Implementing Statewide Transfer & Articulation Reform

An Analysis of Transfer Associate Degrees in Four States

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Implementing Statewide Transfer & Articulation Reform: Executive Summary

In recent years, the federal government and several major philanthropic organizations have focused attention on the need to dramatically increase the number of bachelor's and other postsecondary degrees in order to retain the United States' economic competitiveness in a global marketplace. Improving what is often a complex community college-to-university transfer process, many analysts argue, is key to improving bachelor's degree production. Thus, over the past few years, several states have engaged in systemic transfer and articulation reforms, creating transfer associate degrees that allow students to both earn an associate degree and transfer seamlessly into a state university.

The purpose of this project—which was generously funded by the Bill & Melinda Gates and Walter S. Johnson Foundations—was to examine the development of transfer associate degrees in four states: Arizona, New Jersey, Ohio, and Washington. We utilized case study analysis (including site visits, analysis of relevant documents, and roughly 60 in-depth qualitative interviews) in order to describe implementation strategies that may be utilized in states that are currently embarking on or planning for systemic transfer reforms.

Transfer associate degrees can be understood as a grouping of seven curricular and policy-related elements. The first four, listed below, are essential to the creation of significant statewide improvements in transfer and articulation. The final three elements are also important but may be more or less necessary, depending on each state's unique history, policy goals, capacity issues, and the academic cultures and traditions of its institutions.

1. A common general education (GE) package
2. Common lower-division pre-major and early-major pathways
3. A focus on credit applicability
4. Junior status upon transfer
5. Guaranteed and/or priority university admission
6. Associate and/or bachelor's degree credit limits
7. An acceptance policy for upper-division courses

In the pages that follow we summarize the five primary themes that emerged from our data, as well as early positive outcomes and the likely future of transfer associate degrees. We conclude with implications of this study and recommendations for those advocating or developing similar transfer reforms in other states.

Legislative Action as Driver

Legislation plays an important role in systemic transfer and articulation reform, both through initial mandates or threats to create statewide policies and programs, and in applying pressure to employ them in a timely manner. However, if transfer and articulation legislation is to be effectively implemented, it is essential to limit its provisions to broad, statewide expectations, leaving more specific details related to curriculum development and institutional policy to inter-segmental faculty and administrative committees.

Presidential Leadership and Statewide Governance/Coordination

Presidential and/or top-level system leadership and support is critical to the successful implementation of transfer associate degrees. Presidents, in particular, have both symbolic and hierarchical value, allowing them to support and encourage involvement in transfer reforms across the state and among members of their staff. Leadership and support by statewide governing or coordinating boards is also useful in the development of transfer associate degrees, but successful implementation does not depend on the specific *type* of statewide structure in place.

Clear, Ongoing Organizational Structure

A clear and ongoing organizational structure that assigns responsibility for each aspect of the implementation process to the group that is best suited to manage it is critical for developing transfer reforms, dealing with policy and administrative issues as they arise, and ensuring awareness, buy-in, and compliance among members of the higher education community.

The Autonomy/Efficiency Balancing Act

The process of implementing transfer associate degrees essentially boils down to a balancing act between autonomy/freedom and efficiency, student centeredness, and the common good. The four states in our analysis have balanced these values in various ways. For example, basing course equivalency on learning outcomes focused Ohio faculty on the essential competencies required for upper-division study while allowing for variation in how and by whom courses are taught.

Building Trust and Allaying Fears through Faculty-Driven Processes

Facilitating disciplinary conversations among two- and four-year faculty and implementing processes for periodic review of transfer curricula and courses are critical in moving participants past their own institutional or disciplinary silos and creating efficient, student-centered transfer systems.

Early Positive Outcomes

While more information collected over longer periods of time will be needed to make definitive statements about the impact of transfer associate degrees on the efficiency and cost effectiveness of state higher education systems, recent outcomes data from the four states under review suggest that the degrees may indeed lead to greater system efficiency and increased cost savings. Indeed, the following early outcomes are closely aligned with the policy goals and expected benefits of systemic transfer and articulation reform:

1. Greater flexibility and more options for transfer students (AZ, NJ, OH & WA)
2. Improved transfer rates (OH & WA)
3. Transfer students are better prepared for upper-division work (AZ & OH)
4. Improved degree completion (OH & WA)
5. Reductions in time- and credits-to-degree (AZ & WA)
6. Cost savings for students and the state (OH)

The Road Ahead

Based on early positive outcomes, Arizona, New Jersey, Ohio, and Washington are all looking forward to ways in which they may extend or improve their transfer and articulation systems. These and other states implementing transfer associate degrees will likely face the following challenges in the years ahead:

1. Marketing newly-developed transfer associate degrees to students, parents, faculty, and advisers in order to improve participation rates among community college students.
2. Utilizing technological solutions such as web-based advising and degree planning tools, electronic management systems, and/or electronic transcript delivery systems that can be used by all institutions within a state.
3. Involving K-12 educators in transfer discussions and/or thinking about how college readiness is and should be related to statewide transfer policies.
4. Resolving capacity constraints at certain public universities and within popular degree programs.
5. Maintaining and improving statewide transfer pathways in the current era of reduced funding for public higher education.

Implications & Recommendations

The early positive outcomes described in this report will be especially useful to policymakers and system leaders who are advocating for the development or further implementation of statewide transfer and articulation reforms. Perhaps equally important to those executing the reforms, however, are those findings that identify key aspects of the implementation process itself. To both groups we offer the following recommendations:

- Use legislation to incent or compel the implementation of systemic transfer reforms.
- Ensure leadership and buy-in among college and university presidents, as well as statewide governing or coordinating agencies.
- Implement a clear and ongoing organizational structure.
- Articulate a common goal and shared understanding of why it is important to engage in systemic transfer reform.
- Strive for a balance between autonomy/freedom and efficiency, student centeredness, and the common good.
- Use learning outcomes to determine course equivalency.
- Implement processes for reviewing and revising transfer degrees to ensure relevancy with evolving curricula.
- Market transfer associate degrees to students and advisers early in the implementation process.
- Explore how technology may facilitate systemic transfer and articulation reform.
- Incorporate K-12 educators and/or college-readiness standards into statewide transfer and articulation conversations.
- Use transfer associate degrees to help resolve institutional and programmatic capacity issues.
- Seek alternative funding scenarios for implementing, maintaining, and/or improving transfer associate degrees.
- Continue gathering and publicizing data related to the ability of transfer associate degrees to improve system efficiency, increase postsecondary degree completion, and generate cost savings.

Introduction

In recent years, the federal government and several major philanthropic organizations have focused attention on the need to dramatically increase the number of bachelor's and other postsecondary degrees in order to retain the United States' economic competitiveness in a global marketplace. Improving what is often a complex and confusing community college-to-university transfer process, many analysts argue, is key to improving bachelor's degree production, as only a small proportion of community college students (25-35%, depending on the parameters used to define the likely transfer population) successfully move on to a four-year institution. And, as scholars have pointed out, even when students do transfer, some do so with a significant number of credits that do not apply toward a bachelor's degree, and many others make the transition without completing the full lower-division transfer curriculum or before earning an associate degree.[i] These patterns are costly, both to states and their students.

Thus, over the past few years, several states have engaged in systemic transfer and articulation reforms, creating statewide pathways or degree programs that allow students to both earn an associate degree and transfer seamlessly into a state university with junior status. Although most of the states that have implemented transfer associate degrees have done so relatively recently, positive outcomes—both in terms of greater system efficiency and increased cost savings—have already been documented (see pages 22-25 of this report). Indeed, transfer associate degrees have emerged as an effective way of significantly improving transfer and articulation, in the process increasing the number and percentage of bachelor's degree recipients within states and across the nation.[ii]

The purpose of this project—which was generously funded by the Bill & Melinda Gates and Walter S. Johnson Foundations—was to examine the political processes, actors, and associations involved in systemic transfer and articulation reforms in four states in order to describe implementation strategies that may be successfully utilized in states that are currently embarking on or planning for similar reforms.

A brief side note: Throughout this report we repeatedly use the terms "statewide or systemic transfer reforms" and "transfer associate degrees." The former refers to various initiatives that attempt to establish statewide transfer and articulation policies, pathways, or degrees with the aim of increasing system efficiency and cost effectiveness. The latter refers to specific statewide transfer degrees or pathways that allow students to both earn an associate degree and transfer seamlessly into a four-year college or university with junior status. (These degrees are known by different names in different states, but for the purposes of clarity, we refer to all of them as transfer associate degrees.) Although we acknowledge that transfer associate degrees are only one vehicle for reforming transfer and articulation on a statewide basis, we use the two terms relatively interchangeably throughout this document, as these degrees are the most comprehensive (and may be the most effective) approach to systemic transfer and articulation reform.

Transfer associate degrees have been implemented in at least 8 states, including Arizona, Florida, Louisiana, New Jersey, North Carolina, Ohio, Oregon, and Washington. California is currently in the process of developing these degrees, and other states—such as South Carolina—are considering doing the same. Several more states, such as Texas, have created common general education curriculums in order to ease the transfer of students from community colleges to four-year institutions but have not yet implemented the other components of transfer associate degrees.

Our analysis of the implementation of transfer associate degrees focused on processes in four states: Arizona, New Jersey, Ohio, and Washington. We selected these four primarily because all of them implemented key components of their transfer associate degrees within the past 2-15 years, making it more likely that the political environments and processes used to enact the reforms are relevant to those in place across the nation today. Furthermore, we chose states that have diverse governance structures, faculty associations, capacity issues, and experiences with systemic transfer reforms to ensure that our findings and recommendations are as widely applicable as possible. Although the majority of these states implemented transfer associate degrees prior to the Great Recession, all are struggling to maintain and improve their processes in the current era of reduced state support and higher tuition and fees.

To examine the political processes, actors, and associations involved in implementing transfer associate degrees, we conducted multiple case studies, using within-state and cross-case analyses to identify strategies and processes that may be successfully utilized in states engaged in or considering similar reforms.[iii] The case studies involved site visits, analysis of relevant documents, as well as roughly 60 in-depth qualitative interviews with policymakers, system leaders, college presidents and key administrators, faculty, and others involved in implementing these initiatives. Interview questions focused on the formal and informal processes used to develop, implement, and maintain transfer associate degrees, including: which groups were brought on board and in what order, whether legislation was necessary to compel implementation, how faculty and institutional autonomy were addressed, whether incentives were used, how the initiatives were funded, how the reforms have been maintained in an era of declining resources, if and how a coordinating body was involved, how capacity issues have been addressed, and so forth. Interviews took place in person or over the telephone, and were transcribed verbatim prior to inductive coding and analysis.

