“[At the faculty workshop I saw that] there is another framework for thinking about general education – it blew the doors off how we had been thinking! And I realized that transfer is broader than just where you are. We should have been thinking about more than Ohio a long time ago.”

– Dona Fletcher, Chair, Sociology Department, Sinclair Community College

The American higher education system underwent tremendous development and growth in the second half of the 20th century, and the idea—and the possibility—of going to college and earning a degree became the norm rather than the exception. As the country’s population and student enrollment have grown, states and institutions have had to become increasingly responsive to the ever-changing demographics and economic realities of this evolving student ecosystem.

Critical components of that ecosystem are transfer policies and practices. Successful student transfer has a direct and very positive impact on student completion rates. Too often, however, students encounter obstacles when they
In Short

- Over one-third of all students in public two- and four-year colleges and universities transfer to another institution – 24 percent of whom transfer to one in another state – but interstate transfer agreements are inadequate or do not even exist.
- Passport institutions affirm that their learning outcomes are congruent with the Passport Learning Outcomes but maintain autonomy and flexibility in how students achieve them.
- Quality of the Interstate Passport is assured through a minimum grade requirement and a data collection and tracking system that measures transfer student performance.
- The Passport shifts the focus on student learning and academic progress from inputs – specific credits and courses – to outputs – learning outcomes.

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transfer – credits are not accepted, students repeat coursework and spend extra time and money to earn a degree. Indeed, students who transfer take, on average, 1.2 years longer to complete a bachelor’s degree (U.S. Department of Education, 2010), costing an average of $9,000 more in tuition and fees (WICHE, 2010). Transfer students also pay a hefty “opportunity cost.” Delaying graduation and a move into the workforce means giving up months or years of salary while incurring more debt.

The loss of credit in transfer can have a significant impact on students’ timely graduation and their motivation to complete their degrees. Monaghan and Attewell (2014) found that only 58 percent of transfer students are able to bring 90 percent or more of their credits with them; about 14 percent of transfers lose more than 90 percent of their credits; and the remaining 28 percent lose between 10 percent and 89 percent of their credits.

Although most states have worked to improve transfer for students within their states and occasionally with neighboring states, that is not enough for today’s increasingly mobile student population. A new report from the National Student Clearinghouse (Shapiro, 2015) shows that of the 3.6 million students who entered college for the first time in fall 2008, 37.2 percent transferred to a different institution at least once within six years. The number of students who transfer to another state has increased as well: 18.5 percent of two-year students who transfer and 24 percent of four-year students who transfer do so across state lines (NSC, 2016).

In spite of the prevalence of interstate transfer, there has been no comprehensive mechanism that assures acceptance of achievement and credits for students who transfer to other states—until now. The Interstate Passport is a new learning outcomes-based framework for transfer. Focusing on lower-division general education as a whole, not on individual courses, the Passport allows for an interstate “match” of outcomes. When a student transfers into another state, the receiving institution’s requirements are preserved when a student transfers to another state. Moreover, the Interstate Passport provides the only realistic solution to insuring that at least the general education core is preserved when a student transfers to another state.

Where Did the Idea Come From?

Lower-division general education is a nearly universal common denominator across institutions, with remarkable similarity in both the areas covered and the learning outcomes faculties intend for their students. Most variation occurs in how faculties design that learning into course-sized “chunks” with specific content and pedagogy, with a certain number of credits assigned to each course. Transfer students are disadvantaged when their sending and receiving institutions group and evaluate the general education components into slightly different sets of courses and credits. This often forces students to take additional courses to complete the receiving institution’s requirements.

The common response from policymakers within a state has been to standardize the curriculum—through common course numbers, common sets of general education courses, course titles, and even syllabi. This approach has caused faculty to have less responsibility for the design of the general education curriculum and limited opportunity for innovation and creativity in how it is delivered. And the standardized in-state arrangements typically do not match those of neighboring states.

