking Applications Project* (SNAP) was successful. An overall goal of SNAP was to implement several different electronic exchange of student records (Sierra System Consultants 1997). These were:

- “Transaction Set 130 - Student Educational Record
- Transaction Set 131 - Student Educational Record Acknowledgment
- Transaction Set 132 - Personnel Information
- Transaction Set 133 - Educational Institutional Profile
- Transaction Set 146 - Request for Student Educational Record
- Transaction Set 147 - Response to Request for Student Educational Record
- Transaction Set 152 - Statistical Government Information
 - Common Core of Data (CCD)
 - Integrated Postsecondary Education Data System (IPEDS)
 - Library Survey” (Sierra Systems Consultants, 1997 pg. 7)

Sierra Systems Consultants, Inc. also developed and shared a business case for electronic data exchange in 1997. In it, the authors summarized the history of electronic student records exchange initiatives. In the late 1980s, the *ExPRESS task force*, one of two working groups known to be simultaneously addressing the issue, identified six benefits of electronic data exchange, which are still salient today:

¹ EDX is an umbrella term referring to Electronic Data eXchange. This could include EDI, XML, JSON or any exchange of “data” between two computer systems as opposed to a document such as a paper or PDF.

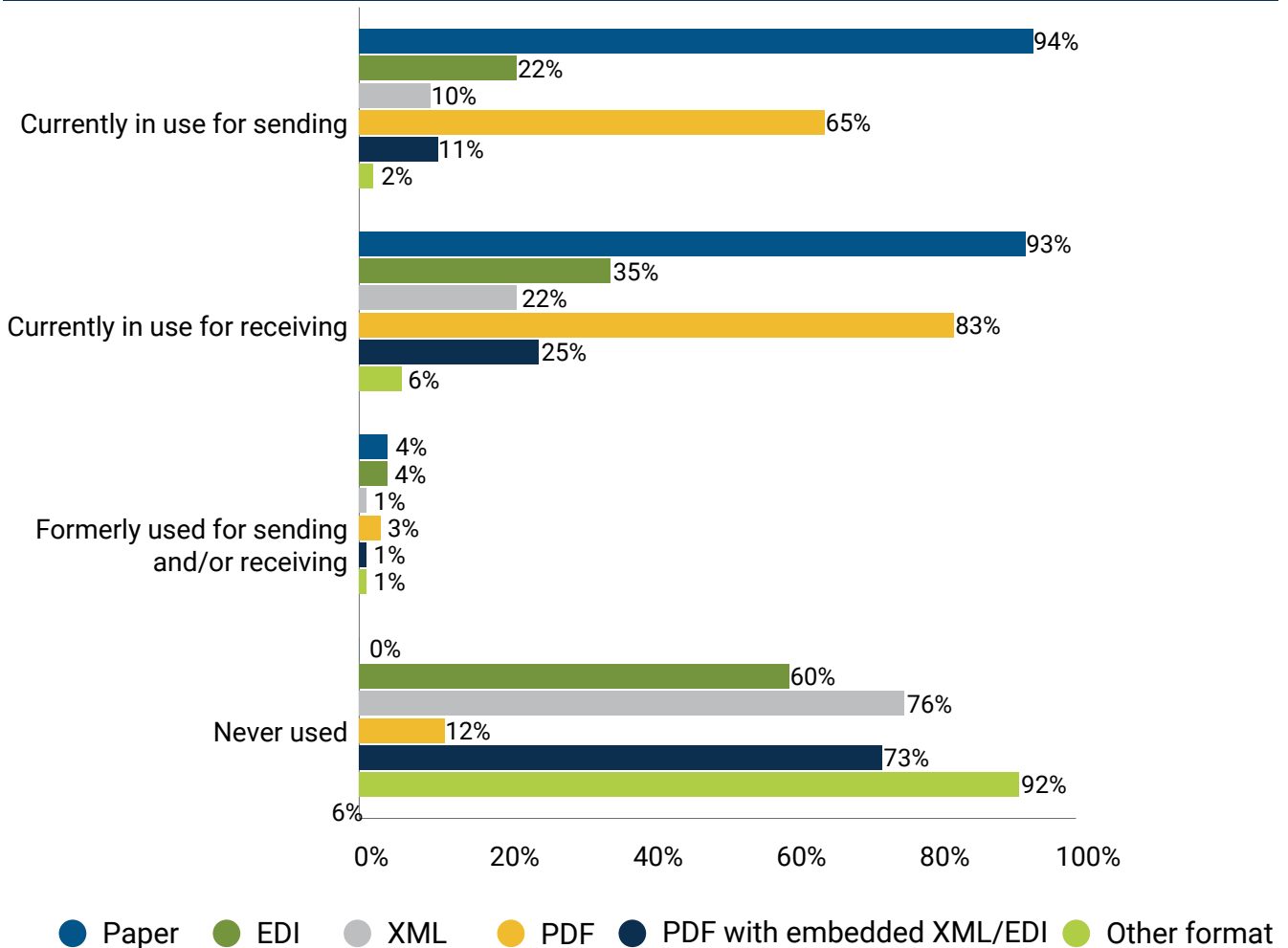
- “faster transfer of student records”
- “timely and appropriate placement into educational programs”
- “increased reliability & consistency interpreting records”
- “increased security over other exchange methods”
- “reduced direct and indirect costs”
- “promotion of greater national compatibility” (Sierra 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 XML² (also not widely used).

The 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 benefits 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 Server³ (National Student Clearinghouse 2019).

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

3 The Standardization of Postsecondary Education Electronic Data Exchange (SPEEDE) server was developed and operated as “...a means to process and deliver transcripts...” (electronically). “The server that first provided for the electronic data exchange of transcripts and later for other types of student academic records was named SPEEDE.”

Figure 3. Official transcript formats (all that apply)

Source: AACRAO *Official Transcript Formats: Results of the AACRAO September 2019 60-Second Survey*

BARRIERS AND CHALLENGES TO FULLY FUNCTIONING TRANSFER ENABLING TECHNOLOGIES

As noted above, the optimal use of technology to support transfer of credit is interdependent on policy, practice and multiple technologies working seamlessly. The same factors that shape whether or not a new technology will be implemented successfully also demark the potential barriers. The lack of any of the following will result in a less than optimal application of technology to facilitate the transfer of credit:

- Lack of an administrative champion to support the initiative
- Lack of institutional buy-in to use the technology once implemented
- Lack of complete training for all end-users
- Lack of ongoing optimization checks and upgrades
- Lack of an alignment of policy and practice with technology

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 benefits, lack of time, lack of information technology support, system incompatibility, and lack of institutional demand for the functionality (AACRAO 2019). These 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. That is, both parties, the sender and the receiver, must be using the same file format. Independence (from identical file 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 configurations that pose a higher likelihood of negatively impacting transfer of credit, if not aligned properly, include:

- The breadth and depth of articulation rules built into the transfer system impacts credit transfer.
 - The 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.
- The extent to which receiving institutions document *all* 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.
 - These 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.
- The 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 sufficient number of catalog years to account for most transfer students applying in any particular academic year.
- The lack of a trusted and fully implemented degree audit system removes the value proposition for potential students who have earned college credit prior to being admitted of running “what-if” scenarios and time-to-degree planning scenarios. It also can make advising more difficult.

PRIVACY, TECHNOLOGY, AND TRANSFER OF CREDIT

Although there is an inherent privacy risk associated with sharing personally identifiable information between institutions and with technology vendors, data privacy protection is a cornerstone of any academic record sharing method. The Family Education Rights and Privacy Act (FERPA) is the predominant regulation dictating how, when, and with whom this data may be shared (U.S. Department of Education n.d.). Providers of higher education technology are held to the same FERPA data protection requirements as the institutions for whom they contract, and, as such, they must establish and maintain compliant technology, policies, and practices. The risk to an individual’s privacy is minimal when compliance is properly carried out.

There is an emergence of new technology called blockchain, and if it becomes the predominant method of sharing transcripts, privacy concerns virtually disappear as disclosure becomes the province of the student. *Reuters* describes blockchain technology as this: “A blockchain is a database that is shared across a network of computers. Once a record has been added to the chain, it is very difficult to change. To ensure that all the copies of the database are the same, the network makes constant checks” (Reuters 2018). Probably the most familiar application of blockchain is BitCoin, but the technology is not limited to monetary purposes.

PROMISING TECHNOLOGIES

At least three entities are examining how and if it is possible to make the implementation of electronic data exchange (EDX) less complicated. As summarized earlier, the most challenging aspect of EDX implementation is configuring the student information system receiving transcript data to accept disparate forms of data. This configuration takes time and expertise not often readily available. What is needed is a translation tool/utility that requires little to no programming or complicated configuration at the institution level. A technology solution, or solutions, that could support EDX in this manner would greatly increase the likelihood that high schools and colleges would use it, if the cost were reasonable. This technology could include software as a service or add-on technology.