Elements of Effective Transfer Associate Degrees

Transfer associate degrees can be understood as a grouping of seven curricular and policy-related elements: 1) a common general education (GE) package; 2) common lower-division pre-major and early-major pathways; 3) a focus on credit applicability; 4) junior status upon transfer; 5) guaranteed and/or priority university admission; 6) associate and/or bachelor's degree credit limits; and 7) an acceptance policy for upper-division courses.

The first four elements, with one exception, have been implemented in all four states under review, and we believe that they are essential to the creation of significant statewide improvements in transfer and articulation. The final three elements are also important but may be more or less necessary, depending on each state's unique history, policy goals, capacity issues, and the academic cultures and traditions of its institutions.

A Common General Education Pattern

All four of the states included in this analysis—as well as several others throughout the nation—have created general education (GE) packages or modules that are common across the state's community colleges, and that transfer en bloc to the public universities. These GE packages are accepted in lieu of the receiving institution's own GE pattern, providing students with a set of GE classes that is portable anywhere in the state. A common GE package is the foundation upon which transfer associate degrees are built.

Common Lower-Division Pre-Major and Early-Major Pathways

Although New Jersey has yet to incorporate common lower-division pre-major and early-major pathways into its statewide transfer policy, Arizona, Ohio, and Washington have all developed these sequences in various disciplines. Because common lower-division major pathways are guaranteed to apply toward the major at receiving universities, they are widely viewed as key to reducing excess credits and improving time-to-degree among transfer students. They also provide students with greater flexibility to transfer anywhere in the state within their program of study; this is especially important in popular or overenrolled programs.

A Focus on Credit Applicability

For transfer associate degrees to be successful in improving transfer and articulation on a statewide basis, policymakers and educators implementing the degrees must move beyond consideration of course transferability and focus instead on how credits will apply to specific academic and degree requirements at receiving institutions. This is especially important when developing those courses or sequences that will apply toward a student's major. Ideally, two- and four-year faculty can work together to agree upon common lower-division pathways that can transfer and apply seamlessly at all public universities in a state. In practice, however, enacting common lower-division sequences, especially in the major, can run counter to long-held traditions of institutional autonomy and academic freedom. While (as this report demonstrates) the latter does not preclude the former, honoring the values of autonomy and freedom, as well as those of efficiency, student centeredness, and the common good requires a delicate balancing act.

Junior Status upon Transfer

The assumption that transfer associate degrees will apply toward a student's program of study at receiving universities leads directly to the requirement, in place in all four states under review, that students transferring with these degrees be automatically granted junior status, with all of the rights and privileges such status typically entails (for example, priority registration over lower-division students). Furthermore, these students should be

considered for scholarships and/or acceptance into specific degree programs on the same basis as native university students. Automatic conferral of junior status upon transfer thus incents students to complete the full lower-division curriculum at a community college, and helps to ensure that—barring changes in major—students can complete a baccalaureate in the standard amount of time and credits.

Guaranteed and/or Priority University Admission

Guaranteed and/or priority university admission for students with transfer associate degrees removes incentives for students to transfer prior to earning an associate degree, and instead rewards degree completion. Furthermore, such policies ensure that students are well-prepared for upper-division study in their major. Most states with a guaranteed admissions policy—Arizona, Ohio, and Washington, for example—certify that transfer associate degree holders with at least a 2.0 grade point average will be granted admission somewhere within the state, but not necessarily to any particular university or degree program, allowing institutions to set their own admissions standards. Transfer associate degree recipients in Ohio also receive priority admission over out-of-state associate degree graduates and transfer students, and Washington gives students with transfer associate degrees priority consideration over non-degreed transfers.

Associate and/or Bachelor's Degree Credit Limits

All but one of the states we examined have instituted limits on the number of units that can be counted toward a transfer associate degree, and several also limit the number of credits in a bachelor's degree. For example, New Jersey's Comprehensive State-Wide Transfer Agreement states that transfer associate degree recipients will have completed exactly half of the units required for a bachelor's degree, and that universities must graduate transfer students within the same number of upper-division units. Similarly, transfer associate degrees in Arizona can include one-half of bachelor's degree requirements (typically 120 semester credits) plus one course, and in Washington, the transfer associate degree is based on 90 quarter-hours of transferrable credit, although transfer students may take one additional term above this limit at a community college. These credit-limit policies help to reduce course overlap and improve time-to-degree among transfer students.

Acceptance Policy for Upper-Division Courses

Some states have also written policies regarding the transferability and applicability of upper-division coursework into their statewide transfer policies, although the intent of these policies varies widely among the four states we examined. For example, The Ohio Articulation and Transfer Policy affirms that if a course completed as part of the lower-division curriculum at the sending institution (typically a community college) is deemed equivalent to an upper-division course at the receiving institution, it will be counted as upper-division credit. By contrast, New Jersey's policy states that, "by definition, 300- and 400-level courses at four-year institutions have no course equivalents at the community colleges."[iv] Policies regarding the acceptance of upper-division courses may be especially necessary in states struggling with university capacity issues and/or those where a significant number of students do not live in geographic proximity to a four-year university.

Chronology of Four Statewide Processes

The following is a brief illustration of the development of systemic transfer and articulation reforms in Arizona, New Jersey, Ohio, and Washington.

Arizona

1980 – Discipline-specific Articulation Task Forces, comprised of faculty representatives from all of Arizona's community colleges and universities, begin meeting annually to develop, maintain, and improve various articulation tools.

1992 – The Transfer General Education Core Curriculum (TGECC) attempts to move beyond course-by-course articulation by creating a 41-hour block of courses that would meet the lower-division GE requirements at any of the state's three public universities.

1996 – Arizona's legislature adds a footnote to the annual appropriations bill requiring the Arizona Board of Regents and the State Board of Directors for Community Colleges to jointly establish a committee (the Transfer Articulation Task Force) to create "a seamless statewide articulation and transfer system, including the process for transfer of lower-division general education credits and curriculum requirements for the majors, with the objective of reaching consensus on an agreement that assures that community college students may transfer to Arizona public universities without loss of credits toward a baccalaureate degree."[v]

1996 – The Transfer Articulation Task Force presents a report to the legislature proposing a revised 35-credit common GE package (called the Arizona General Education Curriculum, or AGEC); a minimum of 6 common lower-division credits within equivalent majors (to be developed by the discipline-based Articulation Task Forces); and credit limits for transfer associate degrees. The Task Force report also asserts that students who complete the GE package and/or a full transfer associate degree shall be able to transfer their courses en bloc to any public university in the state. Finally, the Task Force report establishes a policy oversight structure led by the Academic Program Articulation Steering Committee (APASC) and the Joint Council of Presidents.

1998 – APASC approves a policy related to the transfer of lower- and upper-division credits.

2000 – The Joint Legislative Budget Committee approves an APASC initiative to require institutions making changes to their GE curriculum to consider its effects on transfer and articulation.

2003 – The State Board of Directors for Community Colleges is abolished, with little effect on transfer and articulation reform in the state.

2009 – The Maricopa to ASU Pathways Program (MAPP), a prescribed sequence of courses at a Maricopa Community College that meets the lower-division requirements for an Arizona State University major, is implemented. This program and the ones that follow with other community colleges (called Transfer Admission Guarantees or TAGs) improve course applicability and provide guaranteed admission for pathway completers, but limit progress toward statewide lower-division major pathways.

2010 – APASC, as well as a subcommittee called the Consortium for Transfer and Alignment, are reorganized to include representatives from the K-12 sector.

2010 – APASC approves a new associate of applied science to bachelor's of applied science transfer pathway.

2011 – APASC creates a position for a marketing and communications analyst to better promote the state's transfer associate degrees and pathways.

New Jersey

1997 – A statewide committee of community college faculty and staff develops *A General Education Foundation for Associate in Arts, Associate in Science, Specialized Associate, and Certificate Programs in New Jersey's Community Colleges*, the first common GE package to be utilized across the state's county colleges.

2007 – Assembly Bill 3968 (nicknamed the "Lampitt Bill" after its primary sponsor) unanimously passes both houses of the legislature. The Lampitt Bill requires that all public institutions of higher education enter into a collective statewide agreement providing for seamless of transfer of credits from a completed associate degree program to a baccalaureate degree program.

2007 – With input from their four-year colleagues, a committee of community college faculty revises and reaffirms the *General Education Foundation* document and begins evaluating courses for inclusion in the common GE package. The county colleges also begin statewide discussions about common tests and cut scores for placement into developmental education.

2008 – Per the Lampitt Bill, the New Jersey Presidents' Council adopts the Comprehensive State-Wide Transfer Agreement, which recognizes the county colleges' common GE package and states that: "An A.A. or A.S. degree from a New Jersey Community College will be fully transferrable as the first two years of a baccalaureate degree program at New Jersey public four-year institutions."[vi]

2010 – The New Jersey Presidents' Council begins convening discipline-based groups of two- and four-year faculty in the northern and southern regions of the state in order to discuss common pre-major and early major courses.

Ohio

1988 – The Ohio legislature calls for a commission to examine barriers to credit transfer among public institutions of higher education.

1990 – The Ohio Board of Regents adopts the *Ohio Articulation and Transfer Policy*, which establishes the principles of equitable treatment among transfer and native students and encourages associate degree completion prior to transfer.

1990 – Ohio's colleges and universities develop the Ohio Transfer Module, consisting of 36-40 semester hours of GE courses common across all public institutions. The Transfer Module includes a guarantee that all GE credits can be transferred and applied at other public institutions in the state.

1990 – The Ohio Board of Regents creates an Articulation and Transfer Advisory Council consisting of representatives from each of the state's public colleges and universities.

2000 – The Articulation and Transfer Advisory Council's Impact Subcommittee recognizes persistent campus-level barriers to student mobility, and the General Education and Applied Degree Subcommittee calls for greater transfer of credits beyond the core GE curriculum.