Driven by pressure to be able to define and assess college-level learning, much effort has also gone into identifying and communicating student learning outcomes at the course, program, and institution levels. Inspired and informed in part by the seminal work of the Association of American Colleges & Universities in developing the LEAP Essential Learning Outcomes of a baccalaureate degree, faculties at most institutions—often working together in their discipline-specific professional associations—have identified their intended student learning outcomes.

It turns out that there is considerably more agreement among faculty members about the student learning outcomes to be expected from a good general education program than there is about how to divide that learning into courses and credits that are currently the focus of transfer policies. And there is widespread agreement among faculty members that the actual curriculum and pedagogy—how that learning is delivered and assessed—should remain the collective responsibility of each institution’s faculty.

These two ongoing developments—education focused on learning outcomes rather than content inputs and a need to make transfer more efficient for students—converged in 2010 as an idea shared by chief academic leaders at two- and four-year institutions in the western region of the United States, that is not enough for today’s increasingly mobile student population. A new report from the National Student Clearinghouse (Shapiro, 2015) shows that of the 3.6 million students who entered college for the first time in fall 2008, 37.2 percent transferred to a different institution at least once within six years. The number of students who transfer to another state has increased as well: 18.5 percent of two-year students who transfer and 24 percent of four-year students who transfer do so across state lines (NSC, 2016).

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By focusing on learning outcomes for general education across institutions, we help to ensure that students develop and can build on a coherent set of foundational knowledge and skills to be successful after transfer to other institutions in the Network.

country. At their request, a project, managed by the Western Interstate Commission for Higher Education (WICHE) in Boulder, Colorado, was undertaken to develop a widely acceptable agreement by and among faculties about general education based on student learning outcomes, with an eye toward a more efficient and supportive transfer system.

Beginning in 2011 the development work by participating faculty groups was supported with a grant from the Carnegie Corporation of New York and by subsequent grants from the Bill & Melinda Gates Foundation, Lumina Foundation, and—most recently—a First in the World (FITW) grant from the U.S. Department of Education’s Fund for the Improvement of Postsecondary Education. Development of the Passport framework is now complete and membership in the Passport Network is open to any regionally accredited, public or private, not-for-profit, two- or four-year institution in the country.

The WICHE staff organized and hosted the many faculty groups and meetings that led to completion of the Interstate Passport. WICHE President, Joe Garcia, commented that, “Successful transfer policies and practices are essential to increasing the number of students who earn a four-year degree. Many students, especially low-income, first generation, and active duty military students and dependents, begin their education at a community college and must transfer. If they have to repeat learning already achieved when they transfer, they are more likely to drop out of the pipeline. By focusing on learning outcomes for general education across institutions, we help to ensure that students develop and can build on a coherent set of foundational knowledge and skills to be successful after transfer to other institutions in the Network.”

WHAT, EXACTLY, IS THE INTERSTATE PASSPORT?

The Passport framework consists of the Passport Learning Outcomes (PLOs) in each of the nine knowledge and skill areas (see Figure 1)—what a student should know or be able to do—and the attendant transfer-level Proficiency Criteria (PC) for each learning outcome, which are examples from existing courses of how students often demonstrate proficiency in the PLO. The PC are intended only to serve as a guide and to stimulate ideas among faculty whose responsibility it is to determine the best ways for their students to demonstrate proficiency with the PLOs at the transfer level (see examples of proficiency criteria at www.wiche.edu/files/info/The%20Passport%20Learning%20Outcomes%20and%20Proficiency%20Criteria.pdf).

To develop the Passport’s consensus set of learning outcomes and proficiency criteria, faculty members in a variety of disciplines from institutions in seven Western states (California, Hawaii, North Dakota, Oregon, South Dakota, Utah, and Wyoming) looked for commonalities in their existing learning outcomes. They discussed differences and negotiated the current set of Passport Learning Outcomes to be congruent with institutions’ expectations for students who have completed lower-division general education. It is assumed that the learning outcomes may need to evolve over time and, if that occurs, faculty panels from among the participating institutions will be convened using the same process to adjust them accordingly.