Blockchain technology is also promising in the way it could remove the need for an intermediary (e.g., higher education institution or transcript vendor) in the electronic records sharing or disclosure process and enable students to have sovereignty over their record.

CONCLUSION

The effective and complete implementation of available transfer credit evaluation related technology in conjunction with student-centric policies and practice has the potential to transform how institutions serve prospective and current students. Among the possible benefits are:

- an increase in the information available to prospective students to help them select an institution and program that is a good match for them
- the faster, more consistent, and more accurate transfer of credits from one institution to another
- the timely and appropriate placement into educational programs and courses
- an increase in security over other methods for sharing transcript data
- a reduction in the direct and indirect costs associated with transfer credit processes
- an increase the accuracy and timeliness of academic advising at high schools for college-bound students
- an increase in the accuracy and timeliness of academic/transfer advising at colleges from which many students transfer to another institution
- an increase in the timeliness of transfer credit-related academic advising at comprehensive institutions
- an increase in the accuracy of degree progress checks.

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APPENDIX A. INTERDEPENDENCIES OF POLICY, PRACTICE, AND TECHNOLOGY FOR CREDIT TRANSFER ACROSS THE STUDENT LIFECYCLE⁴

The information provided here is intended to highlight the relationship between transfer of credit enabling technology and institutional policy and practice. In order to take advantage of the full benefits of technology, policy and practice must be configured in a way that they do not bottleneck the process with unnecessary or missing steps.

Prospective students (aka prospect)⁵: Technology is available to support prospective students who have not yet applied to the institution. It is typically self-service in that the prospective student is in charge of entering transfer course information into the software.⁶

- a) This technology can address:
 - i) Identifying institutions that will accept transfer credits
 - ii) How credits will transfer (e.g., general education, elective, major-specific)
 - iii) List course descriptions and course learning outcomes
 - iv) Details about the admissions process, cost of attendance, etc.
 - v) Link the prospective student to the institution's admissions staff
- b) Interrelated **policies** include:
 - i) How and who makes decisions regarding course articulation
 - ii) How a course can be transferred, i.e., direct equivalency, elective, major applicable, course age limitations, etc.
 - iii) Articulation agreements between institutions
 - iv) If applicable, state-level transfer policy
- c) Interrelated **practices** include:
 - i) How often the transfer articulation rules are updated and the breadth and depth of those rules (i.e., the institutions for which the rules apply and the duration for which the rules apply)
 - ii) How accurately the rules are applied
 - iii) What percentage of the institution's course catalog has equivalencies built
 - iv) The practice of how, who, and when prospective students' questions about courses will be answered, when courses are not already built into the technology solution

⁴ Student lifecycle is defined as prospect, applicant, admitted, matriculated, completed, alumnus.

⁵ For the purpose of this document, the terms prospective student and prospect mean only individuals who have not yet applied. Once a person has applied, he or she is considered an applicant.

⁶ An example of this technology is Transferology by College Source: <https://www.transferology.com/index.htm>.

Applicant: Technology may be applied to any or all of these related functions: 1) the application; 2) receiving and processing transcripts from another institution; 3) degree audit/advising; and 4) financial aid. Not all applicants were once prospects and may enter the transfer credit process as an applicant instead of as a prospect. The application may be the first point of contact from a prospective student. As such, some of the policy and practice considerations are the same for prospective students as for applicants.

- a) Credit transfer-related technology can support:
 - i) Self-reported transfer credit earned as part of the application to be used in an initial admission decision
 - ii) Accurately applying transfer student admission rules to the electronic file
 - iii) Triggering communication to the applicant that their transcripts are needed and how to submit them
 - iv) The automated articulation of transfer credit once the transcripts have been received
 - v) The automated communication of the articulation decision to the applicant
 - vi) Initiating a business process to address exceptions to the articulation rules in a timely manner
 - vii) Sharing/tying the credits to a degree audit program
- b) Interrelated policies include:
 - i) Transfer student admission requirements
 - ii) When and how applicants get access to the student self-service system
 - iii) Policy on the official source of a degree audit
 - iv) If the degree audit system is not the trusted and official source for assessing how credits apply toward a degree, then that technology will not help the credit transfer process.
 - v) How and who makes decisions regarding course articulation
 - vi) How a course can be transferred, i.e., direct equivalency, elective, major applicable, course age limitations, etc.
 - vii) Whether or not all possible transfer credits will be articulated into the applicant's record or just those that apply to their major at the time of application
 - viii) Articulation agreements between institutions
 - ix) If applicable, state-level transfer policy
- c) Interrelated practices include:
 - i) When an applicant gains access to the self-service solution to see his or her transfer credits
 - ii) When an applicant gains access to the degree audit solution to see how transfer credits apply to his or her selected program of study
 - iii) How often the transfer articulation rules are updated and the breadth and depth of those rules (i.e., how many institutions are the rules built for and for how many years)
 - iv) How accurately the articulation rules are applied
 - v) The accuracy of the degree audit system rules and the degree to which staff, advisors and faculty trust the accuracy of the system
 - vi) The number of years of automated degree audits are maintained
 - vii) What percentage of the institution's course catalog has course equivalencies built in
 - viii) The practice of how, who, and when applicants transfer courses not built into the technology will be established
 - ix) What an applicant must do if he or she changes a chosen program of study during the application process to ensure that all transfer credits are considered for the new program of study

Admitted student: Some of the technology from the admissions process rolls over to meet a slightly different need during the admitted but not-yet-enrolled part of the student lifecycle.

- 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 **policies** include:
 - i) The official source of the degree audit
 - ii) Pre-requisite and co-requisite course requirements
- c) Interrelated **practices** include:
 - i) Academic advising practices
 - ii) Course registration practices

Matriculated: After a student is enrolled, the role of transfer credit-related technologies diminishes for some students. However, these technologies still impact students who change programs of study or choose to simultaneously take a course at another institution. For those who choose to enroll elsewhere simultaneously, the credit will need to be articulated to the home institution. This credit may be viewed by the home institution as residential credit or transfer credit depending on several variables, for example, if a transfer agreement is in place. Transfer credit may also need to be re-evaluated if a student changes his or her program of study; this will depend on how transfer credit was transcribed when the student was first admitted.

- 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) The 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 **policies** 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 transcribed or only credit that applies directly to the program of study at admission is transcribed)
- c) Interrelated **practices** 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: A student may leave the institution prior to completing a degree. These students may transfer to an institution for which they have not previously enrolled or ask to have their credits transferred to a previously enrolled institution to earn a credential (reverse transfer⁷).

- a) TOC related technology can support:
 - i) The speedy transfer of electronic transfer credit data to another institution
- b) Interrelated **policies** include:
 - i) Reverse transfer agreements
- c) Interrelated **practices** 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 different credential to meet graduation requirement at the previous institution.

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

ACE[®] American
Council on
Education[®]



NATIONAL TASK FORCE ON THE TRANSFER AND AWARD OF CREDIT



A National Snapshot HOW STUDENTS EXPERIENCE AND PERCEIVE TRANSFERRING EARNED CREDIT



In collaboration with



AACRAO

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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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BACKGROUND

The American higher education system serves a diverse student population through a vast network of colleges and universities with distinct institutional missions and values. The diversity of institutional types that afford 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 inefficiencies 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.

The present paper is focused specifically 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) identified three critical dimensions of inefficient and ineffective 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 Officers (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. The 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 exacerbate existing inequities and inefficiencies in the transfer process when implementing transfer policies and practices (Taylor and Jain 2017). It is essential to know what information and resources transfer students draw upon in their decision-making and how they perceive the information and supports provided to them as enabling or hindering their transfer experience. Similarly, knowing the reasons students cite for losing credits in the transfer process can help institutions anticipate and prepare for the needs of transfer students, reduce friction in the transfer of credit process, and improve the accuracy and transparency of information students need to make transfer decisions.

¹ This is based on 3,489 institutions reporting data to IPEDS for the fall 2018 term.

STUDENTS' EXPERIENCE TRANSFERRING CREDITS

The research on transfer students generally focuses on the transfer process, including the efficiency of transfer of credit, or the impact of transfer policies on students' experiences and academic outcomes. However, the research on transfer students' experience disproportionately focuses on community college practices despite the important role four-year institutions play in transfer students' ultimate postsecondary success (Bahr et al. 2013).

Questions remain as to how well the Integrated Postsecondary Education Data System (IPEDS) captures transfer patterns and experiences from the institutional perspective—and whether IPEDS is the right vehicle to represent the student experience, given the unit of analysis at the institutional level (Miller, Clery, and Topper 2018). One study by Kadlec and Gupta (2014) takes a qualitative approach to explore the transfer of credit outcomes of nearly 170 transfer students from eight university campuses in Indiana. The results by Kadlec and Gupta (2014) showed that many of the students transferred and expected their credits to apply toward their degree program; however, credits actually transferred as excess elective credits rather than credits applied to a student's program of study.

