Evaluation of Arizona's Transfer System

Report to
AZTransfer Steering Committee
Approved December 6, 2013

Hezel Associates, LLC is a custom research, evaluation, and strategic consulting firm specializing in education. Since 1987, Hezel Associates has embraced its mission to serve clients with *intelligence, experience, and insight to enable them to succeed in creating, managing, and improving education initiatives*.

Hezel
ASSOCIATES
RESEARCH EVALUATION STRATEGY

Laurene Johnson, PhD, Senior Research Associate
731 James Street – Suite 410
Syracuse, NY 13203
Tel: 315 422 3512
Fax: 315 422 3513
www.hezel.com
laurene@hezel.com

Hezel Associates, LLC is an equal employment opportunity/affirmative action employer.

EXECUTIVE SUMMARY

In 1996, the Arizona Board of Regents (ABOR) and the state board of directors for community colleges (state board) established a Transfer Articulation Task Force (TATF) to bolster Arizona's articulation system and improve student access to the state university system. The resulting transfer model focused on "a dynamic set of processes and agreements" between the community colleges and public universities. Research conducted by Hezel Associates in 2007 reinforced the success of these efforts in Arizona. In 2010, the Arizona Board of Regents, through funding provided by the Lumina Foundation, sought to further strengthen Arizona's transfer system in order to increase degree completions and reduce the time students take to complete their degrees through the Getting Access to Higher Education And Degrees (Getting AHEAD) project.

To understand the impact of the Getting AHEAD project and other interventions, the Arizona Academic Program Articulation Steering Committee (APASC), now rebranded as the AZTransfer Steering Committee, contracted with Hezel Associates, LLC, an education research and consulting firm, to conduct an evaluation of Arizona's transfer and articulation system. To accomplish this task, Hezel Associates reprised their prior transfer system research, in order to determine the current status of the system as well as its maturation over time. The current research included three primary components: (a) analysis of statewide transfer system data, (b) analysis of data from surveys of institutional employees, and (c) analysis of data from surveys of transfer students.

This report describes in detail the project methods and findings, and we offer recommendations to further enhance the articulation and transfer process.

Statewide Data Analysis Summary

A number of analyses were conducted with data from the Arizona State System for Information on Student Transfer (ASSIST) database. Data were provided to Hezel Associates researchers related to the educational attainment of cohorts of students who transferred from Arizona community colleges to ASU, NAU, or UA in 2006, 2007, 2008, 2009, 2010, 2011, and 2012. The goal of these analyses was twofold: (1) to compare the current group of students with those students from Hezel Associates' 2007 Report on several factors, including cumulative GPA, bachelor's degree completion, time to degree completion, number of semesters enrolled, credits at transfer, credits at graduation, and one-year persistence; and (2) to examine the outcomes of degree attainment and persistence after one year to determine what other factors, including variables such as preparation at transfer (i.e., Arizona General Education Curriculum or AGEC), community college attended, university attended, and university credits per semester, potentially predicted these outcomes. These analyses resulted in predictive models which helped determine which factors were most influential in terms of students' ultimate educational outcomes.

Findings. The number of students transferring from community colleges to universities in Arizona has increased every year since 2006. Comparison of data indicated an increase in one-year persistence at the university from the 2007 to the 2013 sample. In addition, a slightly greater percentage of students in the 2013 sample completed their bachelor's degree than in the 2007 sample. In both samples, those completing AGEC were most likely to graduate from a university, while those with neither AGEC nor an associate degree graduated least often. These findings suggest positive impacts of the transfer system on students' educational outcomes, as

more transfer students are persisting at the university and ultimately earning a bachelor's degree than before the transfer system interventions were implemented.

Data related to credit attainment suggested there was increased efficiency in degree completion at universities by transfer students: The 2013 sample had higher mean credits per semester when attending a university than the 2007 group, but had transferred fewer credits and had fewer total credits at graduation. Cumulative grade point averages (CGPAs) at graduation varied little between the two samples, despite the differences in number of completed credits between the two groups.

Using the 2013 sample, two academic success outcomes were examined, One-Year Persistence (students who continued to be enrolled one year after transfer) and Bachelor's Degree Attainment, in order to determine which characteristics of students or their educational process were the greatest predictors of these outcomes.

- *One-Year Persistence*
  Cumulative GPA had the greatest positive impact on a student's odds of staying enrolled more than one year at a university (the higher the CGPA, the higher the odds). In addition, odds were increased as students' average number of credit hours enrolled increased, as well as for students who completed AGEC, and attended ASU, as opposed to NAU or UA. Demographic variables such as ethnicity, age, and gender had very little impact on persistence.

- *Bachelor's Degree Attainment*
  More than any other variable included in the analysis, students completing AGEC were more likely to attain their bachelor's degree, all else being equal. In addition to AGEC, students with higher CGPAs and transfer hours were more likely to graduate. Other variables that indicated higher odds of graduation were (a) transfer from Maricopa Community Colleges (as opposed to other two-year colleges), (b) being female, (c) attending ASU (as opposed to NAU or UA), and (d) being white. Older students also had a slight decrease in odds of graduation for each year of age.

Overall, the best predictor of One-Year Persistence was students' cumulative GPA, while completing AGEC, as opposed to not, was the best predictor of Bachelor's Degree Attainment based on the available data. While these two variables were found to predict the academic success outcomes most accurately for students included in these analyses, predicting academic success is extremely complex and includes a wide variety of variables, not all of which were included in these analyses.

Employee and Student Survey Summary
In general, 2013 survey findings indicated that employees and students had favorable opinions of the Arizona transfer system as a whole. Employees and students were familiar with the transfer system components, were generally satisfied with the transfer system, and believed that AGEC, transfer pathways, and Common Courses were useful.

Overall, substantial percentages of employees and students agreed that AGEC was the most clearly defined component of the transfer system and provided students with the most preparation for transfer, consistent with 2007 findings. Both groups' responses suggested, however, that students did not know enough about their transfer options. Face-to-face interactions (i.e., one-on-one advising, word-of-mouth) were the most used and most effective promotional means cited by employees and students, indicating that more one-on-one interaction between students and employees knowledgeable about the transfer process is still necessary.

Community college employees were far more likely than their university counterparts to mention procedural processes and university-community college collaboration to be weaknesses, suggesting the disconnect between these two groups' perceptions of the transfer process continues to be an issue, as it was in the previous report.

Recommendations
While future efforts are likely necessary to sustain the system that has been put in place and continue the momentum that has been established through the Getting AHEAD project and other interventions, overall the system has been incredibly successful based on the perceptions of the stakeholders in Arizona. Hezel Associates makes the following recommendations to help the Arizona Board of Regents and AZTransfer maintain and expand the transfer system, reduce the barriers to transfer, and continue to benefit college students in Arizona.

- Maintain the existing transfer system components as they are effective in promoting degree completion among transfer students.
- Continue efforts to increase student awareness of the various components of the transfer system to ensure all students have the information necessary for a smooth transfer process.
- Enhance training opportunities for transfer-relevant employees to increase awareness of all components of the transfer system and the requirements of degree paths to ensure all students receive appropriate transfer guidance.
- Expand opportunities for communication between community college and university personnel to increase message consistency across institutions.
- Standardize administrative processes to ensure appropriate and consistent identification of student progress and certifications on community college transcripts to ease student transitions to universities.
- Expand transfer resources available to students at the universities to enhance the post-transfer experiences for students.
- Utilize former transfer students as resources for current and future transfer students.

TABLE OF CONTENTS

INTRODUCTION

Arizona's Getting Access to Higher Education And Degrees (Getting AHEAD) project is one of several statewide efforts funded by the Lumina Foundation's higher education productivity initiative. Commencing in 2010, higher education institutions in Arizona, including the Arizona Board of Regents (ABOR), coalesced around the grant's charge to increase degree completions and reduce the time students need to complete their degrees. Hezel Associates, LLC, an education research and consulting firm, joined the grant team in 2010 as the state's project evaluator, and has continued in that role for the project's fourth and final year.

The Arizona Scope of Work for Getting AHEAD is organized around five major strands (Governance & Coordination, Higher Education Finance, Student-Centered Advising, Strategic Engagement & Communication, and New Institutional Structures). Following the release of Lumina Foundation's *Four Steps to Finishing First*, Arizona's Getting AHEAD leadership aligned its work around the four steps: Performance Funding, Student Incentives, New Models, and Business Efficiencies.

Arizona's focus on higher education productivity is part of a longstanding strategic agenda. Unlike other instances where the Lumina Foundation's support was a spark that initiated higher education reform, Arizona had a two-decade-plus history in this area. A key element in the long-term strategy toward building college participation and completion in Arizona has been the assurance of smooth and seamless transfer from Arizona's community colleges to one of Arizona's three state universities for Arizona's college students. The success of the strategy, however, depends on an articulation plan that permits students to move through their academic programs with the security that the credits they earn through their community college coursework will be accepted at the destination university.

Over the past several years, a collaborative network of universities and community colleges has emerged, yielding a collection of transfer resources designed to give students greater access to higher education with an eye toward efficient degree completion. In partnership with the AZTransfer Steering Committee, Getting AHEAD leadership requested Hezel Associates reprise the data collection and analysis featured in the *Evaluation of Arizona's Transfer Articulation System* (Hezel Associates, 2007), in order to assess the progress being made with respect to the efficacy and effectiveness of the Arizona transfer system and the impact on participating institutions and stakeholders. The goals for this research project were as follows:

1. To assess the effectiveness of the Arizona General Education Curriculum (AGEC), as a mechanism to facilitate transfer
2. To assess how well the transfer pathway degrees meet user needs
3. To analyze how students learn about and access information to facilitate the academic planning for transfer from community colleges to universities
4. To analyze the perceptions of key stakeholders (i.e., students, community college and university faculty and staff) about the effectiveness of the transfer system
5. To analyze the academic success of transfer students based on available statewide data
6. To compare current findings to the findings from the previous study to assess changes over time

This report describes in detail the evaluation design, methods, analysis and findings, and synthesizes the findings from all components of the evaluation project to provide conclusions and recommendations for future efforts with respect to transfer articulation in Arizona.

METHODS

Hezel Associates researchers undertook a replication, with some modifications, of their 2007 research conducted on behalf of the Arizona Academic Program Articulation Steering Committee (APASC), since rebranded as the AZTransfer Steering Committee. The study, which explored the efficacy of a statewide articulation and transfer system, resulted in a report entitled *Evaluation of Arizona's Transfer Articulation System* (Hezel Associates, 2007).

For the purpose of comparisons, hereafter, the prior report will be referred to as the 2007 Report and data from the report will be referred to as 2007 data. The 2007 Report described findings from statewide data concerning students who transferred from Arizona community colleges to ASU, NAU, or UA from fall of 2001 through spring of 2006, and survey data from students and institutional employees collected in early 2007. In this current report, a number of analyses were conducted with data from cohorts of students who transferred from Arizona community colleges to ASU, NAU, or UA from fall of 2006 through spring of 2012, and survey data from students and institutional employees collected in mid-2013. These data will be referred to hereafter as 2013 data.

The current report comprised a statewide student data analysis with data from the ASSIST database and analysis of data from surveys of stakeholders, including students and institutional employees. Based on the findings from the 2007 Report, Hezel Associates was able to streamline the research design of the current study in order to build upon the models, theories, and lessons from the prior research.

Statewide Student Data Analysis

The goal of the following analyses were twofold: (1) to compare the current group of students with those students from the 2007 Report on several key factors, including CGPA, one-year persistence, bachelor's degree completion, time to degree completion, number of semesters enrolled, credits at transfer, and credits at graduation; and (2) to examine the outcomes of persistence after one year and degree attainment to determine what other factors, including variables such as preparation at transfer (i.e., AGEC), community college attended, university attended, and university credits per semester, potentially predicted these outcomes. These analyses focused on the key variables identified in the 2007 Report, which has resulted in refined predictive models highlighting the factors that were most influential in terms of students' ultimate educational outcomes.

The 2013 statewide student data analysis sought to answer the following research questions:
- What type of preparation/degrees are students completing prior to transferring to a university? How does this compare to the 2007 Report?
- How do performance measures compare based on preparation at university entry and persistence rates to the 2007 Report?
- What factors contribute to the academic success of transfer students based on available data?
- How does community college preparation impact students' academic success?
- How do other variables, such as community colleges attended, universities attended, or demographic factors, impact students' academic success in terms of degree attainment?

Data Collection
Data from the Arizona State System for Information on Student Transfer (ASSIST) database were provided to Hezel Associates researchers for this analysis. Hezel Associates researchers collaborated with ASSIST staff in order to obtain the necessary data elements in the format needed for these analyses. This resulted in a sample of 39,334 transfer students representing school-year cohorts from 2006-2007 (5,882), 2007-2008 (6,071), 2008-2009 (6,390), 2009-2010 (6,518), 2010-2011 (7,014), and 2011-2012 (7,459).

Data Analysis Plan
The data analysis plan consisted of three primary components to answer the five research questions. First, presentation of descriptive statistics from the 2007 data and the 2013 data was used to compare the two samples in terms of the variables of interest, including CGPA, One-Year Persistence, Bachelor's Degree Attainment, Degree Completion within Four Years of Transfer, Number of Semesters Enrolled, and Credits at Transfer and Graduation. The two samples were also compared on the outcomes of One-Year Persistence and Bachelor's Degree Attainment by community college attended, university attended, and demographic characteristics.

The second component of the analysis focused on factors impacting the outcome of One-Year Persistence at the university for students who transferred from an Arizona community college (including all 22 community and tribal colleges) to one of the three Arizona public universities between the fall semester of 2006 and spring semester 2011. The third component of the analysis focused on factors impacting the outcome of Bachelor's Degree Attainment. In order to target students who had adequate time to complete their bachelor's degree, these analyses included only those students who transferred from an Arizona community college to one of the three Arizona public universities between the years of 2006 and 2009. The planned analyses for both of these components included discriminant analysis and logistic regression to determine the importance of the following predictors on the outcomes:
- Preparation at transfer
- Number of semesters enrolled at university
- Average university CGPA after first year and at graduation
- Total transfer hours at university entry
- Average registered university hours for all enrolled semesters
- Community college attended
- University attended
- Demographics (i.e., gender, age, ethnicity)

Discriminant analysis and logistic regression are similar analyses as they both model the likelihood of a categorical outcome as a function of a set of predictor variables. The purpose of these analyses is to determine what variables, or combination of variables, might increase or decrease the likelihood of the outcome occurring. Discriminant analysis is a predictive model which indicates how well the included variables distinguish between the groups that represent the outcome (i.e., type of degree obtained). The results of the logistic regression analysis are interpreted in terms of the relative odds of the event taking place (i.e., student persistence after one year) given a unit change in the categories or values of the predictor variables. The relative odds, or odds ratio, is one of the key outputs of the analysis.

Specific details related to methods and variable definitions for individual analyses are included in the Statewide Student Data Analysis Findings.

Employee and Student Surveys

Hezel Associates researchers administered online surveys to solicit experiences and perceptions related to transfer from relevant stakeholders, including community college, tribal college, and university students and community college, tribal college, and university employees. As with the statewide data analysis, the survey component of this study replicated the survey research included in the 2007 Report, with some modifications.

Instrumentation

Two instruments were used in this portion of the research. These instruments were both modified versions of the surveys used for the 2007 Report.