2003 – House Bill 95—which stemmed from discussions among institutional leaders, state lawmakers, and the Board of Regents—mandates the development of Transfer Assurance Guides, which are common lower-division pre-major and early major pathways that can be transferred and applied at any public institution in the state. Students completing both a Transfer Assurance Guide and the Ohio Transfer Module are now guaranteed admission to a public university in the state. Since 2003, over 600 two- and four-year faculty have participated in the development, review, and approval of Transfer Assurance Guides in approximately 40 disciplines.

2005 – House Bill 66 requires the establishment of criteria and practices for turning specific technical courses into college credits and mandates the development of Transfer Assurance Guides in certain technical or applied fields.

2009 – Authority for adult career-technical programs is shifted to the Ohio Board of Regents, enabling the development of 17 career-technical Transfer Assurance Guides. [vii]

Washington

1986 – The Washington Higher Education Coordinating (HEC) Board establishes a policy on inter-college transfer and articulation among public colleges and universities (known as the "Umbrella Policy"). The Umbrella Policy recognizes the Inter-College Relations Commission, a permanent articulation and transfer committee comprised of representatives from the community colleges, the baccalaureate institutions, the HEC Board, and the State Board for Community and Technical Colleges.

1990 – The HEC Board adopts the *Cooperative Student Transfer Process* which gives admission priority at public baccalaureate institutions to resident transfer students who can no longer progress toward their goals at a community college. In practice, this meant that students with an associate degree were guaranteed admission to any public baccalaureate institution in the state.

1992 – The Transfer Task Force, a cooperative effort between the state's public colleges and universities, is created to address the increasing number of students prepared for transfer as well as university claims that admission of all associate degree holders will limit enrollment for freshmen students.

1994 – The HEC Board approves the Transfer Task Force's recommendations to develop a Direct Transfer Agreement (essentially a transfer associate degree organized around a common GE core), as well as "proportionality" agreements that set aside a pre-determined percentage of enrollment slots at each public university for transfer students. The proportionality agreements thus alter the original transfer degree guarantee: students who have earned an associate degree are now guaranteed access to a public institution in the state, but not necessarily to a specific university or degree program.

1997 – The HEC Board approves the development of specialized transfer associate degrees in the sciences (called Associate of Science-Transfer Degrees).

2003 – The Joint Access Oversight Group (JAOG)—consisting of senior administrators from public and private universities, community colleges, and higher education coordinating agencies—is established to consider statewide transfer policies and strategies.

2003 – JAOG develops specialized Direct Transfer Agreements for pre-business majors, followed by transfer associate degrees for students intending to become secondary science or math teachers.

2004 – The Revised Code of Washington is amended to request the development of transfer associate degrees in nursing, elementary education, and engineering during the 2004-2005 school year, as well as additional degrees each year thereafter. This leads to the development of Major-Related Programs (common lower-division pre-major and early major pathways jointly developed by two- and four-year faculty) in these and other disciplines. Since 2003, Washington has implemented 19 Major-Related Programs, all of which rest on the common GE courses outlined in the Direct Transfer Agreement or included in an Associate of Science-Transfer degree.

Findings

Despite significant differences in the ways systemic transfer and articulation reforms emerged in the four states included in this analysis, we found much commonality in the processes used to implement transfer associate degrees. In the pages that follow, we discuss five themes that emerged from our data, as well as early positive outcomes and the likely future of transfer associate degrees. These findings have important implications for the development of systemic transfer and articulation reforms in other states.

Legislative Action as Driver

Legislative action was the primary driver of large-scale systemic transfer and articulation reform in all four states under review. In Washington, the threat of legislative action was enough to spur collaboration among two- and four-year institutions in creating transfer associate degrees. In the other three states, actual legislation (or in Arizona's case, a footnote in the annual appropriations bill) mandated the development of these degrees or their component parts.

In several of the states, community colleges had been pushing for these types of systemic transfer reforms for quite some time, while the public universities preferred to develop transfer policies without legislative interference. As one New Jersey university administrator explained, "A couple of the more aggressive advocates from the community colleges went to the legislature to get legislation. And the New Jersey Presidents' Council… took a position that they really should get ahead of this issue, that it was an academic issue, and it didn't really belong in the legislature and that we didn't want the legislature kind of telling us what had to be done. And the legislature, because that's what they like to do, nevertheless went ahead and [passed a bill]." A similar story unfolded in Arizona. After conducting a study that showed multiple problems and obstacles in transfer from community colleges to the three state universities, a former community college administrator:

> …decided to call a meeting with the presidents of the universities… and they basically denied that we had a problem…. So we met, and the [community college] presidents said, "What do you want to do?" I said, "I don't think we have any choice. We go to the legislature with this." And I went up, and [gave] my testimony, and we had given them copies of the report, and they all sat there, and it was real quiet, and they were looking and not saying anything, and I thought: "Well, looks like the universities got to these folks too." Then they started, one right after another. One woman said, "I've been in this legislature for 22 years, and I'll be darned if that the most complaints I get is about the articulation between community colleges and universities." And it went right around like that.

Anecdotal reports about obstacles to seamless transfer and articulation seemed to provide a powerful impetus for state legislators to write (or threaten) legislation mandating systemic transfer reforms. The New Jersey legislator who sponsored the bill mandating transfer associate degrees reinforced this perception: "And I did hear basically over and over again as I was on the campaign trail, because I was going to be focused on higher education issues, stories from various people who said, 'I went to try to transfer my credits, and I had to take a class over again….' When I got to the legislature… I codified it and made it a bill. Did the right thing."

In addition to powerful anecdotal reports, it is clear that an uncertain fiscal climate and a desire for greater efficiency and cost effectiveness in public higher education also influenced legislation pertaining to transfer associate degrees. As one Ohio community college administrator related: "So, the climate was money was getting tight, and the state legislature said, 'We're paying for these classes through subsidy once at a public institution. We don't really want to pay for them a second time, and we don't think we should have to.'" In all four states under review, transfer associate degrees were developed with the expectation that they would improve system efficiency (i.e., reduce barriers to seamless transfer and minimize excess time- and credits-to-degree), as well as increase cost effectiveness (the state would no longer have to pay for twice for similar courses). Furthermore, in all four states it was expected that transfer associate degrees would incent more students to begin their postsecondary study at a community college and complete an associate degree prior to transferring to a higher-cost institution. (Many of these benefits are already being realized; see pages 22-25).

In all four states, legislative involvement in transfer reform was lamented even as interviewees acknowledged that little would have been accomplished without it: "I think many of us—myself included—would have preferred not to have it legislated. But you can't deny the fact that if it weren't for the legislative initiative, we wouldn't have developed the agreement that we now have" (New Jersey community college administrator). In particular,

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the sense that state legislators were monitoring the development of transfer associate degrees—and that they would not hesitate to introduce follow-up legislation if they were not happy with the progress being made—was extremely effective in maintaining momentum, and in bringing recalcitrant faculty and administrators into the fold. As a former Arizona university administrator recalled, "Frankly, what helped the most was pressure from the public and from the legislature…. Just knowing that we were being watched and that we were being asked, essentially, to keep the best interests of the state of Arizona in mind, rather than our own colloquial concerns. We knew that there were watchdogs." A New Jersey higher education official echoed this sentiment: "I think the big fear was if we didn't get it done to a pretty high degree, the legislature was going to be even more prescriptive."

While educators typically detest legislative involvement, it is clear from this study that legislation plays an important role in systemic transfer and articulation reform, both through initial mandates or threats to create statewide policies and programs, and in applying pressure to employ them in a timely manner. However, if transfer and articulation legislation is to be effectively implemented, it is essential to limit its provisions to broad, statewide expectations, leaving more specific details related to curriculum development and institutional policy to inter-segmental faculty and administrative committees.

Presidential Leadership and Statewide Governance/Coordination

In all four states under review, presidential and/or top-level system leadership and support was critical to the successful implementation of transfer and articulation reforms. College and university presidents, in particular, are not only in a position to support and encourage their staff's involvement in the development of transfer associate degrees (and compliance with related policies and programs), but they also have significant influence across the state, allowing them to exert pressure on their peers and other policymakers and educators. In other words, presidential leadership and support for transfer associate degrees has both hierarchical and symbolic value. In the words of an Ohio university administrator:

> I really appreciate… how important it was to have two individuals representing the two sectors [on the implementation committee]. Presidents who were so committed to make this work that through their sheer determination and their collaborative spirit they became role models for how the state should function and how the rest of the system should function….I think that sends a message that from the very highest level of academia that there's a commitment to this.

Leadership and support by statewide governing or coordinating boards is also useful in the implementation of transfer associate degrees. In Arizona, Ohio, and Washington, governing or coordinating agencies applied the necessary pressure to compel faculty and administrators to participate in the development of systemic transfer reforms. In Washington and Ohio, these agencies also supplied crucial staff support for faculty disciplinary committees working to develop common lower-division transfer pathways:

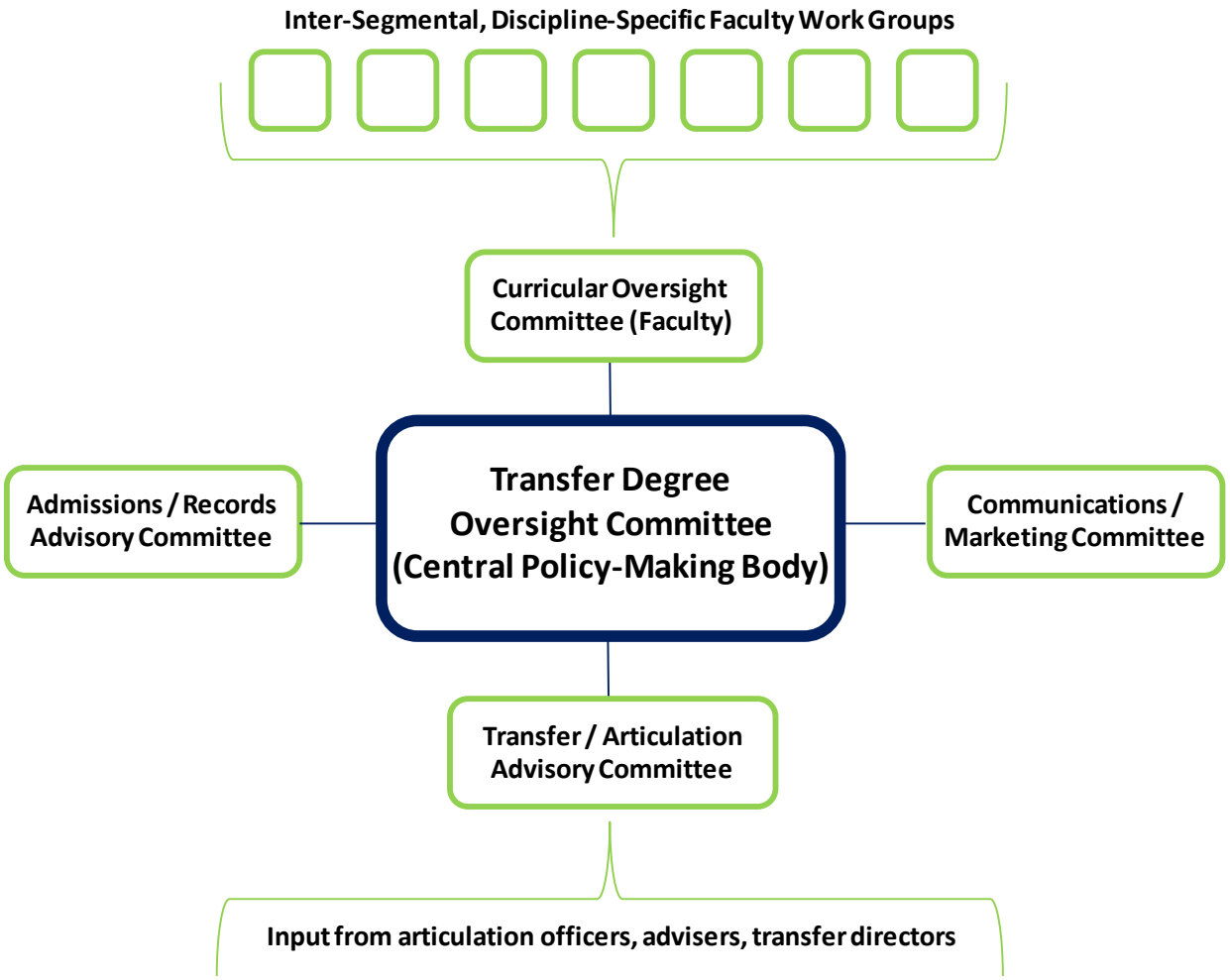
> Representatives from the State Board [for Community and Technical Colleges] and the HEC [Higher Education Coordinating] Board did quite a lot of up-front work… logistical kinds of things. From participation in the discussions, they made it clear that they wanted this driven by the colleges and universities… and they made it clear that they wanted the expertise of the biology faculty to drive the tailoring of the biology [transfer associate degree]. They helped in a lot of background ways, they helped in communication among the colleges, disseminating materials. But they weren't involved in the actual details of the process. (Washington community college professor)

Although governing or coordinating agencies helped to facilitate the development of transfer associate degrees in the four states we examined, successful implementation of these and similar reforms does not depend on the specific *type* of statewide structure in place. For example, the Ohio Board of Regents, which governs all two- and four-year public institutions, was instrumental in the development of transfer pathways in that state. Sector-specific governing or coordinating boards in Washington and Arizona were also helpful, but the implementation of systemic transfer reform in Arizona continued even after its State Board of Directors for Community Colleges was abolished. And in New Jersey, where the Higher Education Coordinating Commission is relatively weak, the Presidents' Council—comprised of community college and university leaders—took the lead in drafting the Comprehensive State-Wide Transfer Agreement. A state-level community college official in New Jersey summed it up nicely: "Governance matters, but when all is said and done, I believe it's really more the people in the system than the nature of the system that determines progress or not."

Clear, Ongoing Organizational Structure

Throughout our interviews, we were struck by the power of personality in enacting large-scale organizational change. Yet individuals do not develop transfer associate degrees on their own; to be effective in implementing systemic transfer reforms, they must work through a clear and ongoing organizational structure. Figure 1 illustrates a model structure for creating such degrees, dealing with policy and administrative issues as they arise, and ensuring awareness, buy-in, and compliance among members of the higher education community.

Figure 1: Model Organizational Structure for Implementing Transfer Associate Degrees



This model organizational structure, some version of which is in place in all four states we examined, is not hierarchical in form or function. Rather, it allows statewide policy to radiate out from a central policy-making and oversight body; model transfer pathways to emerge from a faculty-led curricular oversight committee; and newly-developed policies and programs to be enforced by presidents, provosts, deans, department chairs, and others at the individual district or campus levels. Furthermore, it is a model that ensures communication among all groups and provides venues for identifying and resolving

problems related to policy, curriculum, articulation, admissions, and other aspects of the transfer process. Most notably, this model organizational structure works well because it assigns responsibility for each aspect of the transfer degree implementation process to the group that is best suited to manage it. In particular:

Transfer Degree Oversight Committee (Primary Policy-Making Body)

This committee is comprised of high-level administrators and faculty leaders who have the authority to enforce policy at the system or campus levels, and is charged with resolving statewide policy issues. A university administrator described Ohio's version of this body: "The oversight committee is very much representative of people from… four-years and two-year community colleges that are at significant levels, like academic vice presidents for academic affairs. Key individuals who really have the ability not only to bring resources to the table, but also to impact what's going to happen on their campus."

The transfer degree oversight committee also coordinates and oversees sub-committees dealing with the various administrative aspects of implementing transfer associate degrees, and may provide staff support to curricular oversight and/or faculty disciplinary work groups. It plays an especially critical role in ensuring awareness, buy-in, and compliance at the district and campus levels by working closely with presidents, provosts, and vice presidents. As a former Arizona community college administrator made clear, "If you don't have an enforcer, you don't have anything!"

Finally, the transfer degree oversight committee is the primary body interacting with legislators and other interested parties. A Washington community college administrator explained why this role is so important: "I would try to set up [this committee] in an intermediary position, so that if a hot question got asked to one of the state agencies or a legislator or something, that there was a well-known way to deal with that rather than having it turn into a mallet hitting a gnat. And I would try to just set that up as a role for the organization. Say, 'Send something to us because we can probably sort it out in a sensible way without wasting the valuable time of you [policymakers].'"

Curricular Oversight and Faculty Disciplinary Committees

Data from all four states indicate that faculty must be, as an Ohio university administrator argued, "at the heart of" all curricular matters related to transfer. A Washington university administrator explained further:

> What will we [accept as a common lower-division curriculum] that everyone across the board can agree to? Those kinds of conversations simply cannot be had by people who don't know the curriculum well enough to know the details of those kinds of classes. So it's tremendously important that the faculty get involved. Besides which, the buy-in is so much bigger when the faculty are involved. Administrators can say yes and bless it and do all that sort of thing, but coming down to the operationalizing (sic) of it, it helps to have people on the ground who are familiar with it, who feel like they've had a hand in it and really get it and understand it and can sell it across campus.

Thus, the curricular oversight committee is comprised of two- and four-year faculty leaders in various disciplines, and is charged with resolving curricular issues and developing

transfer pathways at a statewide level. The curricular oversight committee also ensures awareness, buy-in, and degree alignment at the district and campus levels by working closely with deans, department chairs, and program directors. Further, it collects and responds to feedback from local academic senates, departments, and curriculum committees.

Perhaps most importantly, the curricular oversight committee convenes inter-segmental, discipline-based faculty work groups and assists in identifying common, high-quality lower-division transfer pathways in majors or areas of emphasis that can be implemented statewide. As an Arizona community college professor argued, discipline-based faculty workgroups are critical to the successful implementation of transfer associate degrees:

> The decisions have to be made in those little kingdoms. Because… you've really got to get the buy-in from the people granting the degree, and really the people who sign off on the degree are the faculty members…. And there needs to be a vehicle where the university faculty actually meet the community college faculty and say, "Oh, I hear what you are saying. Yeah, you are teaching the same thing. Yeah, you're using the same textbook I'm using," and for the community college faculty member to find out where the university folks are headed, and that's what the [faculty disciplinary committee] does. It allows for the communication to occur and allows for progress in the right direction together.

Interviewees in all four states spoke at length about the types of faculty that should be recruited for inter-segmental disciplinary discussions. An Ohio university administrator felt it was "important to identify people who were the real thought-leaders… the very best faculty in terms of curricular development" so that when they brought statewide transfer curricula back to their own campuses, "people would respect what they were able to accomplish." A state-level university administrator in Washington specified further: "You have to have key academic people in [each] discipline… [those] who actually deal with transfer students and know what the transfer patterns look like and the problems students encounter. From our side it might be associate deans—they tend to be our academic workhorses. From the community college side it was often a faculty member who taught in the subject or an instruction commission person."

Transfer/Articulation and Admissions/Records Advisory Committees

Articulation officers, transfer directors, advisers, registrars, admissions directors, and similar personnel in both community colleges and universities are—in the words of one Washington higher education official—"an essential piece of the puzzle" in the development of transfer associate degrees, as they understand the intricacies of existing articulation agreements and transfer processes and can identify potential implementation challenges as they arise. Furthermore, they are "the ones who actually have to sell" transfer associate degrees to students. Thus it is essential to create advisory committees representing these personnel, and to ensure clear channels of communication between them and the transfer degree oversight committee. These advisory committees collect and respond to feedback from their colleagues at the district and campus levels, and notify the transfer degree oversight committee of any systemic concerns.

Data from our interviews indicate that committees such as these, while essential, have a tendency to view issues in the implementation of transfer associate degrees as insurmountable obstacles rather than as challenges that require creative solutions. Thus while it is important to examine seriously any concerns raised by these advisory committees, the transfer degree oversight committee must ensure that administrative challenges do not stand in the way of systemic transfer and articulation reform.

Communications/Marketing Committee

The communications/marketing committee is primarily responsible for informing college and university personnel about the new degrees, raising awareness of new degree pathways among students and their parents, and working with K-12 schools and other organizations to promote the degrees once they are in place. This process is critical and cannot be put into place too soon. Indeed, several interviewees, such as this Ohio community college administrator, lamented overlooking this component of the implementation process: "I think you need a good marketing campaign… that was one of our downsides: it took us a long time to get the information out…. We thought this was all great stuff, but the masses really didn't know about it too well." An effective marketing or communications plan is thus essential to ensuring that newly-developed transfer pathways are utilized by students, and should be considered early in the process of implementing the degrees.