Though building the capacity of individuals to navigate the transfer pathway is important, institutions may also want to examine the extent to which their structures, policies, and practices enable or hinder the successful transfer of credit. Some of the known barriers to successful credit transfer include unclear transfer pathways, insufficient transfer advising and support, lack of exploration and concentration into fields of study pre-transfer, unreceptive policies and practices, and campus cultures unreceptive for transfer students (Fink 2020). Early in their academic journey, students who intend to transfer may be misadvised, and front-load general education requirements and lack awareness that they can, and in some cases should, also be taking pre-major coursework that can apply to their program of study at the prospective receiving institution. Still, there is no guarantee that students who successfully transfer will encounter a transfer-friendly culture at the institution to which they transferred.

What We Know About Transfer of Credit

Although there is a moderate level of understanding regarding transfer mobility patterns, less is known about the transfer of credit—explicitly, how credits earned from one institution are accepted and applied toward a student's program of study at a receiving institution. The limited data on the acceptance and application of transfer comes primarily from only three sources: U.S. Department of Education Beginning Postsecondary Students Longitudinal Study (BPS); Baccalaureate and Beyond Longitudinal Survey (B&B); and institutional case studies by the American Association of Collegiate Registrars and Admissions Officers (AACRAO).

Indeed, it must first be emphasized that both of the national longitudinal studies—BPS and B&B—depict a portrait of student transfer that may be out of date given their retroactive nature. The BPS study retroactively followed a cohort of students for six years (2004–2009) from the time they first start college to track their progress through postsecondary institutions. The B&B study, on the other hand, surveyed college graduates to collect self-reported information about their previous transfer experiences retroactively; the students in this study graduated college between 2016 and 2017. The U.S. Department of Education releases updated data for both studies every eight years, so the retroactive nature of the studies and lapse in time between survey administration is problematic for understanding the current state of transfer of credit success.

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.

The disconnect around students' perceived credit acceptance versus actual transfer credit applied is evident by comparing data from two national student studies. In the *self-reported* 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 *transcript data* 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 transfer pathway. In 2017, the U.S. Government Accountability Office (GAO) published a report based on 2004–09 BPS limited-access transcript-level data citing that, on average, students lose 43 percent of their credits when transferring, with much variation by the direction of transfer. A considerable caveat of the widely-cited GAO report is that it did not control for certain factors, such as whether the transferring student had informed the receiving institution of having any credits to transfer, how credits that were accepted applied towards students' program of study, or the reasons the institution did not award transfer credit.

In 2018, an AACRAO study of roughly 1,000 transfer students at a large, selective public university in the southwest led researchers to identify several reasons transfer students cited as the rationale for why their credits did not transfer (Kilgore, Crabtree, and Sharp 2019). According to the study, the most commonly cited reasons, in descending order, that credits did not transfer are:

1. Grade earned made course ineligible for transfer
2. A change of major
3. Too many credits were earned
4. "Other reasons" not listed in the survey
5. Remedial courses
6. Student took personal interest courses, knowing they would not transfer
7. Student felt they were misadvised
8. Student chose to take courses to explore majors

Accreditation also matters in how institutions make decisions about the acceptance of transfer credit. The BPS study (2004–09 cohort) shows the accreditation of the sending institution—regional or national—correlates with a vast difference in the percentage of credits that were accepted by the receiving institution. When the sending institution is regionally accredited, 57 percent of credits on average are accepted for transfer credit, whereas, when the sending institution is nationally accredited, the receiving institution accepts only 12 percent of transfer credits.

Similar to the impact of regional or national accreditation, the taxpaying status of an institution, i.e., public, nonprofit, or for-profit, has an impact on the transferability of credits. According to BPS data (2004–09 cohort), students transferring from a for-profit institution have a harder time successfully transferring credits to another institution. Even when a for-profit sending institution is regionally accredited, only 7 percent of credits successfully transfer to regionally accredited public or nonprofit institutions. Though colleges and universities routinely exercise autonomy when making transfer credit decisions, data suggests there is a reluctance on the part of regionally accredited public and nonprofit colleges and universities to accept transfer credit from for-profit institutions, which in turn negatively impacts students who may accumulate excess credits, and increase the time to completion and student debt levels.

THE TRANSFER CREDIT STORY DATA GAP

There is limited data on the perceived experience of transfer students to explain how institutional supports or barriers impact if and how a student's transfer credits are accepted. Current data available through IPEDS offers some basic data to help explain transfer of credit, as the measures originate from institutionally reported data based on enrollment statistics and outcome measures (Miller et al. 2018). Access to more nuanced data about the transfer student experience and students' transfer of credit is limited; this type of limited-access data is available from institutional or state-level internal data that can be disaggregated and analyzed (Miller et al. 2018). This underscores the need for national-level data about the transfer student experience that examines aspects known to enable or inhibit successful transfer from both the sending and receiving institution perspective.

There is minimal data on students' attitudes about credits lost in transfer. Much of the data in this arena is anecdotal rather than quantitative. Thus, it makes it challenging to say the extent to which students are concerned about losing credits upon transfer or to know if students are expecting to lose some credit in the transfer process. As mentioned, in 2018–19, AACRAO partnered with a large public university in the southwestern United States to examine a multi-year data set (2012–2017) of the university's students. AACRAO administered a survey to current students and conducted focus groups and individual interviews with students enrolled at that time. Through the study, AACRAO hoped to gain insights into student decision-making variables that contributed to excess credit accumulation at graduation for both direct-entry students and transfer students (Kilgore, Crabtree, and Sharp 2019).² Pertinent findings from the data include:

- Most transfer students were aware of why they were not able to transfer all of their credit to their current institution.
 - Nearly 30 percent selected “grade earned in a course was not transferable,” and/or “change of major when transferring,” and/or “too many credits earned at the previous institution” as the known reasons for why some credits did not transfer.
- 60 percent of those whose credits did not all transfer indicated they were “Neither pleased nor displeased” as they expected there to be some credits that would not transfer.
- 58 percent of those who were displeased with the loss of credits selected better academic advising as a means to reduce credit loss potentially.

Less than half of students in the study were displeased with losing credits upon transfer, a result that counters much of the prevailing narrative on credit loss. This finding led AACRAO to question whether a national study of the college-going population in the U.S. would mirror the student experiences and opinions in their institutional-level study. Expanding our understanding of the influence that institutional practices and policies, as well as student choices, have on the transfer of credit will help address gaps in the literature on the loss of credit in transfer and inform measures to address credit loss more systematically. The present study and the data reported in this paper contributes to that understanding.

2 Direct entry refers to “any students who enrolled at the university without first attempting or earning any post-secondary credits from another postsecondary institution after earning a high school diploma (or equivalent) and excluding the readmitted student population.”

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 students³
- 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

The 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 (HSL: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). The 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 effect
- Not asking any potentially embarrassing questions such as questions about GPA, specific 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.

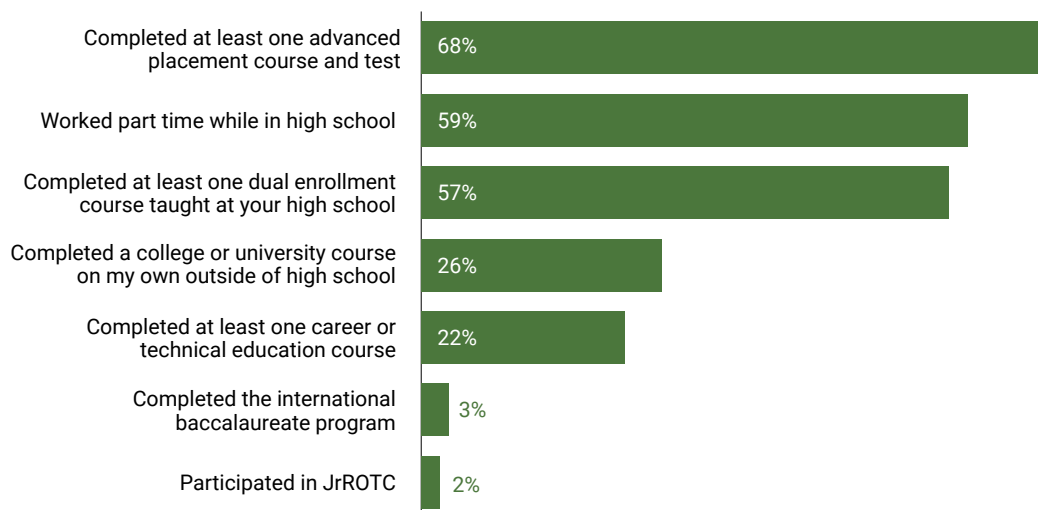
In order to gain a broad perspective on students' experiences with transferring credit, the survey included questions about the following:

- High school experience with taking college-level courses
- Military experience and military credit-equivalent learning
- Current and immediate previous institution type, specifically 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
- Perceptions about the level of support provided by the current and previous institutions to support the transfer of credit
- Perceptions about excess credits upon degree completion

Results

The national study included 1,003 survey completers, with 65 percent of respondents currently enrolled at a public institution and 35 percent at a private institution; 78 percent transferred from a public institution and 22 percent from a private institution. Students were enrolled at institutions in 47 states, the District of Columbia, and Puerto Rico.⁴ Ninety percent were enrolled full time, 95 percent were between 18 and 24 years old, and 3 percent had military experience. Seventy percent graduated from high school as opposed to others who earned a GED® or were homeschooled. Most respondents earned college credit from two academic institutions,⁵ 16 percent earned credit from three, and 14 percent earned credit from more than three academic institutions. More than two-thirds completed at least one advanced placement course exam, and more than half completed a dual enrollment course while in high school (Figure 1).