Employee Survey

The 2013 Employee Survey was based on three surveys conducted for the 2007 Report which investigated opinions and perspectives related to the Arizona community-college-to-university transfer experience. The original study included three different survey instruments that targeted the three stakeholder groups (academic advisors, faculty, and admissions and registrar staff) with primarily open-ended items. In an effort to increase validity and reliability for the 2013 study, the three original instruments were combined into a single employee survey instrument that included branching to tailor the items presented based on respondents' roles in and perceptions of the transfer process. Many open-ended items from the original surveys were revised as close-ended or partially open-ended (which include an Other option that can be filled in) items, using the prior survey results to inform the response options. Questions were included to align with the Student Survey to provide the opportunity to compare employee and student perceptions.

The final survey included a total of 53 multiple choice, open-ended, and Likert-scale items which gathered demographic information and employees' perceptions of the transfer system, processes, and resources in Arizona. As the items presented varied, the number of questions answered by individual respondents also varied. The complete instrument is included in the Appendix.

Student Survey

The 2013 Student Survey was also based on the survey used to gather data for the 2007 Report. Like with the employee survey, open-ended items were revised as close-ended or partially open-ended items, using the prior survey results to inform the response options. The final survey included 57 multiple choice, open-ended, and Likert-scale questions which gathered demographic information, information on their student status, overall perceptions, and experiences specifically with the transfer system, processes, and resources in Arizona. As the items presented varied based on respondents' roles in and perceptions of the transfer process, the actual number of questions answered by individual respondents varied. Respondents who indicated they had not attended one of the targeted institutions or were not involved in the transfer process were exited from the survey. The complete instrument is included in the Appendix.

Data Collection
All survey instruments were administered online using an online survey administration tool. Invitations to participate in the surveys were sent via email to lists of respondents provided to Hezel Associates. An initial invitation, which included the link to the online survey, was sent to each potential respondent. Reminder emails were sent to those who did not complete the survey after the first invitation. The survey administration period lasted for approximately two weeks. Specific details related to data collection for each survey instrument follow.

Employee Survey Administration
Hezel Associates surveyed community/tribal college and university faculty, staff, and administrators involved in Arizona's transfer system in the spring of 2013. AZTransfer staff provided a targeted employee list, which included 1,399 names, titles, institution names, and email contact information for both community/tribal college and university academic advisors, faculty members, and transfer-relevant staff members (i.e., admissions/registrar staff members, chief academic officers) currently employed at Arizona public higher education institutions. A total of 681 individuals began the survey, resulting in 495 completed surveys (370 community college; 125 university respondents) which included representatives from all 22 community and tribal colleges and 3 universities.

Student Survey Administration
In the fall of 2013, Hezel Associates surveyed community college, tribal college, and university students involved in the transfer process. AZTransfer staff provided a list of students (including name and email address) which represented a random sample from all 22 community/tribal colleges and 3 universities. The lists included students who were (a) over the age of 18; (b) currently enrolled at an AZ community or tribal college and intended to transfer; or (c) transferred from an AZ community or tribal college and attend, or had attended, one of three ABOR universities.

Originally Hezel Associates had planned to draw a sample from this list, but in order to maximize participation in the survey and increase sample size, all 32,657 students included on the list were invited to participate in the survey. As an incentive to encourage participation, respondents who completed the survey were entered in a raffle to win one of ten $100 cash prizes. A total of 1,406 individuals began the survey. Respondents who indicated they were not involved in the transfer process or not affiliated with a participating institution were exited from the survey, resulting in a sample of 1,225 students.

Data Analysis Plan
The analysis plan for the survey data comprised three components: (1) analysis of employee survey data and student survey data individually; (2) comparisons of employee and student survey data on similar survey items; and (3) comparisons to 2007 data as provided in the 2007 Report.

Descriptive statistics were run for both the employee and student survey data in order to describe both samples in terms of demographic characteristics as well as summarize the perceptions of each group with respect to Arizona's transfer system, processes, and resources. When

appropriate, comparisons of 2013 employee, 2013 student, and 2007 data are included to provide a more complete picture of the perceptions of the system by a variety of stakeholders over time.

STATEWIDE DATA ANALYSIS FINDINGS

The findings from the analyses of the ASSIST data are organized into three sections: (1) descriptive comparisons of 2007 and 2013 data, (2) predictors of students' one-year persistence at their university, and (3) predictors of students' bachelor's degree attainment.

Descriptive Comparison of 2007 and 2013 Data

For these analyses, descriptive statistics were examined from the 2007 and 2013 data in order to provide comparisons between the two groups of students on key variables. Descriptive statistics for 2007 were calculated with the same sample used for the 2007 Report, which included 54,382 transfer students. For both the 2007 and 2013 data, the full samples were used for all descriptive analyses with two exceptions. For analyses of one-year persistence, students whose persistence data were not yet available (spring 2006 and 2011-2012 transfers) were excluded. For bachelor's degree attainment, only students who had enough time to graduate were included. Students who transferred prior to 2002 were included in the 2007 bachelor's degree attainment sample; students who transferred from 2006 to 2009 were included in the 2013 analysis.

Community Colleges and Universities

In order to be consistent with the terminology used in the overall field of transfer literature and simplify the presentation of data, references to Arizona's community colleges in this document refer to all 22 community and tribal colleges. Universities, unless otherwise specified, refers to the three state universities, ASU, NAU, and UA.

Prep-at-Transfer

For the Prep-at-Transfer variable, the categories were defined as follows:

    AGEC Only
    Any AGEC but no AA/AS/AB

    ASSC Only
    No AGEC but an AAS/AGS/non-AZCC Assc; or an AA/AS/AB earned prior to fall 2000

    Both
    Any AGEC and an AA/AS/AB
    AA/AS/AB earned in fall 2000 or later (with an embedded AGEC)

    Neither
    No AGEC or ASSC of any type

Table 1 shows the makeup of the student samples from 2007 and 2013 data based on their preparation at time of transfer (Prep-At-Transfer) to a university. Students completing only an AGEC made up the smallest group within each sample. Those with only an associate degree were also a relatively small group in each sample, while students completing neither AGEC nor an associate degree made up the largest portion, though this percentage dropped from 66.0% in 2007 to 43.8% in 2013. Those with both AGEC and associate degrees made up the remaining portion, jumping 22.6% between 2007 and 2013. This jump could be due to a change in the structure of associate degrees; as many associate degrees earned in fall 2000 or later had an embedded AGEC and were counted in the Both category. Thus, while some students in the 2007

sample may have had a non-AGEC associate degree (earned prior to fall 2000), in the 2013 sample all AA/AS/AB degrees were counted as Both. Students who earn other types of associate degrees (i.e., AAS, AGS) may still earn an associate degree without an AGEC.

Table 1.   Prep-at-Transfer Group Summary

Prep-at-Transfer	2007		2013	
	N	Percent of Total	N	Percent of Total
AGEC Only	3,284	6.0	3,086	7.8
ASSC Only	6,122	11.3	3,513	8.9
Both	9,111	16.8	15,498	39.4
Neither	35,865	66.0	17,237	43.8

Note. Columns do not add to 100.0% due to rounding.

Cumulative GPAs (CGPAs) at university had only slight variation across groups within each of the two samples, as well as between 2007 and 2013 (Table 2). Students at NAU had increases in CGPA for all groups, while UA had decreases. Note that the sample only included students who graduated with a bachelor's degree.

Table 2.   University CGPA of Graduating Students

Preparation at transfer	2007			2013		
	% Students	Mean CGPA	Standard Deviation	% Students	Mean CGPA	Standard Deviation
All Universities Combined	*(n=21,270)*			*(n=16,868)*		
AGEC Only	8	3.28	.502	10	3.29	.475
ASSC Only	13	3.36	.470	9	3.38	.457
Both	19	3.36	.470	43	3.38	.463
Neither	61	3.31	.468	38	3.24	.469
Arizona State University	*(n=14,001)*			*(n=10,765)*		
AGEC Only	3	3.36	.470	7	3.32	.440
ASSC Only	17	3.36	.467	10	3.34	.456
Both	16	3.37	.453	39	3.37	.455
Neither	65	3.32	.458	44	3.26	.456
Northern Arizona State	*(n=3,286)*			*(n=3,360)*		
AGEC Only	8	3.45	.467	8	3.51	.451
ASSC Only	9	3.42	.483	11	3.52	.417
Both	26	3.45	.468	52	3.51	.439
Neither	58	3.35	.483	29	3.31	.479
University of Arizona	*(n=3,983)*			*(n=2,743)*		
AGEC Only	23	3.20	.508	23	3.15	.481
ASSC Only	2	3.22	.477	2	3.12	.516
Both	24	3.27	.493	49	3.23	.473
Neither	51	3.23	.491	26	3.04	.491

Note. CGPA is on a 4-point scale.

An early measure of transfer students' academic success is their persistence at the university post-transfer. Across all the transfer credential types, one-year persistence increased from 2007 to 2013 with the exception of AGEC only which decreased slightly (see Figure 1). However, students with AGEC only and both AGEC and an associate degree had the highest persistence rates, thus putting them on the course toward a bachelor's degree.

One-Year Persistence for Each Prep-at-Transfer Group
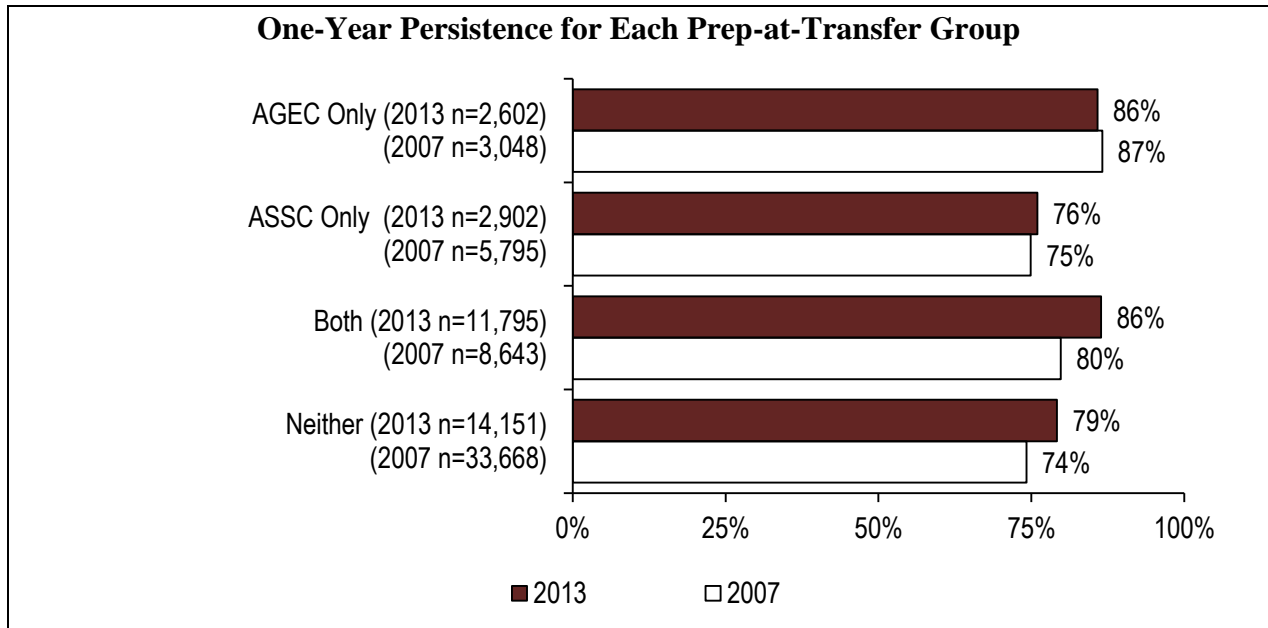
Figure 1. Percent of students who persisted at university after one year. Excludes students entering university in spring of 2006 and the 2011-2012 cohort, as data on persistence were not available.

In Figure 2, the percent of students from each Prep-at-Transfer group who received a bachelor's degree are displayed for each set of data. Because the full datasets were used for each sample, students who did not have sufficient time to graduate at time of data collection were included (e.g., students transferring in 2005 would most likely not have graduated by 2006, so were therefore included in the 2007 "did not graduate" category, even though they may have graduated in a later year). This biases both the 2007 and 2013 data toward low bachelor's degree completion percentages. That said, the data suggested that students completing AGEC earned their bachelor's degree most often in both samples, followed by students who had both an AGEC and an associate degree. Those with neither AGEC nor an associate degree had the lowest percentages completing a bachelor's, suggesting that completing an AGEC had a positive impact on degree completion.

Bachelor's Degree Attainment Rates For Each Prep-at-Transfer Group
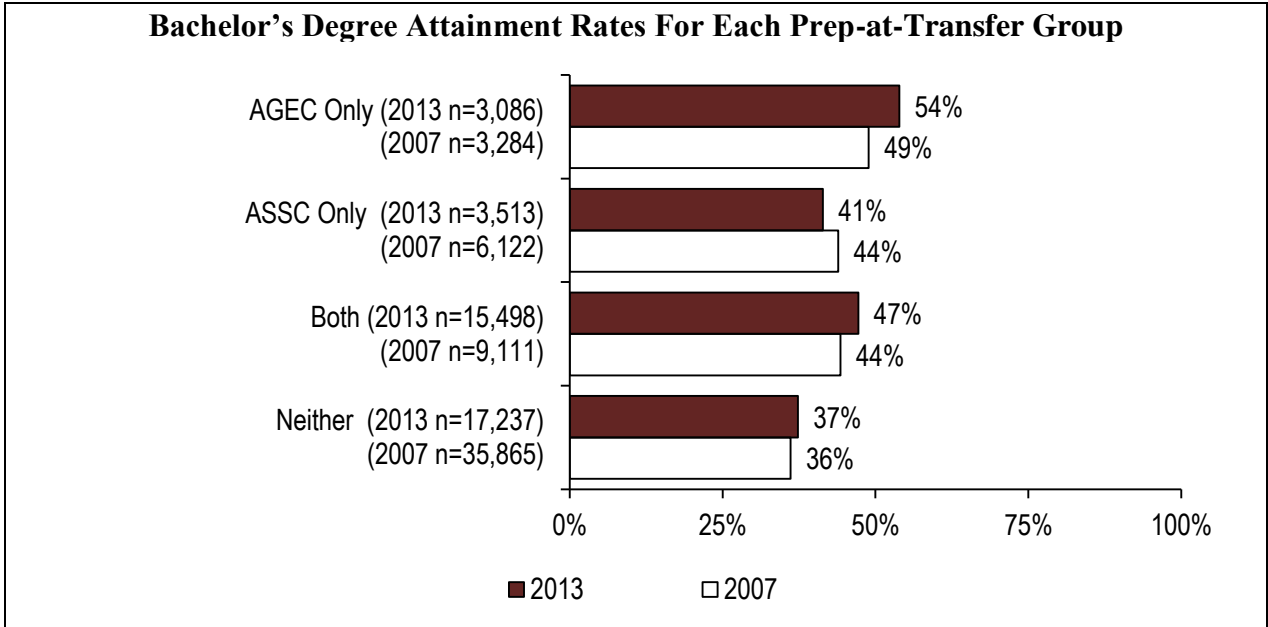
Figure 2. Percent of students who obtained a bachelor's degree.