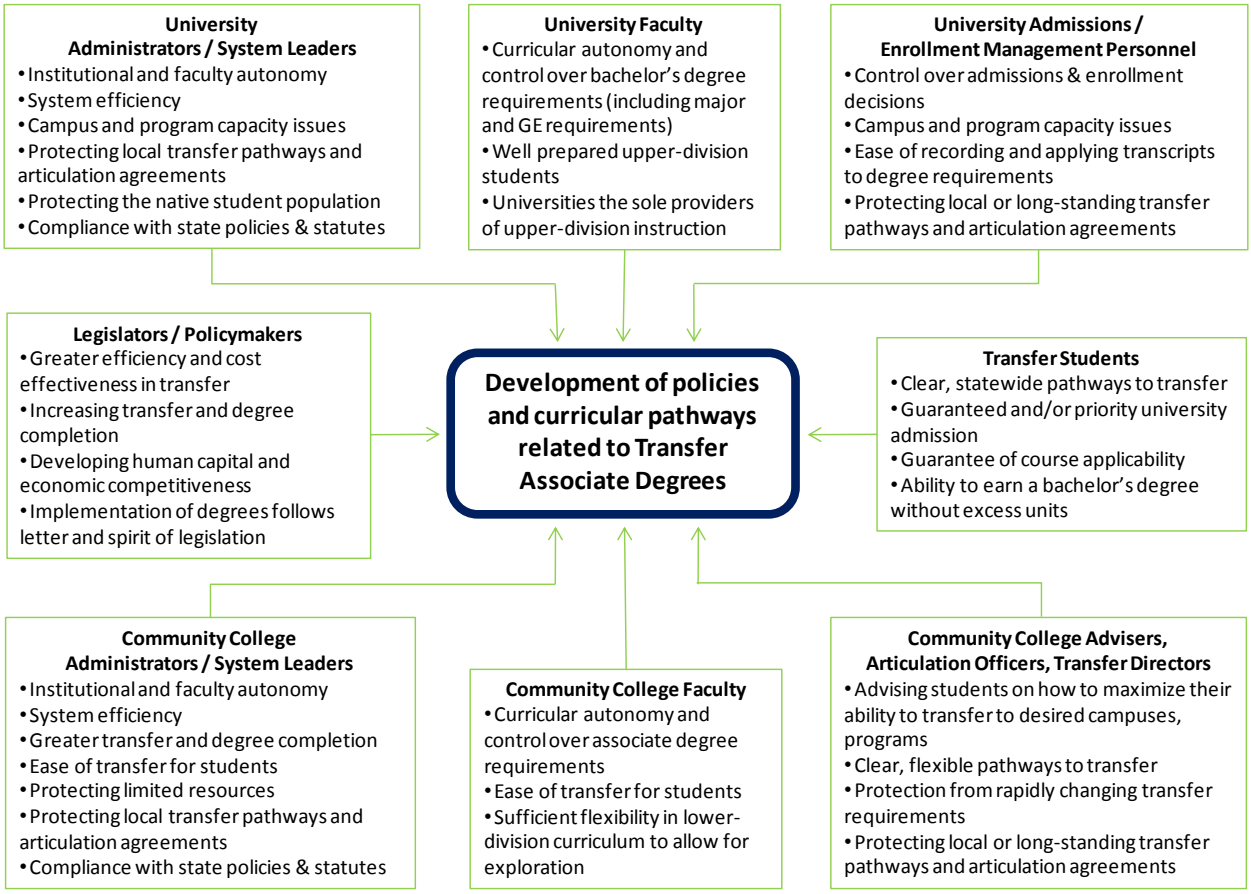
The Autonomy/Efficiency Balancing Act

An organizational structure that recognizes the roles and responsibilities of various constituent groups is critical, as the process of implementing transfer associate degrees essentially boils down to a balancing act between the values of autonomy and freedom and those of efficiency, student centeredness, and the common good. Policymakers, in particular, tend to value the latter over the former, as it can lead to increased system efficiency, cost effectiveness, and theoretically, greater human capital and economic competitiveness. Yet implementation committees in all four states worked hard to preserve their faculty's ability to provide a cutting-edge curriculum, as well as their institutions' freedom to pursue their particular missions and goals, even while asking them to relinquish some control over the lower-division curriculum in order to develop statewide transfer associate degrees.

Key to striking a balance between autonomy and efficiency is understanding the interests and values of each of the major players involved in systemic transfer and articulation reforms. A New Jersey university administrator argued this point nicely: "The most important thing was to get to the heart of what everybody's really profound concerns were before getting to the nitty gritty of the little issues, because people often get sidelined on the little stuff, and they don't articulate and confront what they really care about." These values must be articulated and addressed early in the implementation process so that the transfer degrees can be developed with them in mind, and so that key players can work together to

find areas where compromise is possible. Most importantly, these concerns must be adequately addressed so that they do not ultimately limit the impact of transfer associate degrees. Figure 2 illustrates common interests and values among the major players involved in systemic transfer and articulation reforms.

Figure 2: Interests and Values of the Major Players in Systemic Transfer Reforms



To be successful in involving various higher education constituents in the development of transfer associate degrees, different messages must be targeted to different groups. For example, system leaders and administrators may be best persuaded with messages about how transfer associate degrees will reduce excess credits and improve system efficiency. University faculty will likely respond to the notion that they will receive better-prepared students into their programs, while two-year faculty and staff are often motivated by the sense that engaging in this process will lead to improved transfer experiences for their students. Finding the right message to appeal to each group is crucial in ensuring acceptance and involvement in the implementation of transfer associate degrees and other systemic reforms.

Yet bringing these groups to the table is only half of the battle. The next—and arguably harder—step is convincing faculty, administrators, and others to cede some level of autonomy or freedom in order to enact statewide, student-centered transfer and articulation

policies and curricula. Creativity is essential in reaching these compromises, and the four states under review all found different ways to balance autonomy and efficiency within their statewide transfer reforms.

For example, in all four states the universities agreed to accept the community colleges' common GE package as equivalent to their own GE requirements rather than standardize general education across all colleges and universities in the state. As a New Jersey university administrator explained, there were other benefits to this arrangement as well:

> The reason why I think the common general education outline was important was for two reasons. The first, it assured the quality and predictability of preparation of the first two years. It was almost a prerequisite for full faith in credit. If we were going to say, "We're going to take it no questions asked," then we needed to know what was in it, at least in terms of the general education.… The other reason why it was important is because it actually derived from a vigorous discussion and debate between the two-year and four-year institutions as to what should be entailed in general education.

Although New Jersey universities embraced the idea of a accepting the common community college GE package in lieu of their own, and put in place processes by which students could appeal a university's decision about course transferability or applicability to the major, they fought to exclude community colleges from participating in formal appeals processes. (In the other states under review, community colleges can initiate appeals processes on behalf of their students.) While the desire to maintain autonomy over course transferability and applicability is understandable, a former member of the Arizona transfer and articulation task force explained why community college authority to initiate an appeals process is so important: "Students need to know that if they have a problem they have somebody they can go to… because a lot of students, especially the ones who are poor or at risk, they may not challenge [the university's ruling]. They just say, 'Oh, I have to take this class over again.' They don't know that there is a system in place." While New Jersey community college administrators would certainly prefer a policy that gave them more latitude to initiate formal appeals, several noted that their attempts to work informally with their university counterparts to resolve specific students' transfer issues had been successful.

Another issue requiring a delicate autonomy/efficiency balancing act has to do with specific institutional requirements that fall outside the parameters (or allotted units) for a transfer associate degree, but that faculty and administrators feel are central to their college's culture or identity. In New Jersey, community colleges were asked to do away with any institutional requirements that would cause a student to earn more than 60 semester credits prior to completing a transfer associate degree. To cope with this diminished autonomy, one college "decided as an institution that we could still support the value of those courses—some students wouldn't take them because they weren't going to fill this particular criteria—but we could still counsel and advise and encourage and value [them]" (New Jersey community college administrator).

In Washington, the four-year institutions were asked to make adjustments to institutional requirements in order to accommodate transfer associate degrees. As a higher education official from that state explained, "One of the ways that we got around the whole issue of

prerequisites… if somebody had a special class that they required, even if it was a 200-level course that they required as a prerequisite, what we asked the university to do was to turn it from a prerequisite into a graduation requirement. So that we weren't trying… to change their degree requirements, we were just trying to change *when* the student had to take that course." A Washington university administrator offered this advice to those developing transfer associate degrees in other states: "Get creative so you don't have to change your requirements, [you] just figure out how to work around them for students."

Washington community colleges and universities demonstrated similar creativity in order to create statewide transfer degrees in the sciences and other majors that have high lower-division unit requirements. Institutions across the state agreed to allow students transferring

"Get creative so you don't have to change your requirements, you just have to figure out how to work around them for students."

with a degree in these subjects to postpone one or two GE classes until their junior or senior year so that they could complete all of the necessary lower-division pre-major and early major courses prior to transferring. University faculty were typically satisfied with these delayed-GE pathways because they felt that students were better prepared for upper-division major classes and because the last few GE courses "take the edge off the science heavy focus of the last two years" (Washington state-level university administrator). However, others in the state believed that these pathways were confusing for students and advisers and thus preferred transfer associate degrees that require all GE courses to be completed in the first two years.

In some instances, disciplinary groups in Washington, Arizona, and other states were unable to identify a truly common lower-division transfer pattern that met the requirements for an associate degree—and all of the major prerequisites required by public universities in the state—within a prescribed cap on the number of units. Most often this occurred in disciplines where the universities could not agree amongst themselves as to the best preparation for upper-division study. Although Arizona faculty began by trying to identify at least 6 common lower-division credits within each equivalent major at the state's three universities, over time universal applicability proved difficult in some disciplines, and educators began instead to develop degree pathways specific to particular universities. The popular Maricopa to ASU Pathways Program (MAPP)—which was implemented in 2009 and is a prescribed sequence of courses tailored to an Arizona State University major—improves the applicability of courses within a major (and protects university autonomy), but does so at the expense of system efficiency.

Similarly, when Washington faculty found it hard to agree on the best preparation for upper-division study in a major, transfer associate degrees were developed with as many common courses as possible, but they also included provisos specifying, for example, that a certain course is required for transfer to University A, but that University B requires a different one. Although the use of provisos or caveats enabled faculty to create transfer associate degrees

that are, perhaps, 80 percent common across all institutions, they are less efficient and student-centered than many educators, such as this Washington higher education official, would prefer: "In my opinion, these provisos muddy the waters. And from the advisers' perspective, it makes it really challenging…. I mean, if you're really trying to create something seamless that keeps options open for students, [provisos must be] kept to an absolute minimum and really have to be strongly justified."