FIGURE 1: HIGH SCHOOL CURRICULAR EXPERIENCES



⁴ Idaho, Hawaii, and Vermont are not represented in this sample.

⁵ This 70 percent may or may not include credit already earned at the current institution.

THE CREDIT LOSS FUNNEL

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.

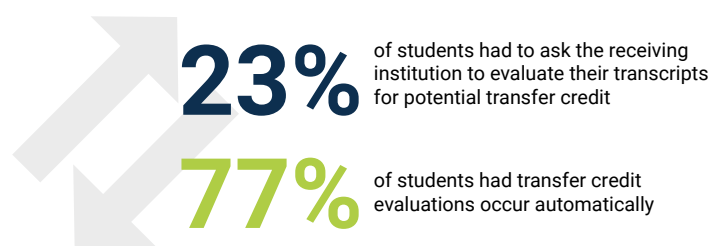
Initial credit loss may occur at this point in the funnel for at least two reasons: 1) the student makes a purposeful decision not to send any or all of their transcripts to the institution they plan on attending; 2) the institution may require that the student request their prior credit be evaluated 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.

Private institutions are more likely to require an incoming transfer student to request their credit be evaluated.

Academic Transcripts as the Source of Credit

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.

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



Military Joint Services Transcript as the Source of Credit

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 $V = .0765$; $n = 860$

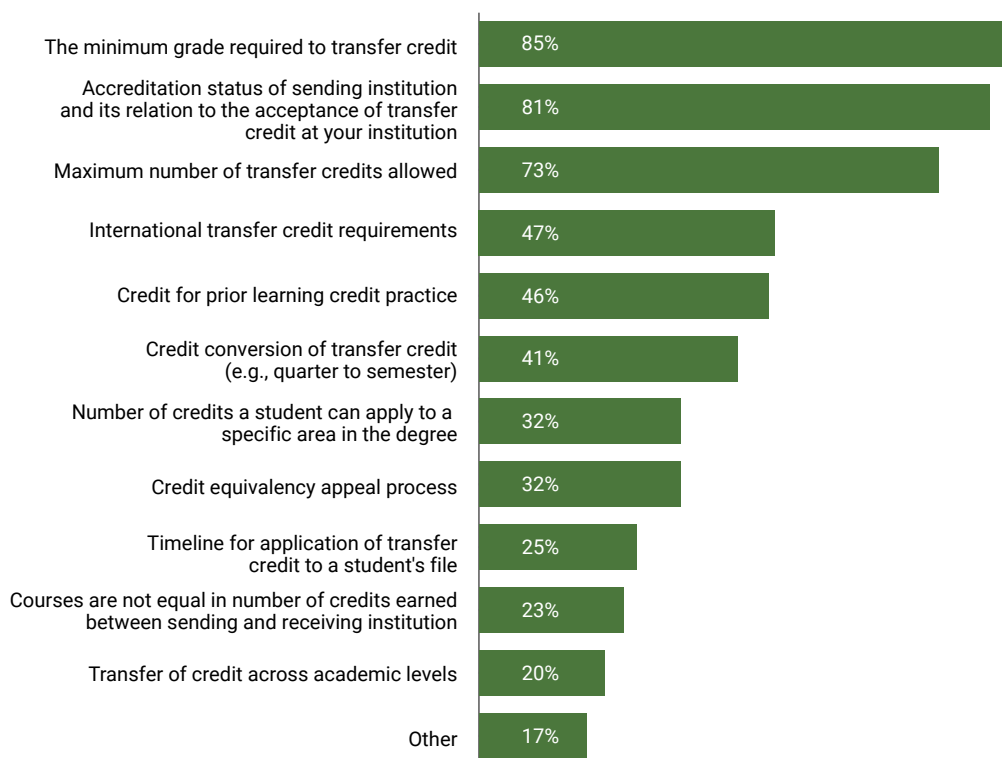
Evaluating the Transcript to Award Academic Credit

There are several factors, both policy and practice, that influence 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 offer examples of some influencing 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
- The 2019 AACRAO academic records and transcript practice report noted that
 - “39% of institutions transfer all eligible transfer credits *regardless* 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 *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” (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 specific 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)
- The receiving institution excludes college credit earned while still in high school if it can be identified 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
- The receiving institution sets a time limit on the age of credit that can be transferred in, either broadly or for specific subjects or majors.

These 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. The 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.

FIGURE 2: UNDERGRADUATE TRANSFER POLICY

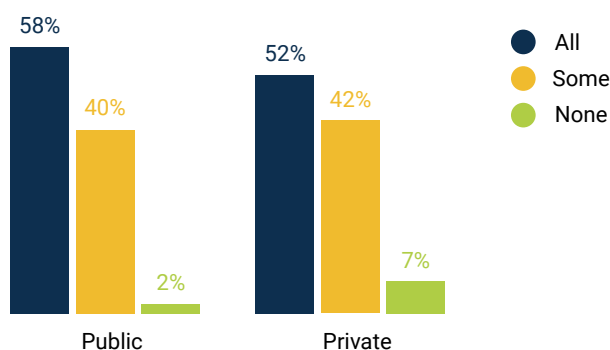


Source: *Transfer Credit Policy: Results of the AACRAO May 2017 60-Second Survey*

In the present study, students were asked whether “all,” “some,” or “none” of their credits were accepted in transfer. This self-reported data is based on their perception of credits awarded and may or may not be based on an understanding of what makes credit eligible for transfer based on the policies described above. For example, a student may have earned credit for college preparatory/remedial courses or received a passing grade of “D” at the sending institution but is not aware of the institutional policies at his current institution, which limits or excludes this type of earned credit from transferring. In the present study, 56 percent reported that all of their credits transferred, 41 percent indicated some transferred, and 3 percent indicated none of their credit transferred. Like the earlier data point, students enrolled in private institutions are statistically less likely to report that all credits transferred and more likely to report that none of their credits transferred (Figure 3).⁷

56% reported that all of their credits transferred.

FIGURE 3: ELIGIBLE CREDIT AWARDED IN TRANSFER BY INSTITUTION TYPE

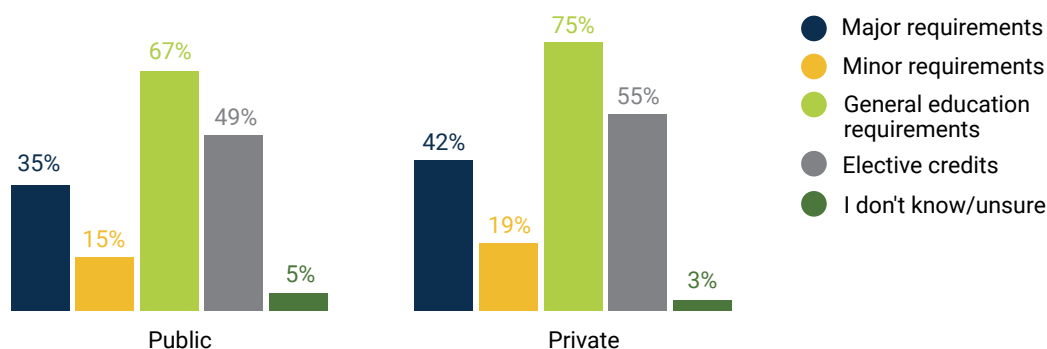


⁷ P=.000164; Cramer's V: .132; n=1003

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, *all students should be made aware of how transfer credit has been applied*. Figure 4 highlights the difference 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.