While Figure 2 presents students who graduated regardless of the time it took to complete their degree, Figure 3 looks more specifically at efficiency by focusing on students who graduated within four years of transferring. Students completing AGEC, either alone or in combination with their associate degree, were the most successful in both 2007 and 2013 with respect to completing their bachelor's degrees within four years (though those with both tied with associate degrees only in 2007). Similarly, students completing neither AGEC nor an associate degree have the lowest percentage of graduates. Larger proportions of students completed AGEC and both AGEC and an associate degree in 2013 than 2007, while those with only an associate degree decreased, possibly due to the increase in embedded AGECs and greater awareness of the benefits of AGEC among stakeholders.
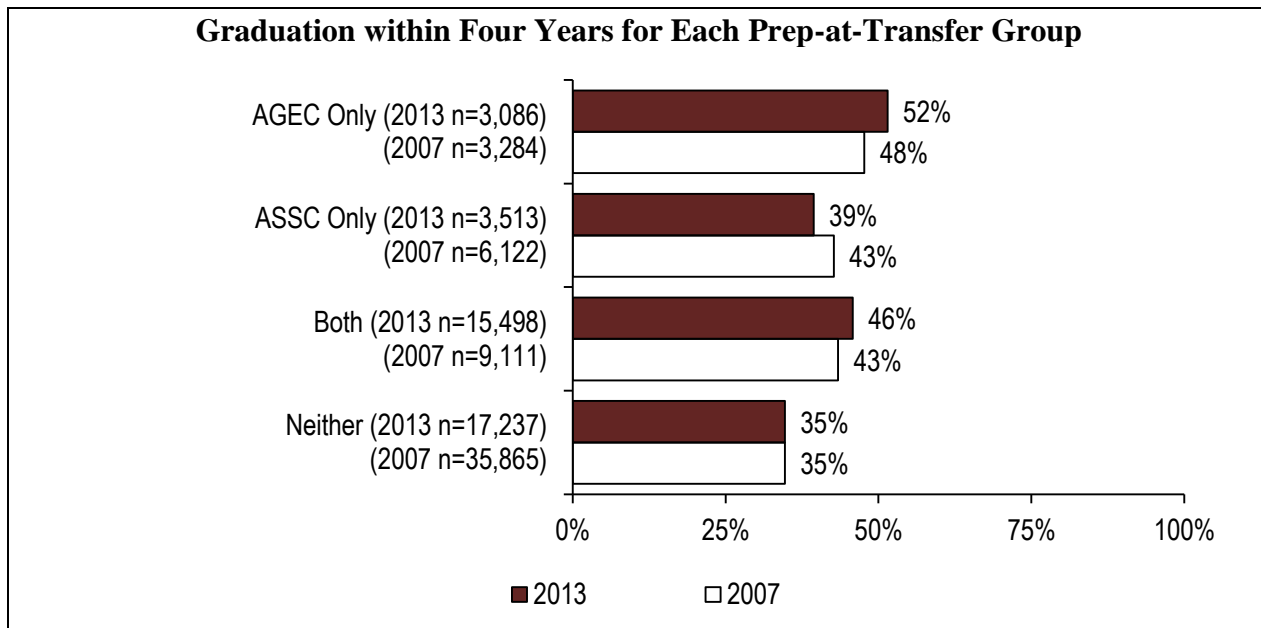
Figure 3. Percent of students who graduated within four years.

The mean number of hours students were enrolled per semester rose for all four groups between 2007 and 2013 (Table 3). In general, those with only an associate degree enrolled in fewer hours per semester than the other groups. The standard deviations for the four groups in the 2007 sample were relatively large, indicating wide variation in hours enrolled. The smaller standard deviations in the 2013 groups suggested that there was less variation than in 2007. This would seem to suggest a more consistent educational process for transfer students once they arrive at the university.

Table 3. Credit Hours Enrolled per Semester

Prep-at-Transfer	2007			2013		
	n	Mean	SD	n	Mean	SD
AGEC Only	3,283	10.51	3.66	3,086	12.20	2.89
ASSC Only	6,122	9.29	4.31	3,513	10.50	3.59
Both	9,110	10.10	4.07	15,498	12.17	3.00
Neither	35,855	10.04	4.35	17,237	12.26	2.93

Calculating the mean number of credits each group had at the time of transfer to a university required some adjustments to the data. In the ASSIST database, transfer hours from an Arizona community college (AZCC) were capped at 64 for ASU students only. Testing these data as reported would have caused a flawed statistical analysis, since it would have appeared as though ASU students as a whole had taken fewer community college courses, when in fact the differences were a result of varying systems for recording credits at the universities. Thus, for the purposes of this analysis, AZCC transfer hours were capped at 64 for *all* students in both the 2007 and 2013 samples. Students' total transfer hours, however, may still exceed 64, as credits from non-AZCC sources were not capped. For example, a student who had 72 AZCC hours and 12 non-AZCC hours would have a total of 76 transfer hours (64 AZCC hours plus 12 non-AZCC hours).

All groups had fewer mean credits at transfer in 2013 than in 2007. There was also less variability in the 2013 sample (as indicated by the smaller standard deviations). Together, this reinforces that the community college experience has become more consistent over time for all students. Those who completed both an associate degree and AGEC had more credits than the other groups in each sample (see Table 4).

Similar to the credits at transfer, the mean total credits each Prep-at-Transfer group had at time of graduation were lower for each group in 2013 than they were in 2007, with smaller standard deviations (Table 4). Interestingly, those who completed both an associate degree and AGEC no longer have the highest number of credits, suggesting that these students took fewer credits at the university than their counterparts, likely because their additional community college credits applied to their university degree program. Students without a community college credential had the lowest number of credits at transfer, and the highest number of credits at graduation, further reinforcing the positive impact of the community college preparation programs and the transfer system.

Table 4. Credits at Transfer and Graduation

Preparation at Transfer	2007			2013		
	n	Mean	Standard Deviation	n	Mean	Standard Deviation
Number of Credits at Transfer						
AGEC Only	3,189	58.86	15.17	3,086	55.47	9.66
ASSC Only	6,045	65.96	18.40	3,513	60.90	7.43
Both	8,915	67.36	17.22	15,498	61.33	6.05
Neither	35,073	54.69	25.14	17,237	47.40	15.11
Total Credits at Graduation						
AGEC Only	1,605	133.38	16.86	1,663	128.12	11.43
ASSC Only	2,690	129.65	15.42	1,454	126.98	10.32
Both	4,039	134.52	18.06	7,319	128.05	10.76
Neither	12,936	135.98	20.51	6,432	129.12	11.60

One-Year Persistence
The next tables focus on the percent of students still enrolled one year after transfer for the 2007 and 2013 samples. These analyses examined the full datasets from both samples, excluding the students in each dataset whose persistence data were not available at the time the data were obtained (spring 2006 and 2011-2012).

Figure 4 explores persistence at one year by the university attended. The percent of students enrolled after one year increased across all three universities from 2007 to 2013. There were only slight differences between universities in each sample, with ASU having the highest percentage of students persisting after one year.

One-Year Persistence by University
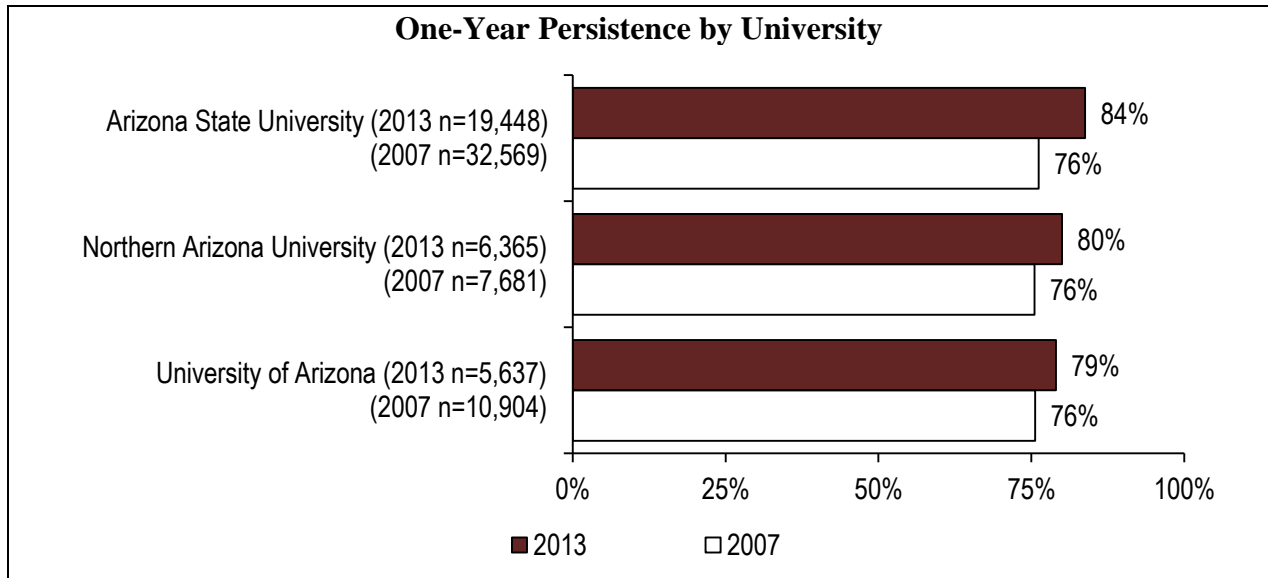
Figure 4. Percent of students who persisted one year post-transfer at each university.

As suggested in Table 5, little difference was apparent between males and females in terms of persisting after one year in either the 2007 or 2013 samples, though more students of both genders persisted in 2013.

Table 5.   One-Year Persistence by Gender

Gender	2007		2013	
	n	Persisted	n	Persisted
Male	23,063	75.7%	14,490	82.2%
Female	28,091	76.2%	16,960	82.1%

In Figure 5, One-Year Persistence was broken down by reported ethnicity. The percent persisting after one year within each ethnicity increased from 2007 to 2013. The African American group had the largest increase, at 10.0%, followed by Asian (9.7% increase), International (9.4% increase), Unknown (7.1% increase), White (6.5% increase), and Hispanic (4.2% increase). The Pacific Islander category was not included in the 2007 data, so was not comparable.

One-Year Persistence by Ethnic Group
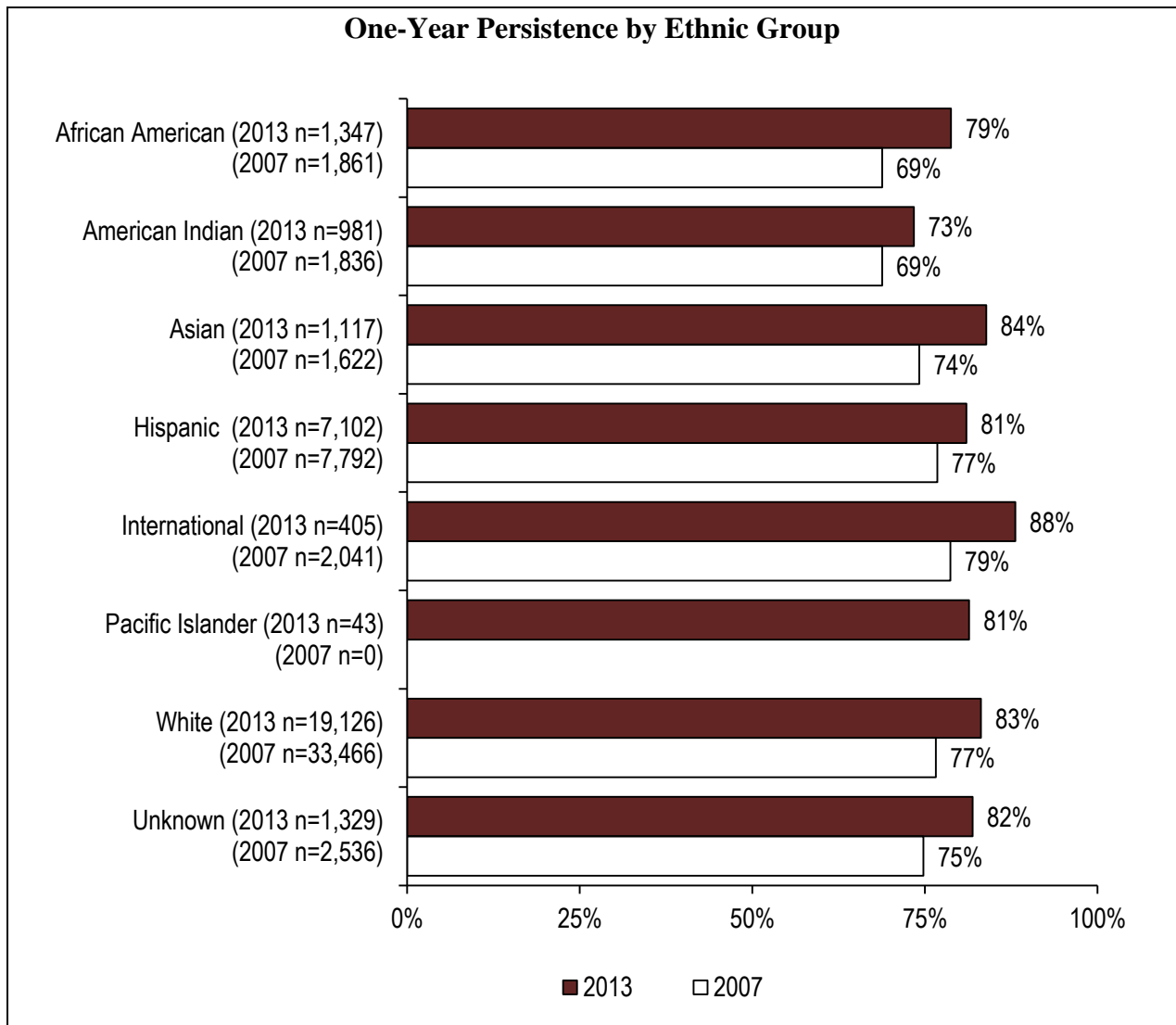
Figure 5. Percent of persisting students by ethnicity. Pacific Islander not reported in 2007 data.

Students' ages at time of transfer were very similar from 2007 to 2013 (Table 6). Data suggest that the Mean Age for those who persisted was slightly lower than for those who did not persist.

Table 6. One-Year Persistence Mean Age at Time of Transfer

	2007			2013		
	n	Did Not Persist	Persisted	n	Did Not Persist	Persisted
Mean Age	51,144	25.61	24.95	31,444	25.33	24.47

Bachelor's Degree Attainment
The following tables examined students' bachelor's degree attainment for the segment of the 2007 sample that transferred to a university prior to 2002, as well as the segment of the 2013 sample that transferred to a university between 2006 and 2009. These subsamples were used in order to ensure students had adequate time to complete a degree.

In Figure 6, Bachelor's Degree Attainment was broken down by the three universities attended (ASU, NAU, or UA). The percent of transfer students receiving a bachelor's degree has remained relatively stable at the three universities, increasing slightly at ASU and decreasing slightly at NAU.