In Ohio, and to some extent in Arizona and New Jersey, the fact that course equivalency is determined by adherence to jointly-developed learning outcomes has proven critical to achieving a satisfactory balance between autonomy and lower-division standardization. One New Jersey administrator provided a useful explanation for this phenomenon:

> The underlying issue… can be articulated fairly concisely. And that is the tendency to say that if you didn't learn it here… or if you didn't learn it from me, you didn't learn it…. So when we began to think in terms of learning outcomes as opposed to… inputs, which is where they were focused, the most important thing we learned is that the mindset changed, and the faculty members began to think in terms of outcomes… and then the source of the inputs became less important to them.

Ohio has instituted a very effective process for determining course equivalency based on learning outcomes, as this higher education official explained:

> In Ohio, when you develop a [transfer associate degree] course, there's something called a 70% rule. A 70% rule saying that if you had, let's say, 10 learning outcomes, that in order for a course to be approved [for this degree], you would need to meet 7 out of the 10. That's 70%. However, in some of the areas, the faculty felt, "Nope, you've got to meet all 100%." And then there were those that said, "Out of the 7 outcomes, 4 are essential," meaning that you had to have those 4 essential learning outcomes or that course wouldn't be approved.

The learning outcomes approach and 70% rule are highly valued by Ohio educators as they give faculty "the flexibility of doing things in totally different ways as long as you can show you're addressing those particular outcomes" (Ohio university professor). Furthermore, they focus faculty on the essential competencies required for upper-division study in a major, as well as the curricular structures that are best for students. Basing transfer degrees on common learning outcomes is thus key to creating a system that is, as Ohio educators like to say, both faculty-driven and student-centered.

While the process of developing transfer associate degrees in various disciplines is not always smooth or easy, the profusion of such degrees in states across the nation prove that—in the words of an Arizona university professor—"if well-educated and considerate representatives from all the campuses get together… and work it out with input from their own faculties… compromise is achieved." In other words, while there is no one-size-fits-all model appropriate for all states, it is possible to achieve a balance between autonomy/freedom and efficiency, student-centeredness, and the common good.

Building Trust and Allaying Fears through Faculty-Driven Processes

Given the delicate autonomy/efficiency balancing act required to create transfer associate degrees, many faculty members were wary of the implementation process, distrustful that their views would be considered, and/or worried that courses would be made less rigorous in order to achieve greater standardization. Furthermore, making decisions about statewide curricular pathways often falls outside the professorial comfort zone, as this Ohio university administrator explained: "We tend to be really insular and not see beyond our own discipline, sometimes not even beyond our own specialty: 'Is there anything in the world besides Beowulf? Well, not that really matters to me.' And so when you start talking about [pathways] that go from one school to another, that's really, like, foreign territory."

Overcoming these hesitations and ensuring buy-in and support from faculty members involves multiple processes of curricular design, feedback, revision, and review (this cycle exists, in some form or another, in three of the four states we examined). The initial step is designing the transfer associate degree for each major or area of emphasis. This requires two- and four-year faculty to come together in disciplinary groups to determine the common pre-major and early major courses that can and should be completed prior to transfer, and then sending the proposed statewide transfer pathways out for a wider review by their disciplinary peers. The next step is determining learning outcomes for each of the pre-major or early major courses in the degree, and again, asking for feedback from a wider disciplinary base. Community colleges will then submit courses that parallel those in the model transfer associate degree, and the final step in the cycle is evaluating whether the courses are truly equivalent. (Ohio, as previously discussed, bases equivalency on adherence to a pre-determined percentage—typically 70%—of the learning outcomes.)

Ensuring buy-in and support from faculty involves multiple processes of curricular design, feedback, revision, and review.

Building trust and collegiality among two- and four-year faculty in disciplinary committees is widely viewed as key to the success of transfer associate degrees, as it can break down stereotypes about teacher preparation and curricular quality. As a state-level transfer official in Arizona explained, "When you have university professors sit at the same table as community college professors, they can see that the community college courses are essentially the same. They use the same textbooks, the same approach, so I think the old prejudice about community colleges being glorified high schools breaks down." Even within disciplines that are notorious for disagreeing on lower-division curricular patterns, often "when you get them in a room, they can see that sometimes their curriculum overlaps maybe 80-90%. And they are sound, good teachers with great backgrounds… And they begin to look at each other as colleagues in a larger system" (Washington state-level community college administrator).

A common fear among faculty new to systemic transfer reform is that transfer associate degrees will be static and unchanging, and thus unresponsive to empirical or pedagogical

shifts within a discipline. Therefore, implementing processes for periodic reviews is critical in persuading faculty to agree to lower-division courses or sequences that benefit students but that are different from what they might ultimately prefer or implement on their own campus. As this Ohio university professor explained, each disciplinary committee should be allowed to determine their own time frames for review:

> What we decided to do—our accreditation agency reviews every 10 years, so we're not likely to see significant curriculum changes in a smaller time frame than that. So we decided that we would review the [transfer associate degree] every 10 years, and then if there needed to be curriculum adjustments, we would make them at that time. And I think other disciplines are doing that more frequently because they have faster turnover [in] their knowledge base.

Although some might imagine that the establishment of faculty-driven processes for developing transfer associate degrees—as well as processes for reviewing them every few years—would slow the pace of systemic transfer reform, in all four states under review these processes were not only essential to the implementation of transfer associate degrees, but they actually helped to move the initiatives forward. In particular, this approach provided implementation leaders with leverage to push for forward progress. As this university administrator in Washington recalled saying, "Nobody's telling you what to teach, they are just asking you to come together on what prepares students best for what you teach." Similarly, a former community college administrator in Arizona was able to move faculty committees forward by saying: "It is not up for a vote, if we're going to do this. What is up for discussion is *how* we're going to do this."

"It's not up for a vote, if we're going to do this. What is up for discussion is <u>how</u> we're going to do this."

Interviewees in the four states we examined also noted the importance of keeping faculty members'—and other participants'—attention focused on *why* they were developing transfer associate degrees. As this Arizona community college professor stated, "It's not about the number of students who transfer, it's about the *ability* of students to transfer." A former community college administrator from New Jersey echoed this point:

> Regulators, administrators, and faculty need to somehow keep the needs of students at the front of their agenda and just keep reminding themselves to why they are doing this. This is not for the purpose of either destroying institutional autonomy or limiting academic freedom of faculty members, but it's to construct a rational system for students, and an efficient system for the state. And those should be worthy goals that anybody can wrap themselves around.

Articulating a common goal and a shared understanding of why faculty and administrators are engaging in the hard work of systemic transfer reform—in combination with clear and ongoing processes for developing and reviewing transfer associate degrees—are thus central to moving participants past their own institutional or disciplinary silos and creating efficient, student-centered transfer systems.

Early Positive Outcomes

Transfer associate degrees are a relatively recent phenomenon. Indeed, they have only been in place in the four states we examined for between 2 and 15 years. Nonetheless, some early positive outcomes have already been documented. Although it is too early to make definitive statements about the impact of transfer associate degrees on the efficiency and cost effectiveness of state higher education systems, the fact that early outcomes are so closely aligned with the policy goals and expected benefits of systemic transfer and articulation reform is a promising sign. The following sections describe early positive outcomes of transfer associate degrees in Arizona, Ohio, and Washington. (Because New Jersey's Comprehensive State-Wide Transfer Agreement was enacted in late 2008, data necessary to evaluate its impact are not yet available.)

Students have Greater Flexibility/Options in Transfer

The implementation of transfer associate degrees automatically provides students with greater flexibility and more options in transfer, as these degrees are based on GE packages and lower-division major pathways that are common across a state's community colleges and public universities. Recipients of these degrees are assured that their credits will transfer and apply at multiple institutions—a benefit that is especially important for those students who are more interested in transferring into a specific degree program than to a particular university. Greater flexibility for transfer students will also benefit states experiencing enrollment constraints within certain institutions or degree programs.

Greater flexibility in transfer—as well as guaranteed or priority university admissions policies, where they exist—are probably the most compelling reasons for students to participate in transfer associate degree programs. Thus, flexibility is not only an advantage of systemic transfer reform, but—through a continuous cycle of benefits and incentives—it may also serve to increase the number and percentage of students starting at community colleges and earning transfer associate degrees over time.

Improved Transfer Rates

Recent reports from Washington and Ohio show that transfer associate degrees have had a positive effect on transfer rates. In Ohio, for example, transfer volume increased by 21% between 2002 (the year before common lower-division pre-major and early major pathways were first introduced) and 2009. This equates to a 3% increase in transfer each year, even though enrollment grew by only 1% per year during the same time period.[viii] Similarly, data from Washington show that students who earn transfer associate degrees in the sciences or engineering transfer to baccalaureate institutions at higher rates than students who complete only the common GE package with an emphasis on science or engineering. This has led the Washington Higher Education Coordinating Board to conclude that transfer associate degrees are "helping students interested in science-related majors to realize their educational goals more efficiently" than the GE package alone.[ix]

Furthermore, transfer associate degrees may be increasing transfer and degree completion among populations that have been historically less successful in navigating transfer pathways. For example, Latino students in Washington are participating in transfer associate degree programs at particularly high rates; in 2009, ninety-three percent of Latino transfers in that state earned such a degree.[x] A 2010 report from the Ohio Board of Regents similarly shows that transfer students "are older, ethnically more diverse and economically less affluent today than in the beginning of the decade; the share of White students among them is on a decline, while shares of Black and Hispanic students are gaining."[xi] Clearly, transfer associate degrees are making it easier for students from all backgrounds to navigate complex higher education systems.

Transfer associate degrees may be increasing transfer and degree completion among populations that have been historically less successful in navigating transfer pathways.

Transfer Students are Better Prepared for Upper-Division Work

Anecdotal evidence from all four of the states we examined suggests that students completing transfer associate degrees are better prepared for upper-division work and more likely to succeed at a university. Take, for example, the opinion of this Arizona community college professor: when community college students "get a degree and then transfer the degree, it just seems that it makes a monumental amount of difference in terms of their preparation for what they're going to see at the university. They just seem to be more successful." University administrators—such as this one from New Jersey—tend to agree: "What I found [at my university] is that our transfer students are becoming our most successful students."