The chair of the Natural Sciences faculty team, Dr. Thomas Krabacher, professor of geography at California State University Sacramento, noted: “Development of the Passport Learning Outcomes for the natural sciences proved to be a surprisingly smooth process, given the range of disciplines involved (Physics, Chemistry, Biology, and the Geosciences).” It became clear early on that there was general agreement among members of the working group across disciplines as to what the basic lower-division general education learning outcomes in the sciences should be. The majority of the group’s time was then spent ensuring that the wording of the PLO descriptions was applicable across the science disciplines.” The Passport Learning Outcomes in one area, Natural Sciences, are presented in Figure 2 below.

No institution is asked to adopt the PLOs as their own; rather, each is asked to ensure that its own institutional or programmatic lower-division general education learning outcomes for the knowledge and skill areas are congruent with the Passport Learning Outcomes.

The faculty at each institution constructs its own Passport Block—the list of courses and/or learning experiences by which its students can achieve the Passport Learning Outcomes—in the same fashion as faculty would compile a list of courses and/or learning experiences that constitute the institution’s general education program, academic minor, academic major or any other program at the institution. The essential consideration is that the total of the learning experiences in the Passport Block must address all of the PLOs in the nine knowledge/skill areas in some way.

As members of the Passport Network, institutions agree not to “unpack” other institutions’ Passport Blocks, and Passport transfer students are not required to repeat or add any learning in a receiving institution’s Passport Block in
order to meet the lower-division general education require-
ments in the Passport’s nine areas. Figure 3 below illustrates
one institution’s Passport Block requirements in one of the
Passport’s nine areas. Complete Blocks for all Passport
Network institutions can be found on the Passport website.

A student at Leeward Community College in Hawaii who
has completed one course from each group with a grade of C
or better will have achieved all of the learning outcomes in
the Passport area of Human Society and the Individual.

**PASSPORT EXPANSION**

During the second phase of the project, funded by the
Gates and Lumina Foundations, six additional states from
around the country were recruited to pilot the process by

which a college or university not involved in developing the
Passport Learning Outcomes would evaluate its own readi-
ness and willingness to become a Passport awarding and
accepting institution as a member of the Passport Network.
As a first step in connecting to more institutions, the proj-
et reached out to the three other regional higher education
compacts in the country—the Midwestern Higher Education
Compact, New England Board of Higher Education, and
Southern Regional Education Board—which assisted in re-
cruiting some of their member states.

The new states participating in this phase—Arkansas,
Idaho, Indiana, Kentucky, Ohio and Virginia—joined for a
variety of reasons. Some wanted to shift their overall focus
more toward student learning outcomes. Others wanted to

**Figure 2. PASSPORT LEARNING OUTCOMES FOR NATURAL SCIENCES**

| Features | Passport Learning Outcomes |
|----------|----------------------------|
| **The Nature of Science** | Students explain the following attributes of science:  
a. Science is based on the assumption that reality exists, operates by consistent principles, and that the rules are understandable by critical analysis.  
b. Processes and results must be reproducible and subjected to peer review.  
c. The results will display intrinsic variation and limitations.  
d. Continued scientific inquiry produces credible evidence that is used to develop scientific models and concepts.  
e. Models and concepts that withstand the most wide-ranging and persistent critical analyses are assumed to most closely describe reality and the principles by which it operates. |
| **Scientific Inquiry** | Students demonstrate the application of specialized methods and tools of scientific inquiry by actively and directly collecting, analyzing, and interpreting data, presenting findings, and using information to answer questions. |
| **Core Concepts** | Students accurately describe the scope of scientific study in both the physical and life sciences, their core theories and practices, using discipline related terminology. |
| **Scientific Literacy** | Students shall:  
• Recognize the proper use of scientific data, principles and theories to assess the quality of stated conclusions.  
• Demonstrate an ability to gather, comprehend, apply and communicate credible information on scientific and technical topics. |
| **Scientific Reasoning** | Students demonstrate scientific reasoning processes to draw conclusions. |
| **Ethics** | Students demonstrate an understanding of the standards that define ethical scientific behavior, including:  
• Honesty: The accurate use and reporting of scientific processes, data, and results, and the proper sharing of credit among colleagues;  
• Safety: Ensuring the safety and well-being, both mental and physical, of practitioners, test subjects, local community, and environment;  
• Social Responsibility: Recognition of the impact of our actions on the natural and human world. |
| **Science and Society** | Students understand the role science plays in historical and contemporary issues. |
attract more transfer students from nearby community colleges across a state border. More than one saw the Passport as a way to head off more intrusive legislative mandates by improving transfer efficiency on terms that the faculty believe are academically sound. Still others hoped to improve their own student success metrics. Several of the new states—like some of the “veteran” states—undertook the project as an entire state, while in others only two or three institutions are participating. Overall, more than 50 new institutions are involved in this second phase, which will be completed by the end of spring 2017. At that time some or all of them will begin awarding Passports to their students and accepting Passport transfer students.