Bachelor's Degree Attainment Rate by University
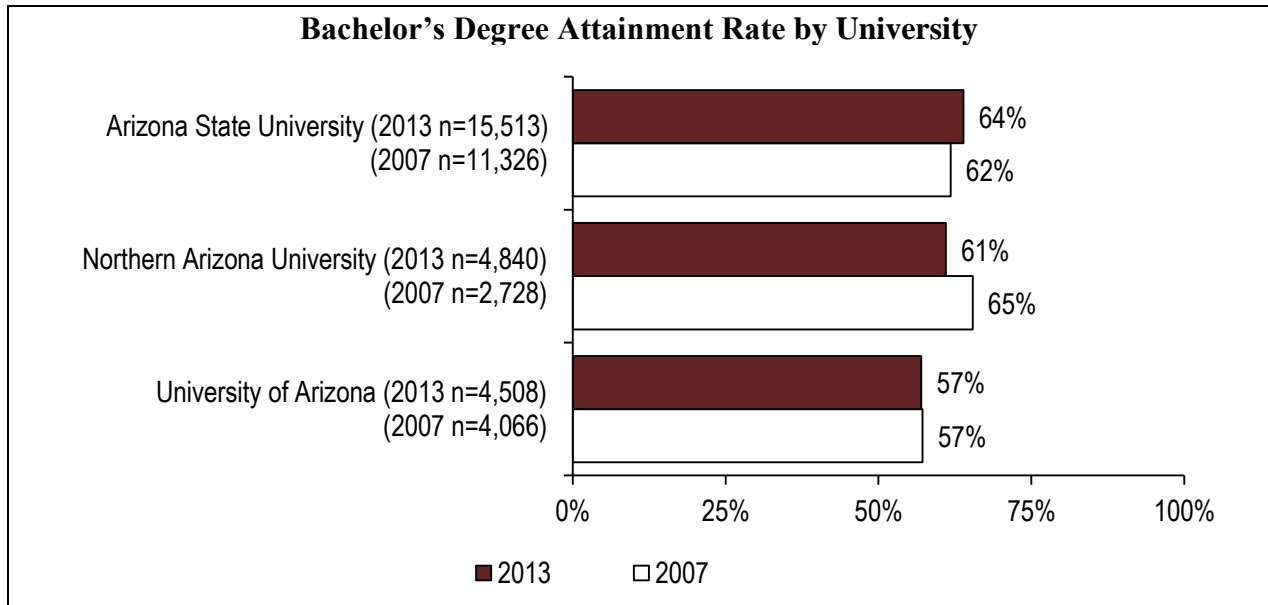
Figure 6. Percent of students at each university who obtained a bachelor's degree.

Data were examined for the 2007 and 2013 subsamples to determine the percentage of students who received a bachelor's degree by gender. As seen in Table 7, females had a higher percentage of graduates in 2007, with 64.1% attaining a bachelor's degree, over males with 57.9%. This pattern persisted in the 2013 sample, with 59.2% of males graduating, compared to 64.5% of females. Comparing the two samples, both genders saw an increase in the percentage of students earning a degree between 2007 and 2013.

Table 7.   Bachelor's Degree Attainment by Gender

Gender	2007		2013	
	n	Attained Bachelor's	n	Attained Bachelor's
Male	8,161	57.9%	11,418	59.2%
Female	9,959	64.1%	13,443	64.5%

In Figure 7, Bachelor's Degree Attainment was broken down by students' reported ethnicity. The percent of students within the Hispanic category and the American Indian category who completed a bachelor's degree decreased between samples by 4.5% and 3.0%, respectively. The Unknown category had the largest percentage increase, from 56.4% to 64.3% attaining a bachelor's degree (a 14% increase), followed by International students (9.7% increase), Asian (8.3% increase), African American (7.6% increase), and White students (2.7% increase). The Pacific Islander category was not included in the 2007 data set and therefore was not compared.

Bachelor's Degree Attainment Rate by Ethnic Group

Ethnic Group	2012	2006
African American (2012 n=1,045) (2007 n=583)	49%	46%
American Indian (2012 n=737) (2007 n=660)	46%	47%
Asian (2012 n=882) (2007 n=555)	62%	57%
Hispanic (2012 n=5,486) (2007 n=2,578)	59%	62%
International (2012 n=321) (2007 n=847)	73%	67%
White (2012 n=15,111) (2007 n=12,206)	65%	63%
Unknown (2012 n=1,273) (2007 n=691)	64%	56%

■ 2012   □ 2006
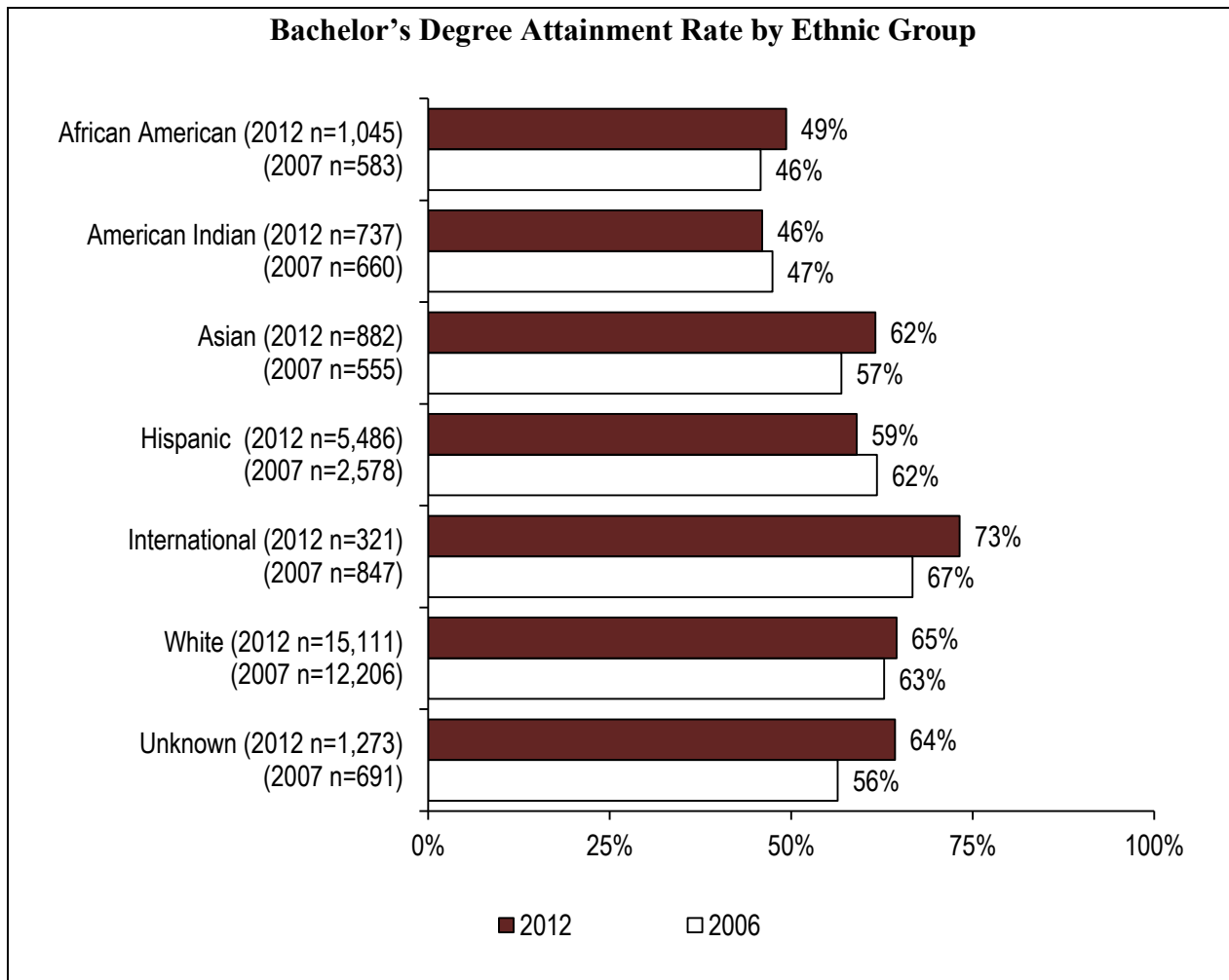
Figure 7. Percent of students who attained bachelor's degree by ethnicity. Pacific Islander not reported due to small sample size in 2013 and lack of inclusion in 2007 data.

Table 8 takes another look at the characteristics of each sample in relation to Bachelor's Degree Attainment, showing students' Mean Age at time of transfer to a university. Data suggested mean ages were slightly lower for students who completed a bachelor's degree than those who did not for both samples. Data indicated little difference in mean ages of students from 2007 to 2013.

Table 8. Bachelor's Degree Attainment Mean Age at Time of Transfer

	2007			2013		
	n	Did Not Graduate	Completed Bachelor's	n	Did Not Graduate	Completed Bachelor's
Mean Age	18,118	25.56	24.54	24,855	25.21	24.20

Summary
Overall, the descriptive characteristics of the 2007 and 2013 samples were relatively similar; however had a few notable differences. The composition of each sample based on their preparation at the time of transfer was slightly different, with those who had completed both

AGEC and an associate degree representing a higher proportion of the 2013 group than in 2007, and those who had neither credential representing a lower proportion; those completing AGEC only or an associate degree only were similar in both samples. This increase in students with both an AGEC and an associate degree may be partly attributed to a change in associate degree structure, with those earning a degree after fall 2000 having an embedded AGEC, but the large increase seems unlikely to have resulted solely from this change. The decrease in percentages of students obtaining neither degree reinforces that improvements to the transfer system were also likely to have had a role, as greater percentages of students in 2013 were obtaining some sort of credential as a result of their community college education than were in 2007.

While students' cumulative university GPAs varied little between the two samples, a more prominent difference was associated with credit hours. The 2013 sample suggested an overall trend of fewer credits at time of transfer, as well as fewer total credits at graduation from a university. Interestingly, the 2013 sample had a higher mean total of credit hours enrolled per semester, with less variation in the sample. This could be attributed to the fact that a higher percentage of students graduated within four years in 2013 than in 2007, therefore they enrolled in more credits per semester, but completed their degree quicker and did not accumulate as many total credits. This also suggested a more efficient educational process, indicating that fewer students were earning credits not applicable to their degree program, which was one of the key goals of the Arizona transfer system overall and the Getting AHEAD project.

Comparison of data from both 2007 and 2013 indicated greater percentages of students were persisting at the universities after one year in 2013. Comparisons of segments of the 2007 sample (those transferring prior to 2002) and 2013 sample (those transferring between 2006 and 2009) indicated a slight increase in bachelor's degree attainment overall, primarily resulting from increases at Arizona State. Therefore, data suggest that more students who transferred remained enrolled in a university after one year and went on to earn a bachelor's degree. Relatively similar results were found in the two samples with respect to gender, age, and ethnicity.

Predictors of One-Year Persistence
For these analyses, logistic regression or discriminant analyses were planned as appropriate focusing on students who transferred to a university between the years of 2006 and 2011 in order to determine the impact of the predictor variables of interest on students' university persistence. The predictor variables tested included those related to students' educational trajectory and performance and demographic variables. As students' preparation at the time of transfer was a key focus of this research, a variable that indicated whether or not students earned an AGEC, including both isolated and embedded, was included as a predictor variable in every analysis.

Logistic regression is most appropriate for categorical predictor variables, while discriminant analysis is most appropriate for continuous predictor variables. The data for the planned discriminant analysis were checked to ensure the assumptions of this statistical test were met (linear relationships between predictor variables, multivariate normality between groups, and equal population covariance matrices across groups). Based on these tests, it was determined that discriminant analysis was not appropriate for these data, thus logistic regression was determined to be an appropriate technique.

The outcome variable in both of these analyses was One-Year Persistence (defined as 1 for persisting and 0 for not persisting). This variable was based on whether or not the student was enrolled in the university one year after transferring. Students who transferred to other colleges or universities or those who graduated within their first year after transferring were not included. In addition, students from the 2011-12 cohort were excluded from this analysis, as data on their persistence were not yet available at the time data were obtained from the ASSIST database.

Impact of Educational Trajectory and Performance on One-Year Persistence
The predictor variables in this analysis included the following, with variable names in parentheses:
- Preparation at transfer (AGEC);
- Average CGPA in the first year of enrollment at university (Average CGPA First Year);
- Number of transfer hours at entry to university (Transfer Hours at Entry);
- Average hours registered for all semesters enrolled (Average Hours All Semesters); and
- Average hours enrolled per semester in the first year at university (Average Hours First Year).

All variables included in this prediction model were independently significant predictors of One-Year Persistence. The model as a whole was also significant—the estimates of how strongly this particular combination of variables predict whether or not students persist their first year at university were moderately high. While these were significant predictors of One-Year Persistence for this sample, they still represented only a very small number of the variables that determine student educational outcomes.

Based on the proportion of students who persisted their first year at university in this sample, by simply guessing that all students would persist, the guess would be correct 83.4% of the time (as this is the percentage of students in the sample who persisted). This model correctly predicted the persistence outcomes for 87.5% of students. Therefore, the model provided statistically significant improvement to the accuracy of this prediction.

The logistic regression output provided odds ratios that represent the odds of a particular outcome occurring given the presence or absence of a specific predictor variable. Odds ratios greater than one indicate that an increase in that predictor variable would also increase the likelihood of persisting one year at a university. Conversely, odds ratios less than one indicate that a decrease in that predictor variable would increase the likelihood of persisting one year at a university.

Students' average cumulative GPA in their first year of enrollment had the largest impact in predicting their university persistence after one year. For each unit increase in Average CGPA First Year there was an increase in the odds of persisting by a factor of 3.124. The average hours a student was enrolled per semester in their first year had a negative relationship with persistence; however, was very close to 1.0 and indicated very little to no impact on the prediction. The odds ratios for each predictor variable are included in Table 9, with a description by variable following.

Table 9.   Educational Trajectory/Performance Odds Ratios

	Odds Ratio	95% Confidence Interval Odds Ratio	
		Lower	Upper
AGEC	1.134*	1.046	1.228
Average CGPA First Year	3.124**	3.008	3.245
Transfer Hours at Entry	1.009**	1.006	1.012
Average Hours All Semesters	1.389**	1.355	1.423
Average Hours First Year	0.929**	0.908	0.950

Note. Outcome was One-Year Persistence. *p < .05; **p < .0001

AGEC
The regression model indicated that students who completed AGEC had higher odds of persisting after one year.

Average CGPA in First Year
This variable had the largest impact on One-Year Persistence in this analysis, indicating higher odds of persisting with higher cumulative GPAs.

Transfer Hours at Entry
Data suggested that the number of hours a transfer student had at university entry had little impact on their likelihood of persisting.

Average Hours All Semesters
The odds of persisting were greater for students who were registered for more credit hours each semester. As this variable was intended as a representation of full-time or part-time status, this suggested that full-time students were more likely to persist.

Average Hours First Year
Data suggested that the number of hours a student was enrolled in their first year had little to no impact on the prediction of whether or not they would persist.

Summary
As a whole, the resulting regression model accurately predicted the One-Year Persistence outcome of the student population 87.5% of the time, which is a relatively reliable model.

Results indicated that a student's cumulative GPA had the greatest impact on their likelihood of persisting beyond their first year at a university, which is an expected outcome as students who are performing better academically are more likely to continue their education. Surprisingly, having a greater number of registered hours for the first year at university had very little impact on the odds of persisting after one year in this analysis. Lastly, while significant, the number of transfer hours at entry had only a slight impact on persistence.