These anecdotal claims are supported by recent data. For example, a 2007 analysis of Arizona's transfer articulation system shows that students who completed either the state's common GE package or a full transfer associate degree prior to university entry had significantly higher grade point averages after two and four semesters than students who transferred without completing a degree or the GE core. Furthermore, students who completed the GE package were 50% more likely to persist at a university after one year compared to students who transferred without the package. (Interestingly, students who completed a transfer associate degree were less likely to persist after one year than those who completed the GE core but did not participate in a common lower-division major pathway. The study's author infers that this may be due to a "high degree of uncertainty and unfamiliarity regarding common courses" among both community college and university student populations.)[xii]

Data from Ohio also support the notion that transfer associate degrees lead to better preparation for upper-division study. According to the Ohio Board of Regents, the proportion of students transferring with a declared major at destination campuses increased from 84% in 2002 to 93% in 2009. This suggests that more transfer students are entering

universities ready to begin work in their major on day one of their junior year. In addition, two key indicators of academic performance among transfer students improved between 2002 and 2009. In the latter year, transfer students completed more credit hours in the first year after transfer, and were also more successful in passing courses (more specifically, the ratio of completed hours to attempted hours increased).[xiii] If transfer associate degrees do indeed provide better preparation for upper-division study—as data from Ohio and Arizona suggest—we are likely to see improvements in bachelor's degree completion among transfer students, and ultimately, greater efficiency along the transfer path to the baccalaureate.

Improved Degree Completion

As expected, the implementation of transfer associate degrees appears to spur greater degree completion at both the associate and bachelor's degree levels. In Washington, for example, 86% of students who began at a community college and earned a bachelor's degree in 2006 had completed a transfer associate degree prior to entering the university. This was a 12% increase from 2001.[xiv] Furthermore, bachelor's degree completion rates among students with Washington transfer associate degrees rose from an average of 63 percent between 1998 and 2002 to 71% in 2007.[xv] While many of Washington's transfer associate degree pathways are too new for individual assessments of their effect on baccalaureate attainment, students with such degrees in science or engineering (these were the first to be developed) "are more likely to have earned a bachelor's degree than students" who completed only the general education package.[xvi]

In Ohio, four-year university graduation rates among transfer students increased from 52.6% in 2002 to 56.1% in 2006.[xvii] It is important to note, however, that while these improved graduation rates correlate with increased participation in Ohio transfer associate degree programs, they may result from factors other than the implementation of systemic transfer and articulation reform. Nonetheless, data from Ohio and Washington indicate that transfer associate degrees may ultimately help to achieve states' policy goals of greater degree completion and, therefore, growth in human capital and economic competitiveness.

Reductions in Time- and Credits-to-Degree

Perhaps the most convincing evidence to date of the effectiveness of transfer associate degrees are data from Arizona and Washington that show significant reductions in the amount of time and number of credits earned en route to a bachelor's degree. A 2007 report from Arizona, for example, shows that transfer associate degree recipients, as well as students who transferred after completing the common GE package, were more likely than those who transferred without either credential to complete a baccalaureate within two or three years. Furthermore, transfer students who completed the GE package prior to university entry graduated with 3.5 fewer credits than their peers. Adding in credit reductions that occur prior to transfer, the report concludes that the state's "transfer system appears to be working well and is functioning as a tool and system exactly as intended. Through the system, students are able to complete their degrees with nearly one semester FTE less coursework than was the case five years ago."[xviii]

A recent report from Washington tells a similar story. As noted above, students who had earned a transfer associate degree in science or engineering were more likely than their peers without the degree to transfer and earn a bachelor's degree. As a 2009 study by

Data provide compelling evidence that transfer associate degrees may lead to improved system efficiency and, ultimately, greater cost savings for states.

researchers at Washington State University's Social and Economic Sciences Research Center demonstrates, these students also required fewer credits to accomplish their goals. Indeed, students with transfer associate degrees in science or engineering earned a baccalaureate in 6 fewer credits than those who completed only a GE package prior to transferring, and with 49 fewer credits than students who had completed a technical or more traditional associate degree before entering a university. The same report shows similar reductions in credits-to-degree among students who had earned a transfer associate degree in business. These students earned a baccalaureate in 7.5 fewer credits than those with only a GE package, 11.5 fewer credits than students who transferred without a degree, and 42.5 fewer credits than students who entered a university with a technical or other associate degree.[xix] These data provide compelling—albeit early—evidence that transfer associate degrees may lead to improved system efficiency and, ultimately, cost savings for students and states.

Cost Savings for Students and the State

While transfer associate degrees are too recent a phenomenon in the four states under study to make definitive statements about their ability to effect cost savings for students and states, one might take early evidence showing that these degrees incent associate degree attainment prior to transfer, improve bachelor's degree completion, and result in reduced time- and credits-to-degree as an indication that these reforms will ultimately succeed in generating cost savings as well.

Recent data from Ohio suggest that this may be a safe assumption. A report published by the Ohio Board of Regents in late 2010 shows that transfer activities save the state $20 million per year. Because almost a quarter of the credit hours transferred in 2009 were earned by students with transfer associate degrees, and because guarantees of transferability and applicability result in higher cost-differences for these degrees, close to one-third ($7 million) of the cost savings can be attributed to transfer associate degrees.[xx] While more data over longer periods of time will be needed to further evaluate the cost-effectiveness of these reforms, this study suggests that transfer associate degrees hold promise in achieving the twin policy goals of greater system efficiency and increased cost savings. In the words of this New Jersey university administrator:

> Where [transfer associate degrees] are done well and thoughtfully, and where they are genuinely embraced, as opposed to being grudgingly tolerated, the outcome that people are hoping for—which is to ensure a combination of quality education experience that is as affordable as we can make it in the sense that we are minimizing redundancy—is in fact achievable. And in the end it's eminently worthwhile doing as a public policy issue.

The Road Ahead

The four states included in this analysis have all made significant progress in implementing transfer associate degrees, and as the previous paragraphs illustrate, many are starting to see positive outcomes. As a result, all four are looking forward to ways in which they may extend or improve their transfer and articulation systems. New Jersey—the only state that had not yet incorporated common lower-division pre-major and early major pathways into its transfer associate degrees—is in the process of convening discipline-based faculty in the northern and southern parts of the state in order to identify common courses and sequences. Washington has led the field in incorporating private colleges and universities into its statewide transfer system. And Arizona, Ohio, and Washington are seeking to extend their transfer policies to include associate of applied science degrees; discussing statewide approaches for awarding Advanced Placement (AP), International Baccalaureate (IB), dual enrollment, and College-Level Examination Program (CLEP) credits; and examining possible transfer pathways for students coming out of the military. In addition to these advances, several emerging issues are common among all of the states in our analysis.

Communications and Marketing

The lack of statewide efforts to market newly-developed transfer associate degrees to students, parents, faculty, and advisers has resulted in, at least in some states, lower-than-expected rates of participation among community college students. As a higher education official in Washington put it, "I think we haven't done a good job in this state of letting people know what the pathways are." As a result, community college students are less aware of available transfer pathways, and do not always understand the benefits of earning a transfer associate degree. All four states in this study are all seeking ways to more effectively promote their statewide transfer pathways; Arizona, for example, has recently created a position for a statewide marketing and communications analyst who will report directly to the inter-segmental transfer and articulation oversight committee.

Technology

In part because of the need to more effectively promote transfer associate degrees, the four states in this analysis are all considering and/or implementing technological solutions such as web-based advising tools for students and staff, electronic management systems that enable faculty review of learning outcomes and course equivalencies, and/or electronic transcript delivery systems that can be used by all institutions. Web-based advising and degree planning tools, in particular, have emerged as a necessary next-step in systemic transfer and articulation reform. As this community college administrator in Washington argued, "If you are going to do this work on a statewide level, you will need to put a web-based advising tool in place. We've tried, we just haven't been able to get funding." Arizona (www.aztransfer.com) and New Jersey (www.njtransfer.org) have online transfer tools, but educators in both states acknowledge the need to make them more robust and student-oriented in the future.

Involving K-12 Educators and Defining College-Readiness

In recent years, Arizona and New Jersey have begun to involve K-12 educators in transfer conversations and/or think about how college-readiness is and should be related to statewide transfer policies. In 2010, Arizona restructured its inter-segmental transfer and articulation oversight committee to incorporate members of the K-12 community, including the state superintendent of schools, high school and technical school superintendents, and a representative from the Arizona Department of Education. A community college administrator explained the rationale for restructuring: "What we're trying to do is now shift the conversation away from the maintenance of the system, which we know we can do well… we want it to be more about pathways and going beyond community college to university. We're getting the high schools involved because we want to talk about vertical alignment. We want to talk about academic preparation and collectively developing a culture of transfer."

Although some in New Jersey acknowledge a need to similarly "go down into the high schools" (New Jersey policymaker), the state has focused more on creating common definitions of remedial and college-level work. As this state-level community college official explained, "Seeking common ground with the senior colleges on transfer depends in large part on community colleges reaching common ground on important related issues…. Over the course of two or three years, we got all of our colleges using the same placement tests…. And we got the colleges to agree to common cut scores." As college-readiness conversations come to the forefront of education policy and practice, other states will likely follow Arizona and New Jersey's lead in incorporating the K-12 sector into statewide transfer and articulation solutions.

Capacity Issues

Although few of the states we examined are currently experiencing capacity issues at universities other than their flagships, all expect to contend with this issue in the near future and are taking steps to combat the dilemma. For example, educators in Washington are reexamining their 1992 "proportionality agreement," which guarantees that a certain percentage of new enrollment slots at the state's baccalaureate institutions will be set aside for incoming transfer students. Furthermore, both community college and university educators have been lobbying for enrollment growth at the public universities:

> One of the things that worries me is that because we are open door and we stretch the rubber band—we are 16% over-enrolled right now—we are creating a bow-wave of transfer students that, starting next year, are going to be beating down the doors at the universities trying to get access, and they won't have any capacity. So… we've talked ourselves into advocating for growth, capacity growth at the universities! (Washington state-level community college administrator)

California, which is currently developing transfer associate degrees, faces severe capacity issues, both at certain public universities and within popular degree programs. The four states in our analysis, as well as many others across the nation, will likely be watching closely to see how California educators are able to deal with these constraints while making significant improvements to its statewide transfer and articulation system.