The focus of the project at all the institutions to date, as for all new member institutions in the future, continues to be faculty members evaluating their own campuses’ learning outcomes against the Passport Learning Outcomes. They need to determine if the Passport Learning Outcomes are acceptable and congruent with—though not the same as—their own learning outcomes. These faculty members or groups must also construct the institution’s Passport Block by identifying the courses and/or other learning opportunities that the institution provides for students to achieve transfer-level proficiency with the Passport Learning Outcomes. Ultimately, the Passport state facilitator and campus liaison in each of the six new states will document the faculty efforts to accomplish these tasks in case studies that will help continuous improvement efforts in the Passport application and implementation process.

**Quality Assurance**

When the first institutions begin awarding the Interstate Passport at the conclusion of the fall 2016 term, they will do so knowing that there are multiple quality assurance measures built into it. These include the Passport Learning Outcomes developed by faculty from multiple institutions and states; a student success data collection and tracking system; a minimum grade requirement; a pilot project to examine faculty assignments and student achievement of learning outcomes across states and sectors; and a robust evaluation component.

**Tracking Student Academic Progress**

Associated with the framework is a robust data collection and student tracking system, designed by registrars and institutional researchers from participating institutions, to provide information on how well Passport students perform at Passport receiving institutions after transfer. Beginning at the end of the fall 2016 term, Passport institutions will send student data each term to the National Student Clearinghouse (NSC), which will compile, sort, and aggregate the data to provide Network institutions with two Passport-specific services: PassportVerify and Academic Progress Tracking (APT). The PassportVerify service—similar to the DegreeVerify service currently offered to all NSC participating institutions—will allow Passport institutions to query the Clearinghouse to find out if an incoming transfer student has earned the Passport and if so, where and when.

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**Figure 3. Excerpt from Leeward Community College’s Passport Block: Human Society and the Individual**

| Human Society and the Individual: One course from each of Group One and Group Two |
|---------------------------------|
| **Group One:**                  |
| • ANTH 150 Human Adaptations    |
| • ANTH 200 Cultural Anthropology|
| • ECON 120 Intro to Economics   |
| • ECON 130 Principles of Microeconomics |
| • ECON 131 Principles of Macroeconomics |
| • GEOG102 World Regional Geography |
| • GEOG151 Geography & Contemporary Society |
| • PACS 108 Pacific Worlds       |
| • POLS 110 Intro to Political Science |
| • PSY 100 Survey of Psychology  |
| • SOC 100 Survey of Gen Sociology|
| • WS 151 Intro to Women’s Studies |
| **Group Two:**                  |
| • AMST 211 Contemporary American Domestic Issues |
| • AMST 212 Contemporary American Global Issues |
| • ANTH 151 Emerging Humanity     |
| • ANTH 152 Culture and Humanity  |
| • POLS 120 Intro to World Politics |
| • POLS 180 Intro to Politics in Hawai‘i |
| • PSY 202 Psychology of Gender  |
| • PSY 240 Developmental Psychology |
| • PSY 260 Psychology of Personality |
| • SOC 151 Intro to the Sociology of Food |
| • SOC 214 Intro to Race and Ethnic Relations |
| • SOC 218 Intro to Social Problems |
| • SOC 231 Intro to Juvenile      |
| • Delinquency                   |
| • SOC 250 Community Forces in Hawai‘i |
| • SOC 250H Community Forces in Hawai‘i: Honors Course |
| • SOC 251 Sociology of the Family |
| • WS 202 Psychology of Gender   |
| • WS 290V Topics in Women’s Studies |
PASSPORT ACADEMIC QUALITY ASSURANCE