The 2007 Report used a slightly different combination of predictor variables, making direct comparisons difficult. For example, GPA was considered as an outcome and not as a potential predictor of One-Year Persistence; therefore, comparing this finding was not possible. The 2007 Report did suggest that AGEC completion, transfer hours, and the average number of hours a

student was enrolled in the first year had an impact on persistence at their university, similar to these findings. These variables generally seemed to have a stronger impact on persistence in the 2007 Report, though the inclusion of different variables in the analysis would impact the results.

Impact of Demographic Characteristics on One-Year Persistence
The final analysis also used a binary logistic regression with One-Year Persistence for the outcome variable. The predictor variables in this analysis included the following, with variable names in parentheses:
- Preparation at transfer (AGEC);
- Community college attended (CC Attended);
- University attended (University Attended);
- Gender (Gender);
- Age at entry to university (Age); and
- Ethnicity (Ethnicity).

CC Attended, University Attended, and Ethnicity were coded as binary variables, choosing the largest category of each variable to be the indicator (Maricopa, ASU, and White respectively) in order to incorporate the properties required for logistic regression and compensate for the unequal distribution of students across these categories.

All variables included in this prediction model, except for Gender, were independently significant predictors of One-Year Persistence. The model as a whole was significant; however, the estimates of how strongly this particular combination of variables predicted whether or not students persisted after one year were very low. Thus, while these were significant predictors of a students' persistence for this sample, not surprisingly they represented only a very small number of the variables that determined whether or not a student persisted beyond their first year at university. This number was also potentially impacted by the large sample size, which can result in lower estimates of overall impact.

This regression model correctly predicted One-Year Persistence 82.2% of the time with this population, the exact same percentage as when left to chance (as 82.2% of students in the sample persisted after one year, if a person guessed that all students persisted, he would be correct 82.2% of the time). Given the large sample, however, even very small effects can obtain statistical significance. As a result, the variables included in this model were significant predictors of students' persistence at university after one year, but did not have enough of an impact to increase the overall correct prediction percentage. All variables were significant independent predictors of One-Year Persistence, except Gender. Having an AGEC had the greatest impact on prediction of One-Year Persistence. The odds ratios for each predictor variable are included in Table 10, with a description by variable following.

Table 10. Demographic Characteristics Odds Ratios

	Odds Ratio	95% Confidence Interval Odds Ratio	
		Lower	Upper
AGEC	1.827*	1.719	1.943
CC Attended	1.216*	1.123	1.317
University Attended	1.229*	1.138	1.327
Gender	1.008	0.950	1.069
Age	0.984*	0.980	0.988
Ethnicity	1.060*	1.040	1.080

Note. Outcome was One-Year Persistence. *$p < .0001$

AGEC
In this analysis, students who completed AGEC had higher odds of persisting at their university after one year, as opposed to those who did not complete AGEC. This relationship was significant and was the most impactful variable in the model.

CC Attended
Students who attended Maricopa Community Colleges had greater odds of persisting when compared to students at other community colleges. It was the third most important predictor after AGEC and University Attended.

University Attended
In this model, the university that students transferred to had the second highest impact, after AGEC. Students who transferred to ASU had greater odds of persisting after one year than those who transferred to other universities.

Gender
Gender was not a significant predictor of One-Year Persistence, indicating that males and females were equally likely to persist one year after transferring to a university.

Age
This analysis suggested that older students had slightly increased odds of persistence after one year than younger students. While the relationship was significant, the odds ratio close to 1 suggests a very small impact.

Ethnicity
The ethnicity of a student transferring to a university, while significant, had very little impact on whether or not a student persisted.

Summary
Overall, this model did not present an improvement for predicting One-Year Persistence than if done by chance (both predicted accurately 82.2% of the time). This model may be a poor predictor of One-Year Persistence for this sample. It also included one variable that was not statistically significant (Gender). In addition, a students' age at the time of transfer and their ethnicity had only very slight impacts.

These findings were somewhat consistent with findings from the 2007 Report, which indicated that completion of AGEC had the greatest positive impact on One-Year Persistence and attending ASU increased the odds over attending NAU (the increase in odds over attending UA was not significant). Other variables examined in 2007 (Total Transfer Hours and Entry Age) indicated little effect on persistence.

Predictors of Bachelor's Degree Attainment
For these analyses, logistic regression or discriminant analyses were planned as appropriate, focusing on students who transferred to a university between the years of 2006 and 2009 in order to determine the impact of the predictor variables of interest on students' ultimate degree attainment outcome. Logistic regression is most appropriate for categorical predictor variables, while discriminant analysis is most appropriate for continuous predictor variables. The data for the planned discriminant analysis were checked to ensure the assumptions of this statistical test were satisfied (linear relationships between predictor variables, multivariate normality between groups, and equal population covariance matrices across groups). Based on the results of these tests, discriminant analysis was deemed appropriate and used as originally planned.

The outcome variable in these analyses was Bachelor's Degree Attainment. The coding for this variable differed for the two tests and is described in each section. In testing the predictors of students' degree attainment, the analysis was conducted only with students who transferred to a university in 2009 or earlier to ensure all students in the sample had adequate time to attain a bachelor's degree. Including students transferring later than 2009 would have biased the sample towards students with no degree, as they may not have had enough time to complete their education. This new subsample accounted for 63.2% of the total sample.

Impact of Educational Trajectory and Performance on Degree Attainment
To explore students' degree attainment beyond the previously presented descriptive statistics, discriminant analysis was used to better understand the factors impacting whether students' ultimately obtained a bachelor's degree. To determine which variables best distinguish between students in terms of Bachelor's Degree Attainment, all predictor variables were entered simultaneously into a discriminant function analysis. The Bachelor's Degree Attainment outcome variable was coded as None, Associate, Bachelor's, or Both (Associate and Bachelor's) for this analysis. The predictor variables in this analysis included the following, with variable names in parentheses:
- Preparation at transfer (AGEC);
- Total semesters enrolled (Total Semesters);
- Average CGPA in the first year of enrollment at university (Average CGPA First Year);
- Number of transfer hours at entry to university (Transfer Hours at Entry); and
- Average hours registered for all semesters enrolled (Average Hours All Semesters)

The data were checked using appropriate methods to determine if they met the assumptions of discriminant analysis. The results suggested these assumptions were met. These data, therefore, were determined to be appropriate for use in discriminant analysis.

Tests indicated that each of the five individual predictor variables were significant predictors of Bachelor's Degree Attainment. The model including all five of the variables together was also

significant, indicating that the model was able to significantly discriminate between the four groups identified by the Bachelor's Degree Attainment variable. Further analyses were conducted as part of the discriminant analysis to determine which of these predictors had the greatest impact on Bachelor's Degree Attainment when compared to the other predictors.

The analysis produced three linear discriminant functions (LDFs) that optimally and significantly separated the four Bachelor's Degree Attainment groups. Table 11 describes the functions in terms of how they discriminate between the groups.

Table 11. Canonical Correlations for Three LDFs

LDF	Discriminates between…
1	Both and None
2	Associate and Bachelor's
3	Associate and all others (None, Both, Bachelor's)

In addition to predicting ultimate outcomes, this model provided insight into the importance of individual variables in predicting students' educational attainment. The standardized function coefficients provide information regarding which variables contribute most to distinguishing between the groups identified by the LDFs. The results indicated that some predictors were weighted more heavily than others.

- Preparation at transfer (AGEC) contributed most to distinguishing between those who received both an associate and a bachelor's degree and those who received no degree. It was also the single strongest predictor in the model, suggesting it had the most impact of any variable on students' educational outcome. A student with more transfer hours at their university entry (Transfer Hours at Entry) was also more likely to have both an associate and a bachelor's than no degree.
- Whether a student was full-time (Average Hours All Semesters) and the total number of semesters they were enrolled (Total Semesters) contributed most to distinguishing between those who received an associate degree and those who received a bachelor's. Essentially, full-time students who stayed in school longer were more likely to earn a bachelor's than their counterparts.
- The number of transfer hours a student had when entering the university (Transfer Hours at Entry) was the best predictor of those who received only an associate degree. Essentially those with more transfer hours were more likely to only earn an associate degree, which is consistent with the descriptives that indicated those with associate degrees tended to transfer the most credits to university. A student with an AGEC was less likely to have only an associate degree, suggesting that students with AGECs were more likely to continue their education and receive a bachelor's degree rather than stopping after receiving their associate.

Table 12 provides the standardized function and correlation coefficients for each variable in each function. Higher coefficients and correlations indicate a stronger contribution of that variable to the ultimate educational outcome represented by the function.

Table 12. Standardized Function and Correlation Coefficients

Variables	Standardized function coefficients			Correlations between variable and LDFs		
	1	2	3	1	2	3
AGEC	.719	-.377	-.525	.778*	-.346	-.480
Average Hours All Semesters	.105	.669	-.463	.110	.609*	-.558
Average CGPA First Year	.333	.431	.124	.387	.496*	.191
Total Semesters	.148	.511	.225	.080	.491*	.188
Transfer Hours at Entry	.498	.022	.678	.580	-.106	.626*

*Largest absolute correlation between each variable and any discriminant function.

Classification results indicated the success of prediction with this sample and model. Overall, 66.7% of students' educational attainment outcomes were correctly predicted by this model. The model was more successful in predicting students who earned a bachelor's degree than predicting those who did not. The model correctly predicted 59.6% of students who graduated with no degree, 54.0% of students with an associate, 69.2% of students with a bachelor's, and 75.0% of students with both a bachelor's and an associate degree.

Summary
As a whole, the resulting discriminant analysis model accurately predicts the degree outcome of the student population 66.7% of the time, which is a relatively reliable model. One potential difficulty with this analysis is the fact that many students have an embedded AGEC within their associate degree, making isolation of the impact of the AGEC somewhat challenging.

Despite this potential confounding explanation, this analysis provided strong support that students completing AGEC were more likely to graduate with a bachelor's degree, which supports the effectiveness of AGEC as a component of the transfer system. Having more credit hours at transfer and taking more credits per semester (i.e., being a full-time student) at the university also were relatively strong contributors to ultimate educational outcomes, suggesting that the community college preparation overall has an important impact on students' success at the university level. These data are consistent with findings from the 2007 Report, which also indicated that completing AGEC, transferring with more credits, and being a full-time student increased the likelihood of university graduation.

Impact of Individual Characteristics and School Selection on Degree Attainment
As the second statistical analysis for degree attainment included categorical predictor variables, binary logistic regression was used to examine the importance of individual and school characteristics on Bachelor's Degree Attainment outcomes. For this analysis, the Bachelor's Degree Attainment outcome variable was a binary variable defined as Yes or No. Predictor variables for this regression analysis included the following:
- Preparation at transfer (AGEC);
- Community college attended (CC Attended);
- University attended (University Attended);
- Gender (Gender);
- Age at entry to university (Age); and
- Ethnicity (Ethnicity).

Community College Attended, University Attended, and Ethnicity were coded as binary variables, choosing the largest category of each variable to be the indicator (Maricopa, ASU, and White respectively) in order to incorporate the properties required for logistic regression and compensate for the unequal distribution of students across these categories.

All variables included in this prediction model were independently significant predictors of Bachelor's Degree Attainment. Our model as a whole was also significant; however, the estimates of how strongly this particular combination of variables predicted whether or not students obtained bachelor's degrees were very low. Thus, while these were significant predictors of degree attainment for this sample, not surprisingly they represented only a very small number of the variables that determined whether or not a student obtained his or her degree. This number was also potentially impacted by the large sample size, which can result in lower estimates of overall impact.

This regression model correctly predicted 64.3% of students. As 62.1% of students in the sample obtained a bachelor's degree, by simply predicting that all of the students would obtain a degree, the prediction would be correct 62.1% of the time. The model, therefore, provided a statistically significant 2.2% improvement to the prediction accuracy.

The logistic regression output provided odds ratios that represent the odds of a particular outcome occurring given the presence or absence of a specific predictor variable. For this analysis, odds ratios greater than one indicate that an increase in that predictor variable will also increase the likelihood of obtaining a bachelor's degree. Conversely, odds ratios less than one indicate that a decrease in that predictor variable will increase the likelihood of obtaining a bachelor's degree.

As indicated in Table 13, all variables were significant predictors of whether or not a student obtained a bachelor's degree. In this analysis, a students' preparation at transfer (AGEC) had the greatest impact on Bachelor's Degree Attainment: A student's odds of completing a bachelor's degree increased by 2.32 if he or she had completed AGEC compared to a student who had not completed AGEC. A description of the results by variable follows.

Table 13. Bachelor's Degree Attainment Odds Ratios

	Odds Ratio	95% Confidence Interval Odds Ratio	
		Lower	Upper
AGEC	2.320*	2.196	2.451
Community College Attended	1.252*	1.161	1.351
University Attended	1.162*	1.081	1.249
Gender	0.799*	0.758	0.843
Age at Entry to University	0.977*	0.973	0.981
Ethnicity	1.340*	1.270	1.415

*p < .0001

AGEC
According to the regression model, the odds of attaining a bachelor's degree were substantially greater for students who completed AGEC compared to those who did not. This variable had the largest impact on the degree attainment outcome in the model and was consistent with the findings of the discriminant analysis, which indicated that completing AGEC was the single most influential variable of those tested in predicting whether or not a transfer student would graduate from the university.

Community College Attended
Students in the sample who transferred from Maricopa Community Colleges had higher odds of graduating with bachelor's degrees than those who transferred from other Arizona community colleges.

University Attended
Students who transferred from a community college to ASU had greater odds of receiving a bachelor's degree than those who attended NAU and UA.

Gender
Female students had greater odds of graduating than male students in this model.

Age at Entry to University
The impact of age on attaining a bachelor's degree was small but significant. The odds ratio indicated that each year older a student was at the time of transfer to a university, he or she had slightly lower odds of graduating with a bachelor's degree.

Ethnicity
Ethnicity had the second largest impact on Bachelor's Degree Attainment; however it was not nearly as high as the impact of completing AGEC. The model indicated that students identified as White had greater odds of earning a bachelor's degree than Non-White students.

<u>Summary</u>
Based on the model produced by this logistic regression, a young, female, white transfer student who completed AGEC, attended Maricopa Community Colleges, and transferred to ASU had the greatest odds of completing a bachelor's degree. While all of the variables discussed were significant in the model, completing AGEC was the most impactful variable identified in the model.

The 2007 Report examined graduation outcomes by time to degree completion, which included graduation within: (1) two years, (2) three years, (3) four years, and (4) five years. While the 2007 and 2013 analyses examined the variables in slightly different ways, both indicated that completing AGEC had the greatest overall impact on bachelor's degree completion. In addition, transferring with more credits, attending ASU as opposed to NAU and UA, and being female all indicated a higher likelihood of graduation in both 2007 and 2013.

Ethnicity was found to only have a slight effect on increasing the odds of graduation within three years in the 2007 data, but was not a significant predictor of graduation in general. This was in

contrast to 2013 findings, in which being white indicated higher odds of graduation. In 2007, older students were predicted to have slightly higher odds of graduating, while in the 2013 analysis, younger students were found to have slightly higher odds of graduating. Since the 2007 Report used a slightly different combination of predictor and outcome variables, making direct comparisons difficult as the inclusion of different combinations of variables in the analysis would impact the results.

Summary of ASSIST Data Findings
The ASSIST student data analysis combined an examination of descriptive data pertaining to the samples, one-year persistence of the 2007 and 2013 samples, and the bachelor's degree attainment of segments of the 2007 and 2013 samples.