Resource Constraints

Although all four of the states we examined had implemented the primary components of their transfer associate degrees prior to the Great Recession, budget cuts and resource constraints continue to threaten the success of these reforms. In the words of an Ohio university administrator, "The state has funded this at $2.5 million. Now that is in great jeopardy, and what we've been putting together is an alternative funding model… I think how we continue to fund this and enhance the funding is going to be a great challenge." Budget cuts not only jeopardize funding for inter-segmental disciplinary meetings and overall transfer coordination and oversight, but they may have more indirect effects as well:

> One of the things that has happened is that the state universities have gotten bigger budget cuts of state funds than community colleges…. That makes them a little less generous toward community college faculty and community college courses. And so their willingness to try to figure out how—or to compromise around their course requirements, what they require for majors, what they will or will not accept—is going down…. I think that is a trickle-down effect of the tight budget situation. (Washington state-level community college administrator)

Arizona, New Jersey, Ohio, and Washington—as well as other states across the nation—will have to find ways to maintain and improve statewide transfer pathways in the current era of reduced funding for public higher education. Hopefully, the promise that transfer associate degrees hold for improving system efficiency and generating cost savings is enough to keep policymakers and educators invested in current reforms and supportive of the next steps.

Implications & Recommendations

In an era defined as much by federal, state, and institutional resource constraints as it is by a renewed focus on postsecondary accountability and degree completion, this study has important implications for policy and practice. Indeed, as pages 22-25 suggest, transfer associate degrees have the potential to significantly improve system efficiency, increase degree attainment, and generate cost savings, both for states and their students. These findings should be encouraging to educators in those states—such as California—that are currently implementing these degrees, as well as to those in several others that are considering similar statewide reforms.

The early positive outcomes described in this report will be especially useful to policymakers and system leaders who are advocating for the development or further implementation of statewide transfer and articulation reforms. Perhaps equally important to those executing the reforms, however, are those findings that identify key aspects of the implementation process itself. While the four states included in our analysis have been largely successful in developing transfer associate degrees, the processes have not always been smooth or easy, and faculty and system leaders have had to make many difficult decisions in order to achieve an acceptable balance of autonomy/freedom and efficiency, student centeredness, and the common good. The following recommendations stem from these lessons learned, as well as our own observations about how transfer associate degrees can be successfully implemented:

Where necessary, use legislation to incent or compel the implementation of systemic transfer reforms. Such legislation should be limited to broad, statewide expectations, leaving more specific details related to curriculum development and institutional policy to inter-segmental faculty and administrative committees.

Ensure leadership and buy-in among college and university presidents, as well as statewide governing or coordinating agencies. Presidential leadership and support for systemic transfer reforms has both hierarchical and symbolic value; governing or coordinating agencies can facilitate and provide staff support for administrative and faculty disciplinary committees working to develop transfer associate degrees.

Implement a clear and ongoing organizational structure. This structure should assign responsibility for each aspect of the transfer degree implementation process to the group that is best suited to manage it.

Articulate a common goal and shared understanding of why it is important to engage in systemic transfer reform. Clearly stating how transfer associate degrees will benefit students and the state can help to move participants past institutional or disciplinary silos.

Strive for a balance between autonomy/freedom and efficiency, student centeredness, and the common good. Address the interests and values of participants early in the implementation process so that they do not ultimately threaten the impact of statewide transfer reforms. In developing admissions policies and lower-division GE and pre-major

pathways, aim for consistency and standardization but allow for caveats where academically necessary. Don't allow one sticking point to derail the entire process.

Use learning outcomes to determine course equivalency. Basing course equivalency on learning outcomes focuses faculty on the essential competencies required for upper-division study in a major while allowing for variation in how and by whom courses are taught.

Implement processes for reviewing and revising transfer degrees to ensure relevancy with evolving curricula. Periodic reviews are critical if faculty are to agree to common lower-division courses or sequences that are different from what they might ultimately prefer or implement on their own campus.

Market transfer associate degrees to students and advisers. An effective marketing or communications plan—established early in the implementation process—is critical in ensuring that newly developed transfer pathways are utilized by students.

Explore how technology may facilitate systemic transfer and articulation reform. Technological solutions may help to streamline the process of implementing transfer associate degrees. Web-based advising and degree planning tools, in particular, will allow students with limited access to an adviser to explore various transfer degree pathways on their own.

Incorporate K-12 educators and/or college-readiness standards into statewide transfer and articulation conversations. Doing so will help to improve the efficiency and cost effectiveness of pathways *into* community colleges as well as those from community colleges to universities.

Use transfer associate degrees to help resolve institutional and programmatic capacity issues. Transfer associate degrees will allow students turned away from impacted programs or institutions to seamlessly apply their credits elsewhere in the state. Furthermore, where impacted programs align with state interests, educators can use the fact that there is a sizable group of well-prepared transfer students to leverage greater capacity at receiving institutions.

Seek alternative funding scenarios for implementing, maintaining, and/or improving transfer associate degrees. Although transfer pathways may be implemented primarily through in-kind contributions from institutions and state systems, technological solutions require real money, and resource constraints and state budget cuts create an uncertain future for collaborative reforms. Educators should simultaneously seek alternative funding models and actively demonstrate the state's return on investment.

Continue gathering and publicizing data related to the ability of transfer associate degrees to improve system efficiency, increase postsecondary degree completion, and generate cost savings. Early outcomes from the four states under review are closely aligned with the policy goals and expected benefits of transfer associate degrees, but further data collected over longer periods of time will be required to make definitive statements about the effects of these degrees on states and their students.

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About the Center for the Study of Community Colleges

The Center for the Study of Community Colleges, a non-profit 501(c)(3) organization based in Southern California, was established in 1974 by Arthur Cohen, Florence Brawer, and John Lombardi in order to conduct original research pertaining to community college policy and practice.

Our mission is to improve community college effectiveness and student success by engaging in relevant and applicable research related to community college practice and policy. The Center's current board of directors includes Carrie Kisker, education research and policy consultant, Richard Wagoner, assistant professor of higher education at UCLA, and James Palmer, professor of higher education at Illinois State University.

Over the years, the Center for the Study of Community Colleges has received support from the Bill & Melinda Gates Foundation, the Walter S. Johnson Foundation, the Ford Foundation, the Carnegie Foundation for the Advancement of Teaching, the National Science Foundation, and the National Endowment for the Humanities. Previous Center projects have included the Transfer Assembly Project, the longest-standing study focusing on statewide measures of community college-university transfer, as well as national studies of community college faculty, student learning, assessment, and accountability. The Center also houses the Council for the Study of Community Colleges (www.cscconline.org), a scholarly community affiliated with the American Association of Community Colleges. More information can be found on the Center's website.

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Endnotes

[i] Moore, C., Shulock, N., & Jensen, C. (2009). Crafting a student-centered transfer process in California: Lessons from other states. Sacramento: California State University, Sacramento, Institute for Higher Education Leadership and Policy.

[ii] Kisker, C. B., Cohen, A. M., & Wagoner, R. L. (2010). *Reforming transfer and articulation in California: Four statewide solutions for creating a more successful and seamless transfer path to the baccalaureate.* Oak Park, CA: Center for the Study of Community Colleges.

[iii] Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Thousand Oaks, CA: Sage.

[iv] New Jersey Presidents' Council. (2008). *Comprehensive statewide transfer agreement.* Trenton, NJ: Author, p. 2.

[v] Arizona Board of Regents and the State Board of Directors for Community Colleges. (1996). *Report of the Transfer Articulation Task Force.* Phoenix: Authors, p. 1.

[vi] New Jersey Presidents' Council. (2008). *Comprehensive State-Wide Transfer Agreement.* Trenton, NJ: Author, p. 1.

[vii] Tafel, J. (2010). *Bringing down the silos: A primer on credit transfer and student mobility.* Columbus: Ohio Board of Regents and the University of Cincinnati.

[viii] Mustafa, S., Glenn, D., & Compton, P. (2010). *Transfers in the University System of Ohio: State initiatives and outcomes 2002-2009.* Columbus: Ohio Board of Regents.

[ix] Washington Higher Education Coordinating Board. (2006). *Consolidated transfer report: Transfer policy and upper-division baccalaureate capacity.* Olympia, WA: Author, p. 4.

[x] Stern, P., Pitman, K., & Pavelchek, D. (2009). *The role of transfer in the attainment of bachelor's degrees at Washington public baccalaureate institutions, class of 2006.* Olympia: Washington State University, Social & Economic Sciences Research Center, Puget Sound Division.

[xi] Mustafa, S., Glenn, D., & Compton, P. (2010). *Transfers in the University System of Ohio: State initiatives and outcomes 2002-2009.* Columbus: Ohio Board of Regents, p. 4.

[xii] Hezel Associates. (2007). *Evaluation of Arizona's Transfer Articulation System.* Syracuse, NY: Author, p. xii.

[xiii] Mustafa, S., Glenn, D., & Compton, P. (2010). *Transfers in the University System of Ohio: State initiatives and outcomes 2002-2009.* Columbus: Ohio Board of Regents.

[xiv] Stern, P., Pitman, K., & Pavelchek, D. (2009). *The role of transfer in the attainment of bachelor's degrees at Washington public baccalaureate institutions, class of 2006.* Olympia: Washington State University, Social & Economic Sciences Research Center, Puget Sound Division.

[xv] Washington Higher Education Coordinating Board. (2006). *Consolidated transfer report: Transfer policy and upper-division baccalaureate capacity.* Olympia, WA: Author.

[xvi] Washington Higher Education Coordinating Board. (2006). *Consolidated transfer report: Transfer policy and upper-division baccalaureate capacity.* Olympia, WA: Author, p. 4.

[xvii] Mustafa, S., Glenn, D., & Compton, P. (2010). *Transfers in the University System of Ohio: State initiatives and outcomes 2002-2009.* Columbus: Ohio Board of Regents.

[xviii] Hezel Associates. (2007). *Evaluation of Arizona's Transfer Articulation System.* Syracuse, NY: Author, p. i.

[xix] Stern, P., Pitman, K., & Pavelchek, D. (2009). *The role of transfer in the attainment of bachelor's degrees at Washington public baccalaureate institutions, class of 2006.* Olympia: Washington State University, Social & Economic Sciences Research Center, Puget Sound Division.

[xx] Mustafa, S., Glenn, D., & Compton, P. (2010). *Transfers in the University System of Ohio: State initiatives and outcomes 2002-2009.* Columbus: Ohio Board of Regents.