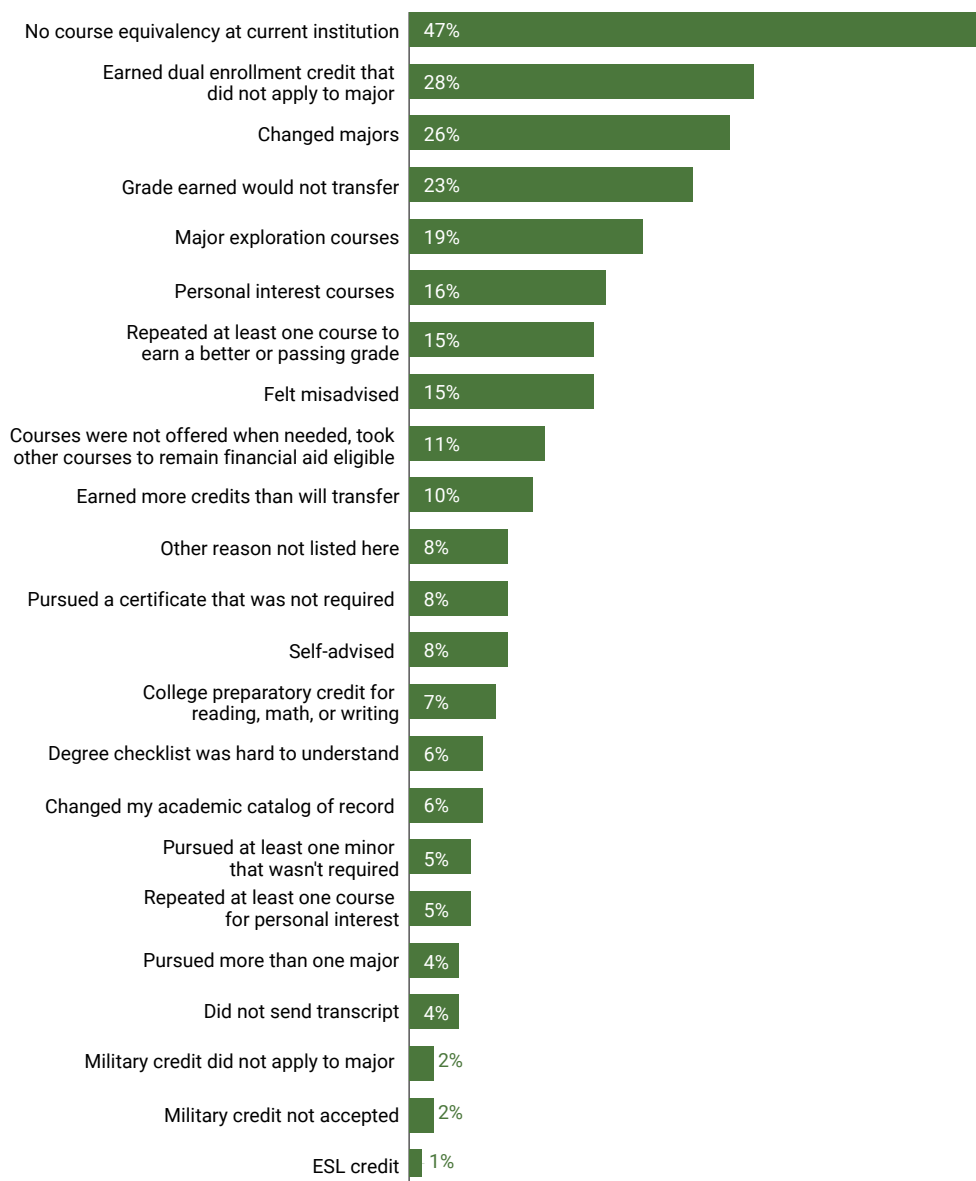
⁸ Appendix A disaggregates the data in Figure 4 by institutional control.

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 certificate (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).

The effect of academic advising and related resources should not be discounted as a contributing factor to credit loss.

The effect 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



Although several of the response choices in the present survey were not among the list of choices in the 2019 AACRAO study of students at a large public research university in the Southwest, where they aligned, the percentages are similar (Table 1).

TABLE 1: CURRENT STUDY DATA COMPARED TO 2019 AACRAO DATA ON SELF-REPORTED REASONS WHY CREDITS DID NOT TRANSFER

Reason credit did not transfer	Present study	2019 single-institution data
Changed majors	26%	27%
Grade earned would not transfer	23%	29%
Major exploration	15%	19%
Degree checklist was hard to understand	6%	3%
Felt misadvised	15%	16%
Self-advised	8%	4%
Courses not offered when needed	11%	7%

Perceptions About Institutional Resources to Support Transfer of Credit

All respondents were asked about their level of agreement with two statements about transfer guidance resources at their current institution and previous institution. The first being, “My current institution provided clear information or resources that made transferring academic credit into my current major/program of study easy to navigate.” Most respondents agree that their current institution provided clear information or resources about transfer (81 percent either strongly agree or somewhat agree with that statement, 10 percent neither agree nor disagree and 9 percent somewhat or strongly disagree). Students currently enrolled in a public institution tend to have slightly higher ratings for this statement than those in private institutions.⁹

Most respondents agree that their current institution provided clear information or resources about transfer.

The second statement was, “The most recent institution I transferred from provided clear information or resources that made it easy to understand how each of my courses would transfer towards my major/program of study at my current institution.” Almost three-quarters strongly or somewhat agree that their previous institution provided clear information and resources about transfer, 14 percent neither agree nor disagree, and 13 percent somewhat or strongly disagree. Like the statement above, those previously enrolled in public institutions have slightly higher ratings than private institutions.¹⁰

Almost three-quarters strongly or somewhat agree that their previous institution provided clear information and resources about transfer.

Among those who were not able to transfer all credit earned, 59 percent were not displeased with the results. More specifically, 30 percent selected “Generally pleased. I expected there to be some extra credits earned that would not transfer,” and 29 percent selected “Neither pleased nor displeased. I expected there to be some extra credits earned that would not transfer.” Forty-nine respondents (12 percent) were extremely displeased, and 118 (29 percent) were somewhat displeased. There was no statistical difference in opinion by institutional control.

These data are almost identical to the 2019 AACRAO study, in which 60 percent indicated they were not displeased, 25 percent somewhat displeased, and 14 percent extremely displeased.

⁹ P = .0201; Cohen’s d: .162

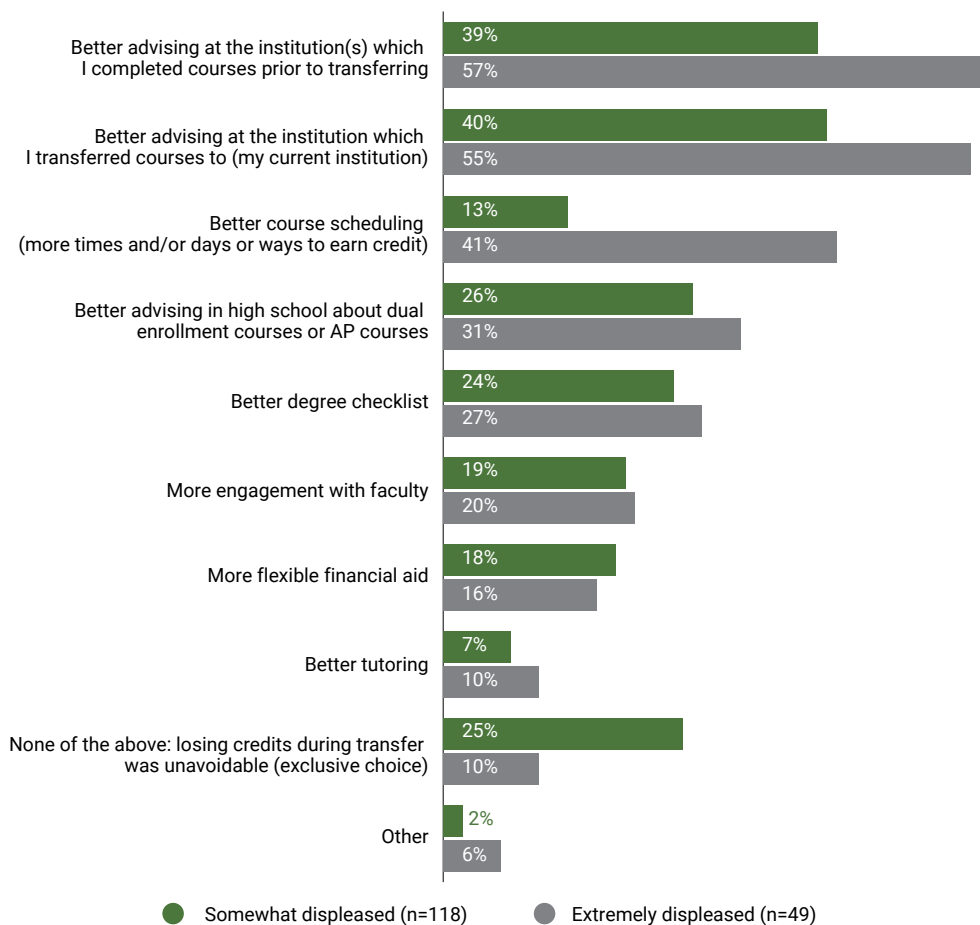
¹⁰ P = .0030; Cohen’s d: .245

The 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 appear to understand that, in part, some credit lost in transfer is attributable to personal course taking choices.