The overall analysis sought to answer five research questions. Findings include the following:

- What type of preparation/degrees are students completing prior to transferring to a university? How does this compare to the 2007 Report?

Based on frequency counts of students in each cohort in the 2013 data, the number of transfer students who have entered the three Arizona Universities has increased each year since 2006, indicating that greater numbers of students completed some sort of community college preparation then successfully entered a university. Looking at types of preparation and degree, transfer students from each sample were broken out into four groups: AGEC, Associate Degree, Both, and Neither. Based on descriptives of the 2007 and 2013 samples, students who completed AGEC made up the smallest group within each sample and those with an associate degree were also a relatively small group in each sample. Students who completed neither AGEC nor an associate degree made up the largest portion of each sample; however, these percentages decreased from 2007 to 2013. Those with both made up the remaining portion, increasing from 2007 to 2013. This jump could be due to a change in the structure of associate degrees, as many associate degrees earned in fall 2000 or later had an embedded AGEC and thus were counted in the Both category. While some students in the 2007 sample may have had a non-AGEC associate degree (earned prior to fall 2000), in the 2013 sample all AA/AS/AB degrees were counted as Both. Students who earned other types of associate degrees (i.e., AAS, AGS) may still earn an associate degree without AGEC.

- How do performance measures compare based on preparation at entry and retention rates to the 2007 Report?

Comparison of segments of the 2007 sample (those transferring prior to 2002) and 2013 sample (those transferring between 2006 and 2009) suggested a slight increase in bachelor's degree attainment overall. Those completing AGEC were most likely to graduate in each sample, while those with neither an AGEC nor an associate degree graduated least often. This trend continued for those who earned a degree within four years, though the groups with only an AGEC and those with both an AGEC and an associate increased; the associate degree only group decreased; and there was no change between 2007 and 2013 in those who had neither an AGEC nor associate. There was also an increase in One-Year Persistence from the 2007 to 2013 sample. Therefore, larger percentages of students who transferred remained enrolled in a university after

one year in the 2013 sample, and were more likely to ultimately earn a bachelor's degree, when compared to the 2007 sample.

Mean credit hours at different points in time varied across samples. The mean enrolled hours per semester at the university rose for all four groups between 2007 and 2013. In general, those with an associate degree enrolled in fewer hours per semester at their university than the other groups. All groups had fewer mean credits at time of transfer in 2013 than in 2007, and those with both an associate degree and AGEC had more credits than the other groups in each sample. The mean number of credits at graduation was lower for each Prep-at-Transfer group in 2013 than they were in 2007. Therefore, the 2013 sample had more mean credits per semester, but had transferred fewer credits and had fewer total credits at graduation. A possible explanation could be that a higher percentage of students graduated within four years in 2013 than in 2007; therefore they enrolled in more credits per semester, but completed their degree quicker and did not accumulate as many total credits. This also suggests a more efficient educational process, indicating that fewer students were collecting credits that were not applicable to their degree program. Lastly, CGPAs at graduation varied little between the two samples.

- What factors contribute to the academic success of transfer students based on available data?

For the purpose of this student data analysis, "academic success" outcomes examined were One-Year Persistence (students continuing enrollment at a university after one year of transfer) and Bachelor's Degree Attainment. Samples for the two outcomes were different, as the One-Year Persistence sample excluded only those students who transferred to university during the 2011-2012 school year while the Bachelor's Degree Attainment sample included students who had adequate time to complete their degree (those transferring from 2006 to 2009).

Based on the analyses for the 2013 sample, completing AGEC had a significant impact on One-Year Persistence. Not surprisingly, it was also positively associated with Bachelor's Degree Attainment, and was the predictor with the most impact.

Students' cumulative GPA in their first year was also a significant predictor of both One-Year Persistence and Bachelor's Degree Attainment. The higher a student's CGPA, the higher the odds that he or she will persist through one year of university and the more likely he or she will graduate from university with a degree.

Students' credit hours at various stages in their education were factors in the outcomes as well. While students who attended a university full-time (as indicated by their enrolled credit hours) were more likely to persist after one year, the number of credit hours they enrolled in during their first year at university had little impact on their persistence. Having more credit hours at the time of transfer, however, did help predict whether or not a student had an associate degree, either alone or in combination with a bachelor's degree.

- How does community college preparation/degree completion impact students' academic success?

Completing an AGEC while in community college had a significant and positive impact on subsequent educational outcomes. AGEC was a significant predictor of both One-Year Persistence and Bachelor's Degree Attainment, and had a greater impact than any of the demographic variables included in the models tested. Students without an AGEC, embedded or isolated, were less likely to graduate in general and less likely to graduate within four years than their AGEC-possessing counterparts. AGEC, therefore, seems to have a positive role in students' educational success.

- How do other variables, such as community colleges transferred from, universities transferred to, or demographic factors impact students' academic success?

Both the community college that a student attended and the university the student transferred to were important predictors of educational outcomes. Students who attended Maricopa Community Colleges, as opposed to other colleges, had higher odds of both persisting after one year and receiving a bachelor's degree. In terms of universities, transferring to ASU (as opposed to NAU or UA) increased students' chances of both persisting and graduating. While a student's gender, age, and ethnicity had little or no impact on their One-Year Persistence, a young, white female student had significantly better chances of obtaining a bachelor's degree than students with other demographic characteristics.

EMPLOYEE AND STUDENT SURVEY FINDINGS

To investigate opinions and perspectives on the Arizona community college-university experience, Hezel Associates surveyed Arizona community college and university employees with responsibilities associated with transfer, and Arizona community college and university current and former students. As with the preceding statewide data analysis, the surveys replicated the study included in the 2007 Report to capture the perspectives of higher education officials as well as those of the students they serve. Comparisons to the 2007 Report are provided in the findings when applicable. Differences in the structure of the surveys, however, limited the comparisons that could be made.

Demographics and Background Data

Employee Survey

For the current study, responses were received from 495 employees (370 community college and 125 university respondents) that included representatives from all 22 community colleges and 3 universities. As reflected in Table 14, the resulting sample included relatively balanced representation from universities (25%), urban community colleges of Pima and the 10 Maricopa Community Colleges (38%), and non-urban community colleges (38%).

Table 14. Employee Respondents by Institution

Type of Institution	Institution	Employees	
		Respondents (n = 495)	Percent of Total
University	ASU	61	12
	NAU	39	8
	U of A	25	5
Urban Community College	Maricopa	155	31
	Pima	35	7
Non-Urban Community College	Central	33	7
	Cochise	25	5
	Coconino	17	3
	Dine	7	1
	Eastern	27	6
	Mohave	18	4
	Northland Pioneer	13	3
	Tohono O'odham	3	1
	Western	19	4
	Yavapai	18	4

Note. Does not add to 100% due to rounding.

A similar survey was administered and findings reported in the 2007 Report. However, three separate, but similar, surveys were provided to three subgroups: (a) academic advisors; (b) articulation task force members (faculty); and (c) admissions and registrar office staff (transfer-relevant staff members). When combined, the 2007 sample was less balanced in terms of types of institutions, with a higher representation from the three universities (46%) and lower representation of urban community colleges (7%) than the current sample.

Employees' Work Experience

A broad cross section of higher education employees actively support student transfer, whether through direct student contact or behind-the-scenes support. To contextualize the opinions and perspectives elicited from the employee survey, some context around the individuals involved is in order.

The employees involved in Arizona's transfer system were largely seasoned employees, with a mean of 11 years and over 45% of the respondents having spent 10 years or more in their current position. Despite this experience, the range of 44 suggests there was substantial variation in terms of experience. With a mode (most frequent response) of 2 years and 35% of respondents having been in their current position for five years or less, there were also a large number of respondents who were relatively new to their positions.

With respect to years in higher education in Arizona, however, only 5% have fewer than two years' experience with higher education in the state of Arizona. The mean for this variable is 16 and the mode is 20, indicating that overall the respondents had extensive experience in higher education in Arizona, though they have not stayed in the same position throughout their careers. These data are summarized in Figure 8.

Results were similar to employees surveyed in 2007, with the means, medians, and modes of the three groups surveyed closely aligned to the current data. Years in their roles at the time of survey administration ranged from less than a year to 40 years.
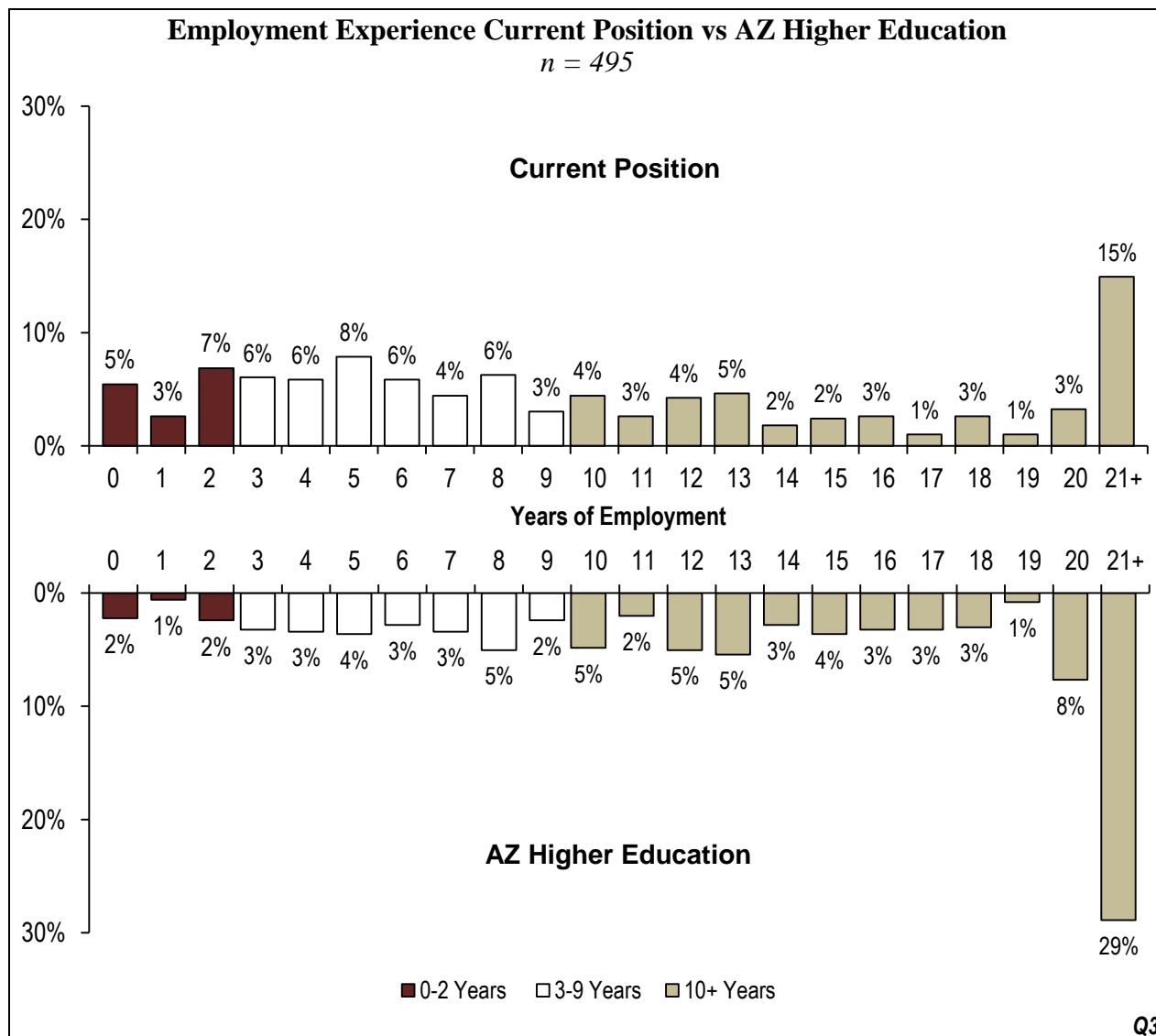
Figure 8. Years in current position (top) compared to years in Arizona higher education (bottom) for the 2013 employee survey.

With respect to current role, 77% of respondents were faculty members, 19% were staff members, and 4% were academic advisors. There were 819 survey respondents in 2007, with substantially higher representation of academic advisors (59%), 34% faculty, and 7% staff members than the current respondent group.

Faculty member respondents were predominantly engaged with Articulation Task Forces (ATFs) through discipline-specific committees (77%). A few served on the General Education ATF (2%) and Admissions and Records ATF (1%), while some faculty involved with the transfer system did not serve on an ATF (20%). This sample was similar to the 2007 respondents who were heavily represented by discipline-specific ATFs.

The majority of ATF faculty served 5 years or less (56%), while the mean of 7 years and the range of 31 years show there were some members with substantial ATF experience (Figure 9).

ATF members in the 2007 Report had slightly more time in the role than the current sample, with a mean of 9 years, a median of 8 years, and a similar range of 30 years.

Articulation Task Force Years of Service
n = 348
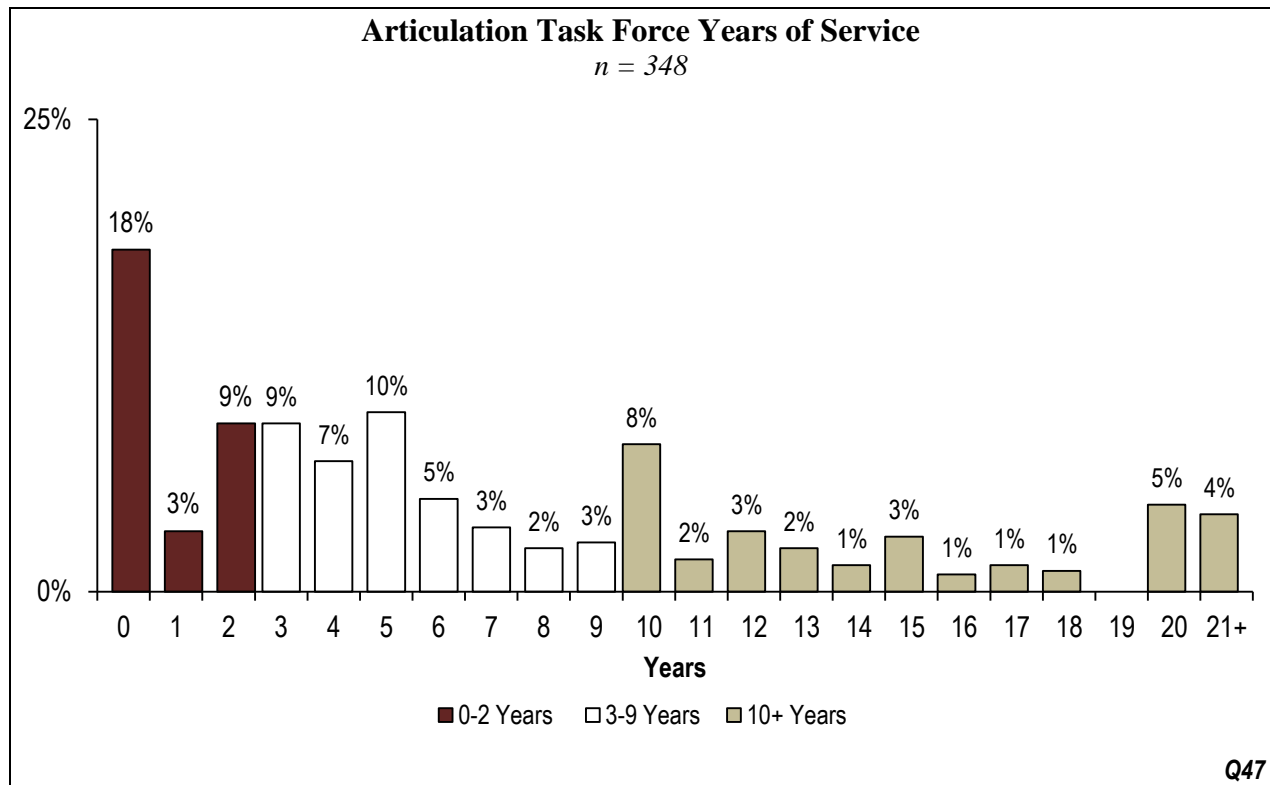
Figure 9. Includes only faculty members.