Five avenues of quality assurance have been built into the Passport:

1. Retention and GPA of students who transfer after earning a Passport will be tracked for two terms post-transfer and compared with non-Passport transfer students at the receiving institution, and with freshman-entry students who earn a Passport at that institution. The results will be reported back to the sending institution.

2. The National Center for Higher Education Management Systems is conducting a grant-funded pilot mapping exercise across two institutions in each of three Western states (CO, NM, MT) that were not involved in the original development of the Passport Learning Outcomes and Proficiency Criteria. Faculty in these states will be trained to exchange and evaluate both critical assignments and anonymous student work products on those assignments that purport to demonstrate achievement of PLOs in order to determine their consistency across institutions and the reliability of faculty assessments.

3. In order to be awarded a Passport, a student must earn at least a C or its equivalent in every course included in the Passport Block on the transcript. A grade lower than C would not assure proficiency on all of the Passport Learning Outcomes the institution had associated with that course.

4. The First in the World (U. S. Department of Education) grant supports the Education and Employment Research Center at Rutgers University to conduct a longitudinal study of the outcomes for Passport students, including persistence, GPA, graduation rate, and time to degree.

5. The Passport Review Board consists of one member from each participating state, as well as transfer, learning outcomes, and assessment experts, and Passport staff. The PRB meets in person at least once annually and electronically as needed to review the results of all of the above analyses, as well as any issues brought forward by a state or institution. The PRB will be able to require an institution to make changes, if needed, or to give up its Passport status if its students are not being well served.

Taken together, these measures provide a robust system supporting the academic quality of the Passport at every institution that offers it and reassuring receiving institutions that Passport students will be prepared to succeed after transfer.

For the APT service, institutions will submit to NSC de-identified student data on the academic progress of Passport transfer students, non-Passport transfer students, and native students. Transfer students are tracked for the two terms immediately after transfer to the receiving institution, while native students are tracked for two terms after earning the Passport at the same institution. The Clearinghouse will deliver reports annually to each sending institution about the performance of its former students across the participating institutions for use in continuous improvement efforts. The NSC will also provide a composite report to the Passport Review Board (PRB), the oversight body, for evaluation of the overall effectiveness of the Passport.

Mapping Assignments

As part of the First in the World grant, and in partnership with the National Center for Higher Education Management Systems (NCHEMS), the Passport has engaged lower-division general education faculty at three two-year and three four-year institutions in a closer look at what types of evidence are being used to determine the same lower-division general education competencies. The goals are to expand faculty understanding and choices of assignments in designated courses, and to share ideas on competency assessment among institutions.

Three states not previously involved with the Passport have each appointed a Passport state facilitator and a mapping specialist to oversee the work over a period of nine months. The six institutions in three WICHE-member states participating in this work are, in Colorado: Aims Community College and University of Northern Colorado; in Montana: Great Falls College and University of Montana at Missoula; and in New Mexico: Santa Fe Community College and New Mexico State University.

First in the World Research and Evaluation

The Interstate Passport will benefit significantly from the research and evaluation undertaken by the School of Management and Labor Relations’ Education and Employment Research Center (EERC) at Rutgers University as part of the First in the World grant. This rigorous research project, designed to adhere to the standards of the What Works Clearinghouse, will identify the commonalities and challenges of integrating the Passport into different institutions’ transfer policies and procedures. (Managed by the Institutes for Education Research on behalf of the U.S. Department of Education, the WWC identifies studies that provide credible and reliable evidence of the effectiveness of a given practice, program, or policy and disseminates summary information and free reports on its website.) EERC will examine how the Passport could serve as a milestone or marker of achievement in a student’s academic pathway toward completion and will also examine the Passport’s impact on students’ transfer experiences.