To help address the lack of data on how students feel about credit that does not transfer, students unable to transfer all their earned credit were asked how they felt about it and what, if anything, colleges and universities could do to help (Figure 6). Although the sample size is small (n=167), the results are again similar to the 2019 AACRAO study. Better academic advising at both the previous institution and current institution is at the top of the list of resources that could have helped students retain more of their transfer credit. This data does not tell us what “better advising” means to the student, and it is essential to understand the nuances of that before making any changes to academic advising practice. For example, for some students this could be better or more regular access to an advisor, more directive advising as opposed to consultative advising, better alignment between advisors’ depth of knowledge of the academic program of study for which the student selects, more direct follow up after an advising session, or any number of other advising practice and policy factors. It is interesting, but not statistically significant, that there are a few key differentiators between those who are extremely displeased and somewhat displeased, especially around academic advising. However, the sample sizes are too small to generalize to the population.

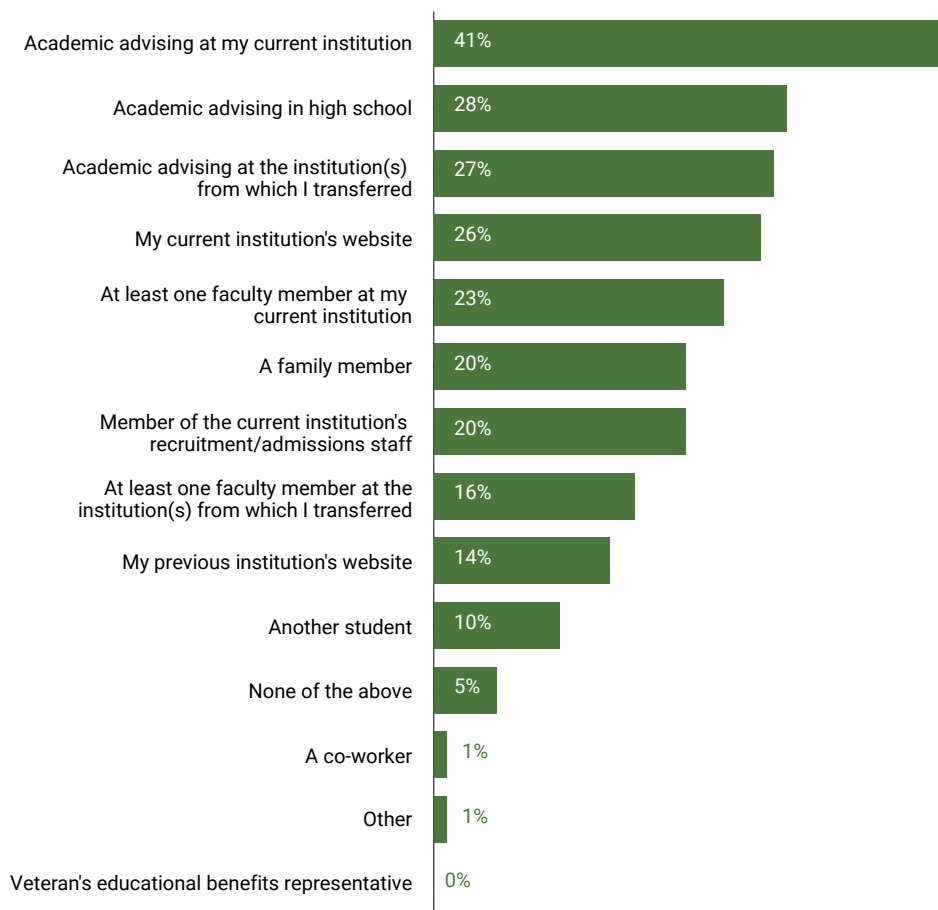
FIGURE 6: RESOURCES THAT COULD HAVE HELPED REDUCE LOST CREDIT BY LEVEL OF DISPLEASURE WITH LOST CREDIT



Academic advising was at the top of the list of resources that helped ensure all of their credits transferred.

The researchers aimed to compare transfer resources identified by students who were able to transfer all of their credits with the resources identified 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



EXCESS CREDITS UPON COMPLETION

One of the goals of the 2019 AACRAO institutional case study on the source of excess credits at graduation was to understand whether or not those who start at the university (direct-entry students) have more, less, or the same number of excess credits at graduation as transfer students. In the present study, the researchers asked students the same questions about excess credits even though there was not a comparison population of direct-entry students with which to compare. All were asked if they will have earned more credits than needed to graduate. Among those who knew the answer (n=875), 76 percent will have earned more credits than needed. Some (24 percent) will have earned the credits only at the institution(s) from which they transferred, 30 percent only at their current institution, and 46 percent will have earned extra credits at both the transfer and current institution. There is no statistical difference in these values by institutional control. We examined the relationship between whether all, some, or none of the transfer credit was awarded, and where extra credit at graduation was earned.

Those who indicated that no credit transferred were nearly twice as likely to report that they earned extra credit at their current institution than those who transferred all or some (Table 2). This data may point to a small population of students who are not getting the assistance they need to navigate their college careers. It may also be that this small segment of students changed majors at their current institution, perhaps rendering some of their coursework not applicable to their new program of study.

Without the institutional context of the transfer credit practices, we are unable to determine how 45 percent of those who indicated they transferred all credit also state that excess credits at graduation were earned at both their current and transfer institutions. One practical explanation for this is that some institutions transfer all eligible credits regardless of whether they apply to the major. In this example, one could transfer all credits but have less than all apply to the degree and, as a result, have excess credits at graduation.

TABLE 2. WHERE EXTRA CREDIT WAS EARNED BY THE AMOUNT OF CREDIT THAT TRANSFERRED

Where extra credit was earned	Credits that transferred			
	Total	All	Some	None
At the transfer institution(s) and current institution	46%	45%	49%	8%
At the current institution	30%	35%	23%	68%
At the institution(s) from which I transferred	24%	20%	28%	25%

DISCUSSION AND UNANSWERED QUESTIONS

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 findings 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. The findings in the present study give further credibility to the validity of the conclusions drawn in the single-institution study.

From the present study, we identified several key takeaways:

- Most students feel that their transfer institution and their current institution have resources in place to help with the transfer process.
- More than half of transfer students successfully transfer all credit.
- Among students that were not successful in transferring all credit, most are aware of why the credit did not transfer.
 - Most knew credit would be lost in transfer and were not displeased with the outcome.
 - Students understand that their course taking choices and individual circumstances in those courses (e.g., grade earned, college preparatory, major exploration, personal interest) contributed to losing credits in transfer.
- Academic advising is an integral part of the transfer funnel, having both positive and negative implications.
 - Students that successfully transferred all credits listed advising as the top resource that helped them do so.
 - Students that were unable to transfer all credits also listed academic advising as the resource that could have been more helpful in the transfer process.
- Dual enrollment courses have a role in the credit loss story for almost a third of students who lost credit.

The present study reinforced other research findings that students who are currently enrolled in private institutions have a different experience in transferring credit than those enrolled in public institutions. This study also elucidated institutional practices that are likely direct contributors to the loss of credit during transfer. For example, among the 20 percent of institutions in this study that required a student to request that their transcript be evaluated for transfer credit, it is unknown how many students chose not to submit their transcripts for credit.

Limitations

The present study has several limitations regarding the scope and outcomes of the research. The researchers had to place specific constraints on the study to administer and analyze the results in a short timeframe and given limited resources.

Given that the study only included currently enrolled transfer students, there could be an element of survivor bias in the results—the results do not include students who attempted to transfer but were unsuccessful in transferring for any number of reasons. Another study might include students who attempted to transfer but were unsuccessful in doing so to understand what inhibited their successful transfer.

This 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 differently at the time of graduation based on a new degree audit.

The researchers made an intentional decision to include only currently enrolled domestic undergraduate students (i.e., students who are U.S. citizens or have other legal domestic status). Due to the more complicated nature of transferring academic credit to a domestic institution from a foreign institution, we excluded this population of students to limit how transfer and award of credit for foreign coursework might skew the results of domestic transfer.

Areas for Future Research

There is a gap in our understanding of the number and type of credits lost because the present study was limited in scope, only asking students if “all,” “some,” or “none” of their credits transferred. The relative percentage of credits lost for those who answered “some” is unknown. Other research has attempted to address this data point (e.g., the 2017 GAO study), but does not account for the type of credit lost and to what extent credit loss can be explained by student choice, student course taking behaviors, or institutional policy.