Student Advising Responsibilities
Student advising duties were shared by faculty, staff, and administrators. Faculty were most commonly involved with student advising (46%), followed by administrators with advising responsibilities (10%), and the less common full- or part-time dedicated academic advisors (5%). A large portion of employees (39%) who were involved with the transfer system reported having no direct student-advising responsibilities.

The advisors surveyed in 2007 were made up of fewer faculty members than the current sample (17%), more staff with advising responsibilities (20%), substantially more full-time (53%) and part-time advisors (10%).

Staff Job Functions
Among staff members (which excluded faculty and academic advisors), chief academic officers, institutional articulation facilitators, and registrars were the most commonly indicated staff functions. There was a broad range of administrative functions that supported the transfer system, including front-line staff working with records, program directors, deans, and curriculum administrators/support staff (Figure 10). Community college staff members were more likely to report multiple primary job functions than their university counterparts. A large number of predominantly community college employees selected "Other" as their primary job function, including a written descriptor of their function. These included Program Director/Manager (7);

Advisor (4); Academic Dean/Curriculum Committee Chair; Advisement Director; Curriculum Analyst; Curriculum Coordinator; Curriculum Development; Data Analyst; Data Reporting & Compliance; Dean of Instruction; Division Chair; Institutional Effectiveness; Program Review Processes; Research; Student Services Director; and Transfer Marketing and Event Support, Development of Advisement Resources.

The composition of the 2007 staff respondent group (n = 57) was substantially different than the 2013 data, with Transcript Evaluator as the most often cited job (40%), followed by Graduation Services (23%), Registrar Administrator (23%), and Records Management (21%). Admissions Counselors made up 12% of the 2007 sample, and were not represented in the 2013 data.

Primary Job Function
n = 102

Job Function	Percent
Chief Academic Officer	16%
Institutional Articulation Facilitator (IAF)	15%
Registrar administrator	14%
Admissions Administrator	10%
Transcript evaluator	3%
Graduation Services	2%
Records managements	2%
Recruiter	2%
Data Entry	1%
Encoder	1%
Other	35%

Q45
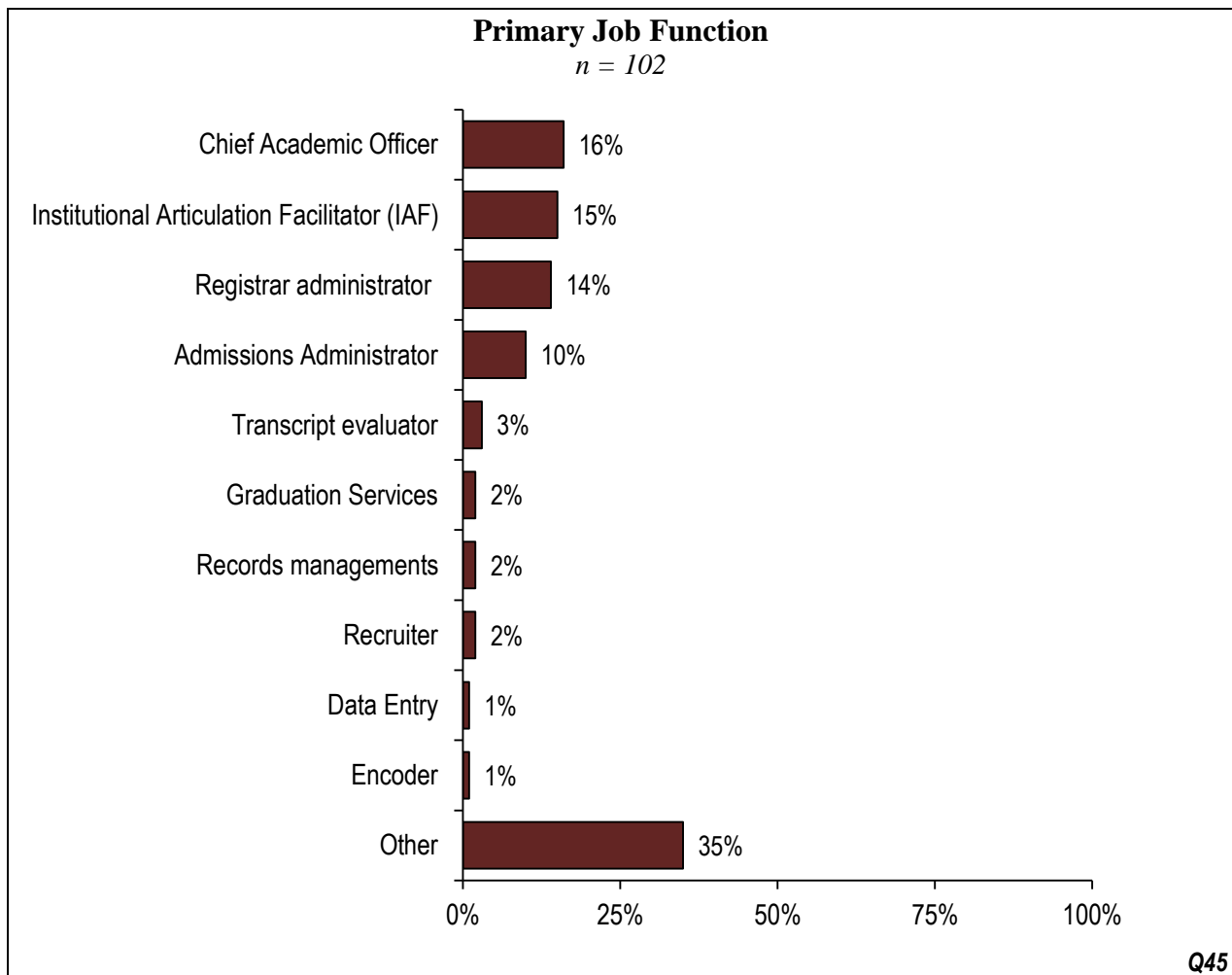
Figure 10. Percent of respondents with each job function. Two responses were allowed for this question.

Student Survey
For the 2013 student survey, responses were received from 1,225 students (226 current community college, 92 concurrently enrolled at both community college and a university, 726 current university, 160 transfer student graduates, and 21 that did not fall into any of those categories) which included representatives from 20 Arizona community colleges and all 3

universities. Like the employee survey, the resulting sample evenly represented the three universities, as reflected in Table 15. With respect to community colleges, the sample strongly favored the urban community colleges of Pima and the 10 Maricopa Community Colleges (71%).

Table 15. Student Respondents by Institution

| | | Students | |
| | | Respondents (n = 1,225) | Percent of Total |
Type of Institution	Institution	Respondents (n = 1,225)	Percent of Total
University	ASU	415	34
	NAU	354	29
	U of A	378	31
	Other	45	4
	Undecided/None	33	3
		Respondents (n = 1,225)	Percent of Total
Urban Community College	Maricopa	553	45
	Pima	316	26
Non-Urban Community College	Central	25	2
	Cochise	34	3
	Coconino	30	2
	Dine	4	0
	Eastern	52	4
	Mohave	16	1
	Northland Pioneer	19	2
	Tohono O'odham	0	0
	Western	89	7
	Yavapai	87	7

Note. University represents the institution a student attended, attends, or planned to attend. Community college represents the institution the student attends or attended.

As with the 2007 employee survey, the student survey administered in 2007 was less balanced in terms of types of institutions. The 2007 sample of 1,045 had a much higher representation from ASU (45%) than any other institution. Community college representation in the 2007 sample was similar to the current data, with the urban community colleges having more respondents than non-urban.

In the current sample, more than half of student respondents indicated that they had transferred from a community college and were currently enrolled at a university, as displayed in Figure 11. Less than 20% were enrolled in community colleges and were planning on transferring, and less than 15% noted that they had transferred and already graduated from a university. A small portion of respondents were concurrently enrolled or chose "none of the above."

Current Student Status
n = 1,225

Category	Percentage
Transferred and enrolled at a university	59%
Enrolled at community college and will transfer	18%
Transferred and graduated from university	13%
Enrolled at a community college and university	8%
None of the above	2%

Q3
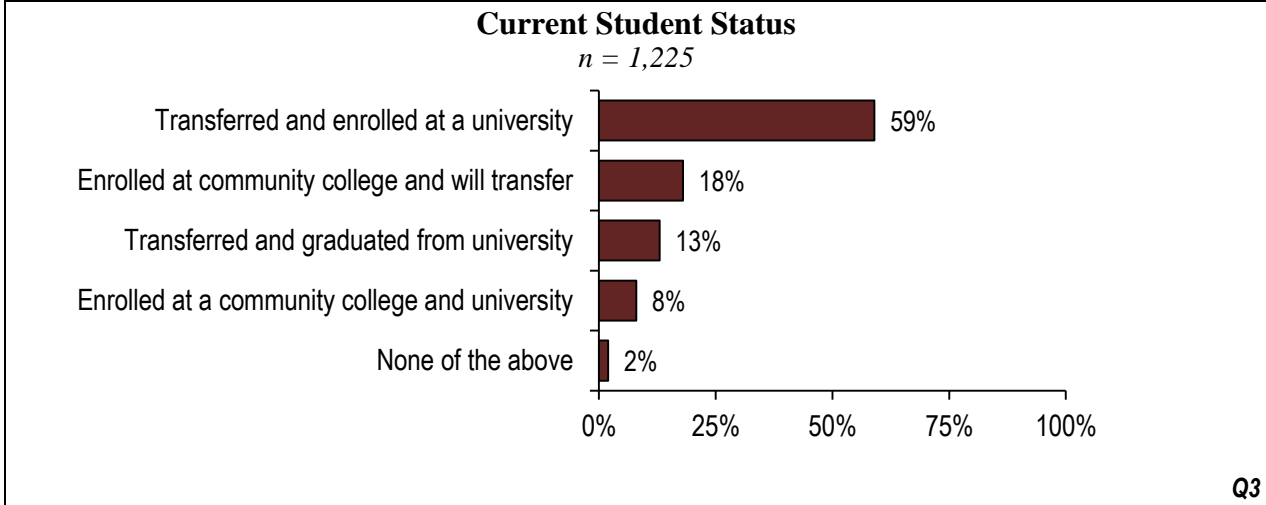
Figure 11. Current student status as indicated by respondents.

The majority of student respondents indicated they recently transferred to a university, most (65%) within the 2011-2012, 2012-2013, or 2013-2014 academic year. Less than 20% transferred earlier than 2011-2012, while 9% planned to transfer within the next two academic years. The response distribution is presented in Figure 12.

Academic Year Students Transferred or Plan to Transfer to University
n = 1,225

Academic Year	Percentage
2006 or before	0%
2007-2008	0%
2008-2009	1%
2009-2010	6%
2010-2011	11%
2011-2012	17%
2012-2013	25%
2013-2014	23%
2014-2015	8%
2015-2016	1%
2016-2017	0%
2019-2020	0%
Don't Know	7%
Prefer Not to Say	1%

Q1c
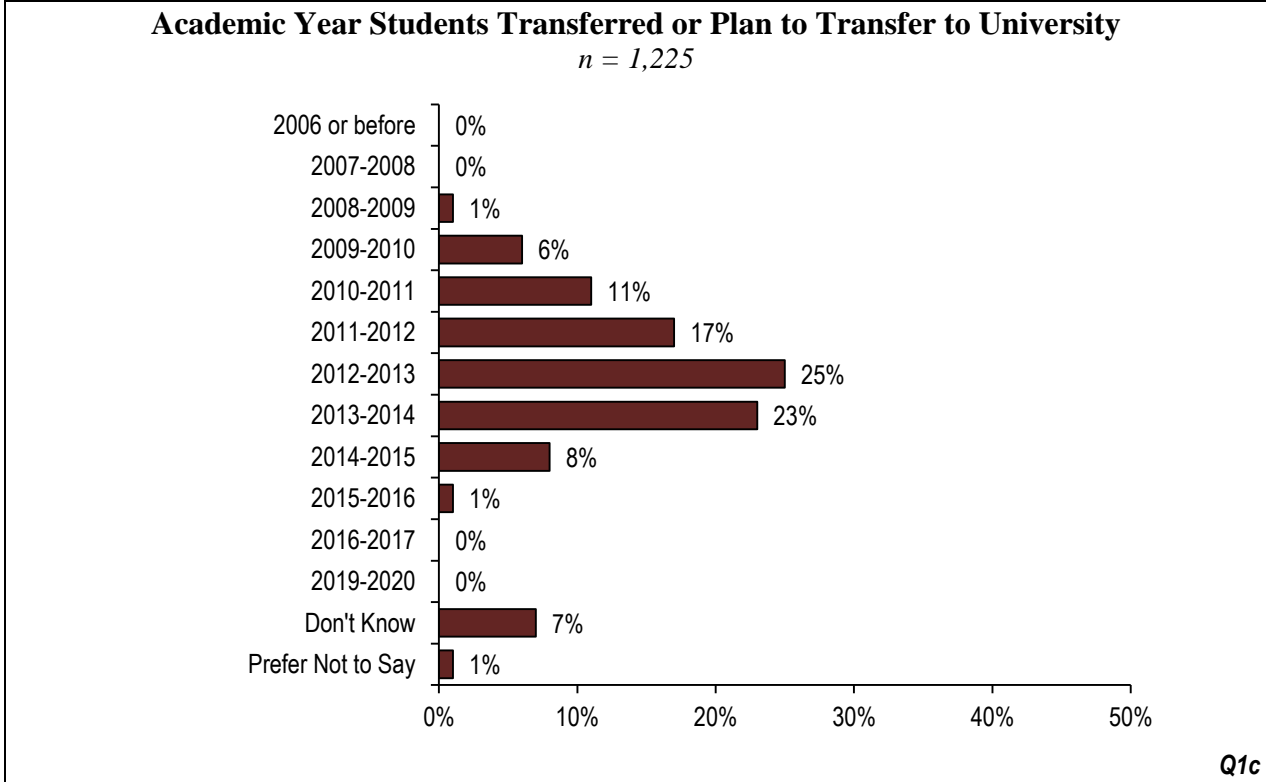
Figure 12. Academic year of transfer to university.

Respondents indicated they had or would graduate between the years of 2010 and 2018. Over 50% of the student sample indicated that they intended to graduate in 2014 or 2015 (Figure 13).

Only 15% had already graduated. Almost one fourth of the sample was not sure when they would graduate, but intended to do so.