Implementation Features

It was agreed early on among the participants that member institutions must both award and accept Passports, and...
that all areas of the Passport Block must be completed for the award of a Passport. While the Passport cannot be “unpacked”—i.e., only some courses accepted for credit or for general education requirements—the receiving institution is, of course, free to determine whether specific courses can also be used as prerequisites for certain majors. For example, if the Quantitative Literacy course a student chose for the Passport is college algebra, and the student is planning to major in psychology, the receiving institution would likely also require a statistics course as a prerequisite for the major.

A 2014 Jobs for the Future report noted that “navigating the transfer process was complicated by inaccurate, inconsistent, or unavailable information on which courses universities would accept for credit, and whether these credits would apply toward a Bachelor’s degree and program requirements—or merely as electives.” (Jobs for the Future, 2014). The Passport will not be a substitute for good advising and thoughtful planning, but it does provide the assurance that all of a student’s credits earned within the Passport will transfer for credit toward the degree and that all lower-division general education requirements within the nine Passport areas have been met.

This knowledge can both motivate a student to complete lower-division general education requirements and to continue. Judy Hay, vice president of student services at Laramie County Community College in Wyoming, put it this way: “This Passport can be a momentum point within a college—of value to any student, including native ones. Whenever a student completes a significant piece of the journey, it opens doors.”

**Moving Forward/Conclusion**

The Passport welcomes new institutions into the Network (see http://www.wiche.edu/passport/application for an application), and the value of the Passport to students increases as more institutions join the Network. With the Passport, students know that they will not have to take additional lower-division general education courses or credits after transfer, which saves them time and money. The Passport provides faculty the opportunity to control their own curriculum, pedagogy, and assessments. Institutions will hopefully see greater student motivation to complete and faster time to degree, which improves performance metrics.

Also, the Passport offers institutions a leading role in shaping a general education model based on learning outcomes that will more broadly influence outcome-based approaches into the future. The Passport shifts the focus on student learning and academic progress from inputs to outputs. With the increasing focus on preparation for the workforce, competency is becoming an accepted coin of the realm, and the Passport is perfectly designed to operate in this new environment. It adapts to higher education’s changing landscape while staying focused on student success and maintaining institutional autonomy.

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**Resources**

- Alstadt, D., Schmidt, G., & Couturier, L.K. (2014). *Driving the Direction of Transfer Pathways Reform: Helping More Students Achieve Their Baccalaureate Goals by Creating Structured Transfer Pathways “With the End in Mind.”* Washington, DC: Jobs for the Future.
- Monaghan, D.P., & Attewell, P. (2014). “The Community College Route to the Bachelor’s Degree” in *Educational Evaluation and Policy Analysis*, 36(1), 1–22.
- National Student Clearinghouse Media Center. April 21, 2016. *National Student Clearinghouse Releases Higher Education One-Year Mobility Data for All 50 States and DC.*
- Shapiro, D., Dundar, A., Ziskin, M., Yuan, X., & Harrell, A. (2013). *Completing College: A National View of Student Attainment Rates-Fall 2007 Cohort*, Signature Report No. 6. Herndon, VA: National Student Clearinghouse Research Center.
- Shapiro, D., Dundar, A., Wakhungu, P.K., Yuan, X., & Harrell, A. (2015). *Transfer and Mobility: A National View of Student Movement in Postsecondary Institutions, Fall 2008 Cohort*, Signature Report No. 9. Herndon, VA: National Student Clearinghouse Research Center.
- U.S. Department of Education (2010). *Baccalaureate and Beyond Longitudinal Study.* Washington, DC: Author. Retrieved from http://nces.ed.gov/surveys/b%26b/index.asp.
- Velez, E.D. (2014). *America’s College Drop-Out Epidemic: Understanding the College Drop-Out Population*, National Center for Analysis of Longitudinal Data in Education Research Working Paper. Washington, DC: American Institutes for Research.
- Western Interstate Commission for Higher Education (2010). *Promising Practices in Statewide Articulation and Transfer Systems.* Boulder, CO: Author.