Future research might focus on the extent to which it is acceptable that some credit will be lost for a certain percentage of students because of their course taking choices (e.g., major exploration, personal interest) or decisions that are thrust upon them (e.g., needing to repeat a course, college preparatory course). Researchers might also explore whether credit lost through dual enrollment should be categorized as lost credit or more explicitly tied to major and career exploration because it is earned while students are still in high school and is intended to meet high school graduation requirements.

Exploring to what degree, if any, the various advising models impact the number of credits lost in transfer, or how student behavior or decision-making impact the utility of advising services provided is another important area for future research. Similarly, deeper exploration of advising models and their impact on transfer of credit will be useful. Among students who lose credits in transfer and do not know why, it would be helpful to identify what institutional practices contribute to students' uncertainty about the reasons credits do not transfer.

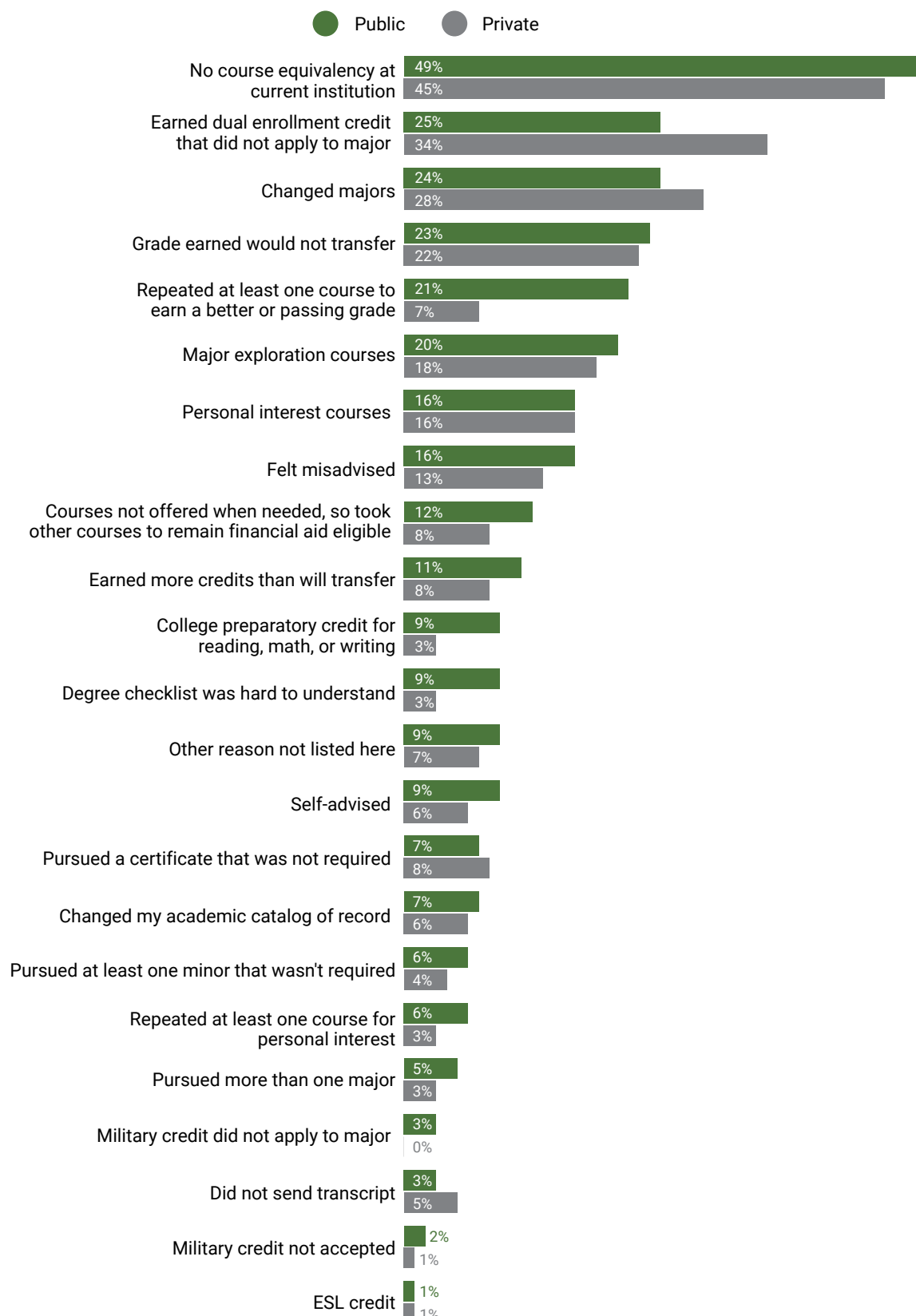
Given that most students end up with excess credits at graduation and which are earned at the transfer institutions or the current institution, more information is needed on the factors that most significantly contribute to this additional loss of credit. Finally, additional research is needed to better understand the factors that cause differences in the transfer of credit between public and private institutions.

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APPENDIX A: KNOWN REASONS WHY CREDITS DID NOT TRANSFER, BY INSTITUTION TYPE



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



Exploring the Impacts of Institutional Advising and Credit Evaluation Policy and Practice

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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

This exploratory study has added to our understanding of the variables related to the percentage of earned transfer credits subsequently awarded and applied to a student's program of study at their new institution. Change of major at transfer, institutional transcript credit evaluation policies and practices, and transfer student advising models were shown to impact the number of earned credits awarded and applied at transfer. The study also sheds light on the complexity of transfer credit evaluation policies and practices between and within institutions. As a result of this study, we see opportunities to improve the percentage of earned credits awarded and applied in transfer through the self-evaluation and modification of related academic advising and transfer credit evaluation policies and practices.

INTRODUCTION

This study explored the institutional policy, practice, and student choice factors related to the percentage of credits earned at one institution and subsequently awarded in transfer at a receiving institution and the extent to which those credits were applied to a student's program of study at the receiving institution. Transcript-level studies are considered the gold standard for understanding how transfer credit is awarded and applied. Despite their value, these studies are rarely done due to the significant amount of work involved and the time-consuming nature of evaluating transcripts from numerous sources, the variety of transcript notations processes, and the variation in policies and practices at receiving institutions. This study investigates previously unexplored variables related to awarding and applying transfer credit.¹ These variables are:

- Policy and practice related to awarding and applying earned credit in transfer
- Policy and practice related to transfer student academic advising
- Differentiating earned transfer credit from credit awarded at the new institution and subsequently applied to the program of study
- The relationship between a change of major upon transfer and the number of earned credits awarded and applied at the new institution

Existing research lacks a helpful explanation for how institutional transfer credit evaluation policy and/or practice and transfer student academic advising policies impact the percentage of credit awarded in transfer or how awarded credit is applied to a student's program of study. Students' self-reported perceptions about their transfer experiences show academic advising has both positive and negative outcomes associated with the transfer of credit.²

The purpose of this study was to address the following research questions:

1. What is the influence of transfer credit evaluation policy and practice on the percentage of earned credit awarded in transfer and applied to the program of study?
2. What is the influence of transfer student academic advising policy and practice on the percentage of earned credit awarded in transfer and applied to the program of study?

¹ We are unaware of other studies that have explored the specific variables considered in our study.

² The self-reported student data comes from, *A National Snapshot: How Students Experience and Perceive Transferring Earned Credit*, conducted by ACE and AACRAO. The survey can be accessed at www.acenet.edu/Documents/National-Snapshot-Transferring-Earned-Credit.pdf.

3. What additional institutional characteristics influence the percentage of earned credits awarded in transfer and applied to the program of study?
4. What is the influence of a student's decision to change majors at transfer on the percentage of earned credits awarded in transfer and applied to the program of study?

DEFINITIONS

There are several important terms to define when addressing credits “lost” in transfer because there are two different points in the transfer of credit process where credit loss could occur. These two points are 1) when earned transfer credit is awarded at the new institution, and 2) when the awarded credit is applied to the student's program of study requirements. The following definitions apply to this research.

- **Earned credit** refers to college credit documented on a student's official transcript regardless of how that credit is annotated (standard course credit, PLA, Joint Services Transcript, ACE credit recommendations, AP, IB, etc.).
- **Awarded credit**³ is defined as the number of credits in transfer that are documented and given to the student at the new institution.
 - This credit may or may not be included on the new institution's official transcript; it will, however, be tied to the student's academic record.
 - The number of credits earned at the prior institution or through other sources of documented credit may be **more than** the number of credits awarded and added to a student's academic record at the new institution.
- **Applied credits** are credits subsequently used to meet a student's program of study requirements.
 - The number of credits applied to a student's program of study may be less than the number of credits awarded.⁴
- **Lost credits** in this study are defined as any difference between credits earned prior to attending the institution and those applied to the program of study at the new institution.

Definitions for the advising models included in the transcript study are based on the definitions found in the “Academic Advising Toolbox” developed by researchers at the University of California, Berkeley, which identifies four categories:⁵

- **Active** advising includes coaching, mentoring, or academic counseling, where the advisor is a facilitator and the student makes meaning and sets priorities and goals.
- **Passive** advising is prescriptive, intrusive, or transactional, and the role of the advisor is to describe, instruct, inform, and establish priorities for the student.
- **Blended** advising involves a synthesized, learning-centered approach where both students and advisors are “learners.” In other words, blended involves a combination of “active” and “passive” advising models.

3 Accepted is also used by institutions to describe this type of credit. The preference in word use is institution-centric.

4 This credit is often posted on a student's transcript, but not always. However, it is recorded and accounted for in the student information system regardless of whether it is included on the official transcript.

5 The Academic Advising Toolbox was developed by the University of California, Berkeley, and can be accessed at <https://advisingmatters.berkeley.edu/academic-advising-toolbox>.

- **Mixed** advising involves a mix of the advising models listed above may occur where transfer students may, depending on major, department, college, or other differentiating characteristics, experience a different advising model from another student, **or**:
 - IF the institutional policy is **mixed**, each student could experience active **or** passive **or** blended, **unless**:
 - 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

Thirteen 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 students⁶ and identified 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 Classification	Region	Control	Level	2018–19 12-month UG Enrollment
Special Focus Four-Year	Midwest	Private	4-yr	Less than 1,000
Master's College or University	South	Private	4-yr	1,001–10,000
Doctoral-Professional University	Online	Private	4-yr	10,001–20,000
Doctoral Research University	South	Public	4-yr	20,001–30,000
Doctoral Research University	West	Public	4-yr	20,001–30,000
Associate Colleges	West	Public	2-yr	30,001–40,000
Master's College or University	Northeast	Private	4-yr	30,001–40,000
Master's College or University	West	Public	4-yr	30,001–40,000
Doctoral Research University	South	Public	4-yr	40,001–50,000
Doctoral Research University	South	Public	4-yr	50,001–60,000
Master's College or University	Online	Public	4-yr	70,001–80,000
Baccalaureate/Associate-granting	South	Public	2-yr	80,001–90,000
Master's College or University	Online	Private	4-yr	Over 100,000

The 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 identified using insights from similar research, and new variables based on the research questions above. This research aimed to identify factors (e.g., institutional characteristics, policy or practice) that statistically differentiate the percentage of credits awarded and applied in transfer from one student to another. The dependent variables are the percentage of earned credits awarded and the percentage of earned credits applied.

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

Transfer Credit Evaluation Policy and Practice

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 different known policies and practices, rather than attempt to analyze each unique variable, policies and practices were grouped into related "clusters." These clusters provide a more coherent structure to examine the connection between related categories of policies/practices and the degree to which these policies influence the amount of credits awarded and if awarded, the degree to which the credit is applied to a program of study. The 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 analyses⁷ 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.

Transcript Data Descriptive Statistics

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-five percent of these credits were applied to their program of study.
- Just 28 percent of these students had **all** 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
Public to Public	60%	2-yr to 4-yr	56%
Private to Private	3%	4-yr to 4-yr	36%
Public to Private	20%	2-yr to 2-yr	1%
Private to Public	16%	4-yr to 2-yr	7%

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. The 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 model⁸ when they first entered the institution. Of the remaining students, 19 percent experienced an active advising model, 7 percent passive, and 12 percent a blended model.

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

⁸ A mix of advising the advising models listed above. This means that transfer students may, depending on major, department, college, or other differentiating characteristics, experience a different advising model from a student with other characteristics. **Or if** the institutional policy is **mixed**, each student could experience active **or** passive **or** blended **unless** 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.

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.

The 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 percent⁹
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

Relative Effects of Independent Variables (Logistic Regression)

The dichotomous variables for 1-4 were created from continuous variables to examine differences between groups of students. Logistic regression was selected for the first 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 effects instead of the direct effects. 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.

- Four-year to four-year transfer: 3.58 times more likely, $P < .01$ (when compared to two-year to four-year transfer)

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

- Change of major: 3.3 times less likely, $P < .01$
- Change in institutional control: 2.4 times less likely, $P < .1$

A student is less likely to have 75 percent or more of earned credits awarded* in transfer when:

- Four-year to two-year transfer: 43.5 times less likely, $P < .01$ (when compared to two-year to four-year transfer)
- Blended advising: 6.5 times less likely, $P < .05$ (when compared to active advising)
- Change in credit type: 3.8 times less likely, $P < .1$
- Registration, admissions, or specialized staff conduct transfer evaluation: 3.3 times less likely, $P < .1$ (when compared to a shared model of responsibility with academic units)
- Change of major: 3.1 times less likely, $P < .05$

A student is less likely to have 75 percent or more of earned credits applied to their program of study when:**

- Blended advising: 5.26 times less likely, $P < .05$ (when compared to active advising)
- Policy cluster 1: 3.7 times less likely, $P < .01$
- Policy cluster 2: 3.7 times less likely, $P < .1$
- Four-year to four-year transfer: 2.22 times less likely, $P < .1$ (when compared to two-year to four-year transfer)
- Change of major: 2 times less likely, $P < .1$

* Awarded credits equals earned credits ($n=249$) pseudo $R^2=0.154$

** Awarded credits equals 75 percent or more of earned credits ($n=152$) pseudo $R^2=0.252$

Effects of Independent Variables on Percentage of Credits Applied (Ordinary Least Squares)

An ordinary least squares analysis was completed to examine the percentage of credits applied as a continuous dependent variable. This allows the opportunity to directly observe the effects of the independent variables on the dependent variable rather than looking at the relative effects as provided by logistic regression.

Percent change in earned credits applied to a student's program of study ($n=186$, Adj. $R^2 = .16$):

- 12 percent increase in credits if registration, admissions, or specialized staff conduct transfer evaluation ($P < .05$)
- 16 percent decrease in credits if a student is exposed to a mixed advising model at the new institution ($P < .1$)
- 16 percent decrease in credits attributed to policy cluster #2: credit ineligible for transfer ($P < .05$)
- 13 percent decrease in credits if institutional control changes in transfer ($P < .01$)

- 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.
- The original institution's major code was unknown for 68 of 318 students, so the change in major proxy was null for these students.
- There 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 differentiate who among the registrar's staff, admissions staff, or specialized transcript evaluation staff complete the evaluations as these were grouped as one variable.
- Unable to differentiate the type of mixed advising models to which students are exposed.

DISCUSSION

The 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 first engagements with advising at the institution. Staff 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 significant amounts of credit in transfer. In addition, to the best of our understanding we have identified some statistically significant independent variables not previously examined in similar research. These variables are:

- Change of major in transfer
- Advising model for transfer students at the receiving institution
- Transcript evaluation policy and practice details

In summary, we found the following variables to be statistically related to the percentage of earned credits awarded and applied in transfer:

- Changing majors upon transfer has a negative impact on the percentage of earned credits awarded and applied towards a program of study.
- The type of transfer advising at the new institution appears to be related to the amount of earned credits awarded and applied.

- Transcript credit evaluation policies and practices have an impact, both positive and negative, on the amount of earned credits awarded and applied.
- A change in institutional control or type, or credit can be negatively associated with the amount of earned credits awarded and applied.

These results support the potential value of replicating this research with a larger sample size and the addition of the sending institution's advising model data. If the additional research replicated the results, it would provide additional clarity regarding the best policies and practices to minimize the credits lost in transfer.

Although we examined the difference between earned credit and awarded credit, we were most interested in “lost credits” as defined as any credit that was earned but was not applied to the student's program of study. We recognize that in many conversations about transfer credit, lost credit may not be differentiated in this manner. Given the task force discussions thus far, the student experiences and perceptions data, the results of this exploratory study, and the AACRAO national survey results on transfer credit evaluation policy and practice, the higher education community should consider adopting a more student-centric definition of “lost credits,” such as the one below:

Lost credits are those that are: 1) recorded on an academic transcript which have satisfactorily met content knowledge requirements; 2) a student has sought to transfer this credit to another institution; 3) learning outcomes meet one or more of the program of study requirements at the new institution; and 4) credit was not applied to the student's academic program of study at the new institution.

The definition of lost credits presented above could help shape future research because it is a more exact definition and identifies the earned credit of most value to a student in transfer. That is, credit that is eligible for transfer, sought in transfer, and applicable to the student's program of study at the new institution.

TAKEAWAYS

- Institutions should use transcript and policy data to examine their transfer credit evaluation policies and practices for opportunities to:
 - Streamline
 - Maximize earned transfer credits subsequently applied to a student's program of study
- Institutions should complete a self-study on the relationship between transfer student advising models and credits applied in transfer.