Academic Year Students Graduated or Intend to Graduate
n = 1,225

Category	Percent
2010-2011	2%
2011-2012	4%
2012-2013	9%
2013-2014	26%
2014-2015	23%
2015-2016	9%
2016-2017	2%
2017-2018	1%
Don't know but intend to graduate	23%
Do not intend to graduate	0%
Prefer not to say	2%

Q1h
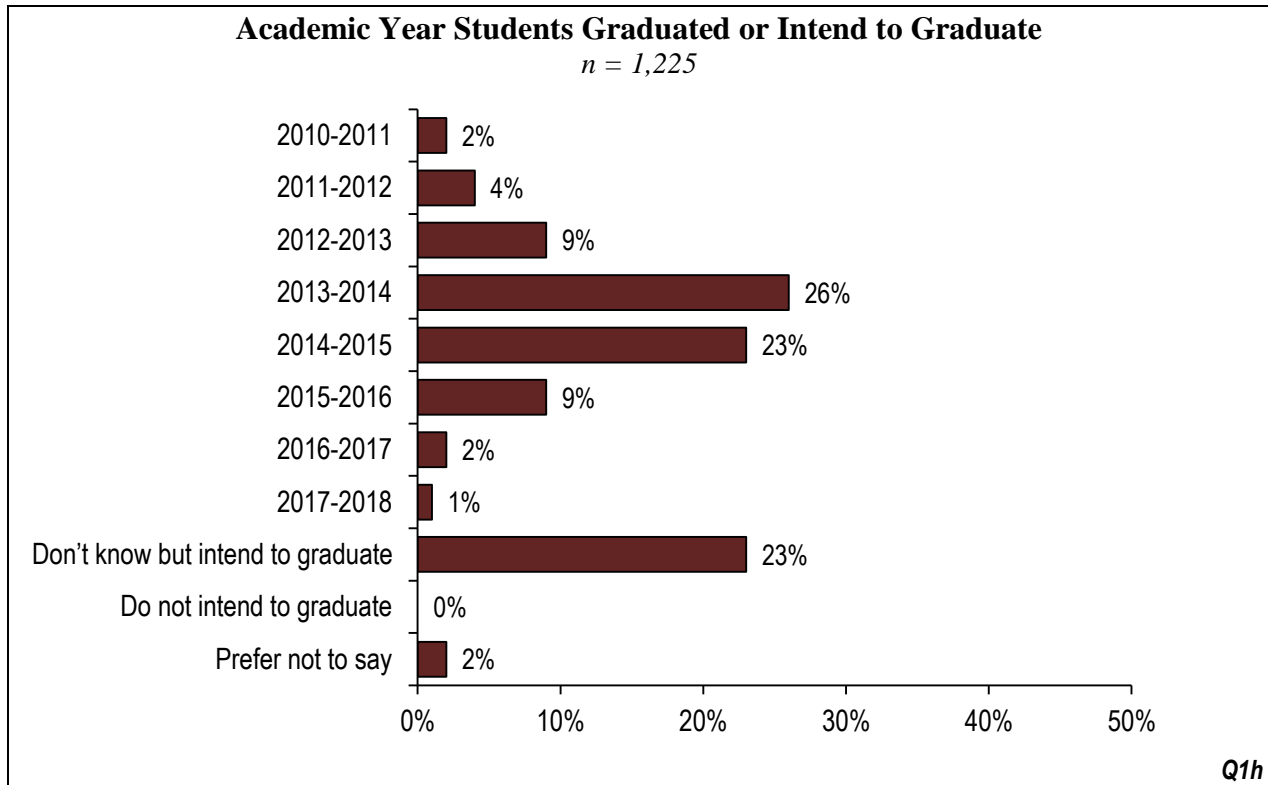
Figure 13. Academic year of university graduation.

Of the respondents, 83% had completed one of the three AGECs (AGEC-A, AGEC-S or AGEC-B), suggesting that AGEC completion has become a standard for transfer students. Only 12% did not plan on completing an AGEC, as displayed in Figure 14.

Type of AGEC completed
n = 1,013

Category	Percent
AGEC-A liberal arts and social sciences	48%
AGEC-B business oriented requirements	12%
AGEC-S math science oriented requirements	23%
Undecided - will complete the AGEC	2%
Undecided - not sure I will do AGEC	4%
None - I didnt/wont complete an AGEC	12%

Q32
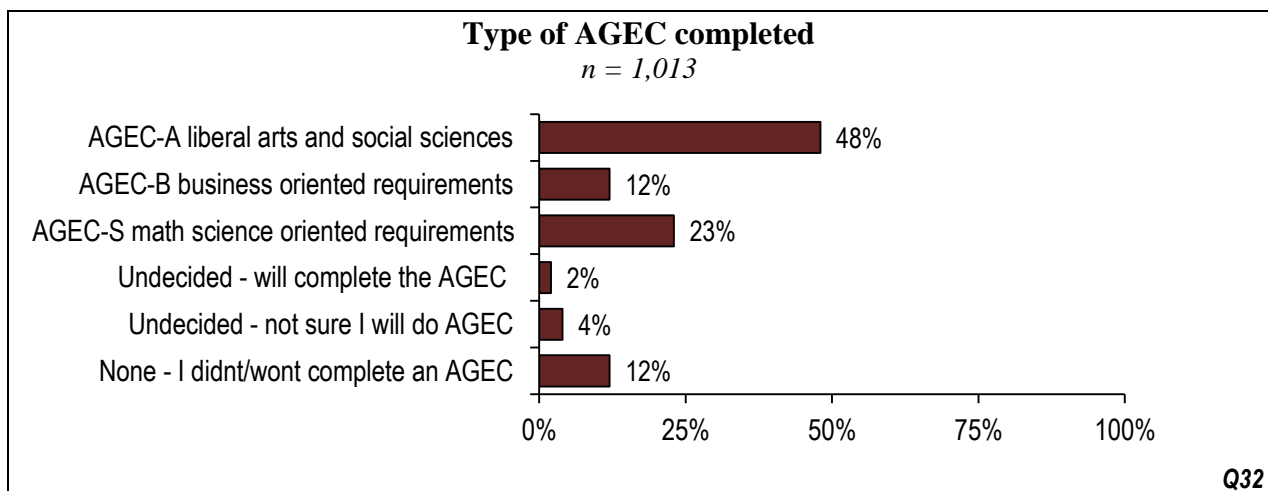
Figure 14. Type of AGEC completed or planned to complete.

Students' indication of the transfer pathway they completed were simliar to the AGEC results; however, were geared less toward liberal arts and more towards math and science (See Figure 15). Only 35% indicated they completed an Associate of Arts (as opposed to 48% completing a Liberal Arts AGEC), and 33% completed an Associate of Science or Applied Science (as opposed to 23% compelting a Math and Science AGEC).

Type of Transfer Pathway Completed
n = 1,013

Pathway	%
Associate of Arts AA	35%
Associate of Business ABus	11%
Associate of Science AS	18%
Associate in Arts in Elementary Education AAEE	4%
Assoc. in App. Science to Bach. of App. Science	15%
Undecided, but intend to complete a degree	2%
None - I didnt/wont complete a Transfer Degree	15%

Q39
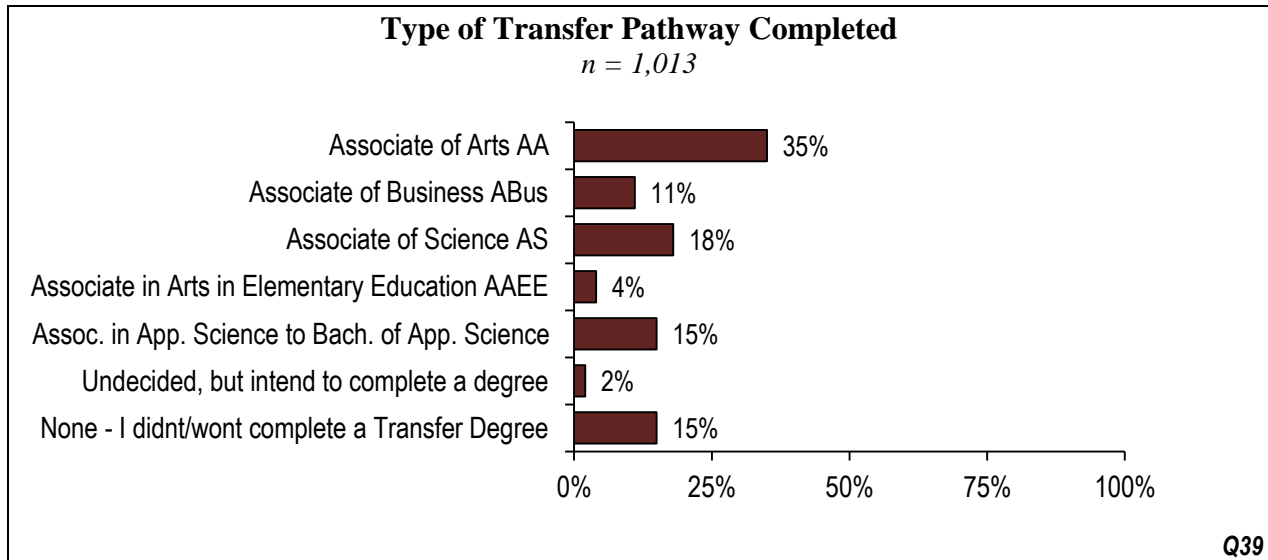
Figure 15. Type of transfer pathway completed by students.

Student respondents reported infrequent meetings with community college advisors (Figure 16), with almost 90% participating in face-to-face advisement four times per year or less. This was somewhat consistent with 2007 findings, where 80% of community college student respondents indicated they met with an advisor once per semester or less.

Frequency of Meetings with Community College Academic Advisor
n = 1,225

Frequency	%
Weekly	2%
Monthly	8%
Quarterly	29%
Once every 6 months	28%
Once a year	13%
Less than once a year	19%

Q25
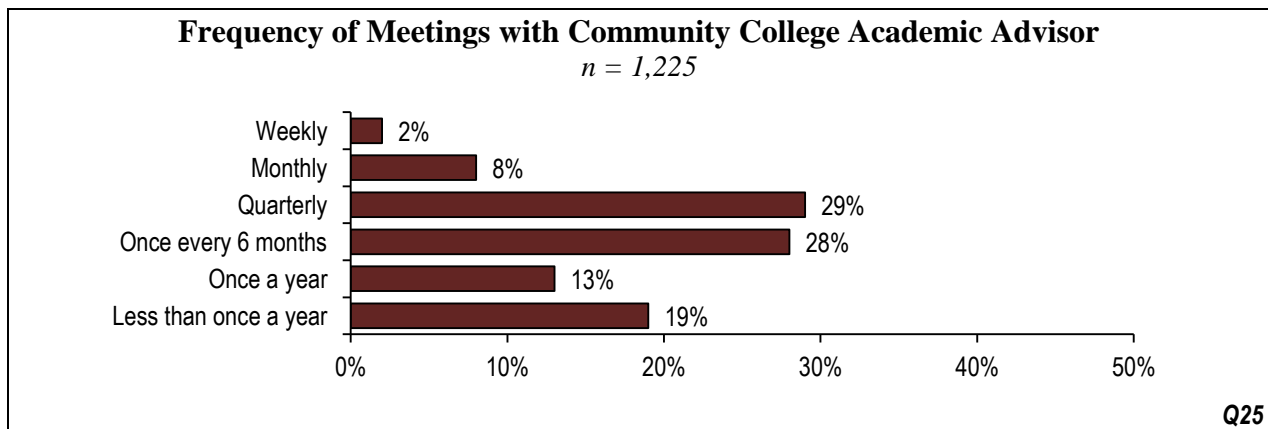
Figure 16. Student indications of meetings with Academic Advisors at community college.

Table 16 shows which community college student respondents attended and which universities they transferred to. The distribution, not surprisingly, seems to be related to proximity, as most students attending Maricopa Community Colleges transferred (or will transfer) to Arizona State, all of which are located in the Phoenix area; and over three quarters of Pima Community College transfers attended (or will attend) the University of Arizona, both of which are in Tucson.

Phoenix and Tucson are two large metropolitan areas that cover much of southern Arizona, while the northern portion of the state, where Northern Arizona University (NAU) is located, is less densely populated. This could explain why many students from non-urban community colleges transfer to NAU. Results were similar in the 2007 findings.

Table 16. University chosen for transfer by community college

	Community College		
	Maricopa CCs	**Pima CC**	**Non-Urban CCs**
Arizona State University	58%	5%	22%
Northern Arizona University	27%	15%	44%
The University of Arizona	11%	79%	19%
Other	3%	1%	8%
Undecided	1%	0%	7%
None – I did/will not transfer to a university	0%	0%	0%

The following figures further demonstrate the characteristics of the responses from the student survey. Figure 17 shows that more than half of respondents were white and one quarter indicated they were Hispanic or Latino. All other ethnicities were represented at less than 10% in the sample. The sample was predominately female (63%); most (49%) fell into the 18-24 age range, while 30% indicated they were 25-34 (Figures 19 and 20, respectively). As expected in a sample of college students, the majority of respondents indicated a yearly household income on the low end (63% less than $50,000) and that they were single (64%) (Figures 21 and 22). These demographics were very similar to the sample in the 2007 Report, in which respondents were predominately white, with one quarter indicating they were Hispanic or Latino, more than half were female, and the median age was 24. Household income and marital status were not asked in the 2007 survey.
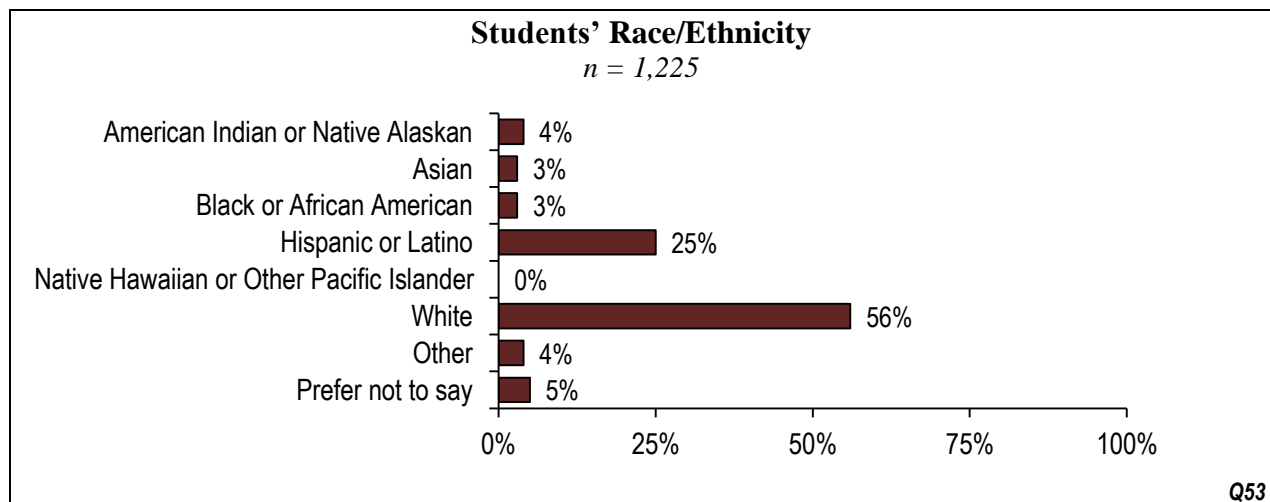
Figure 17. Students' reported race/ethnicity.

Students' Gender
n = 1,225

Female　Male　Prefer not to say

2%
35%
63%
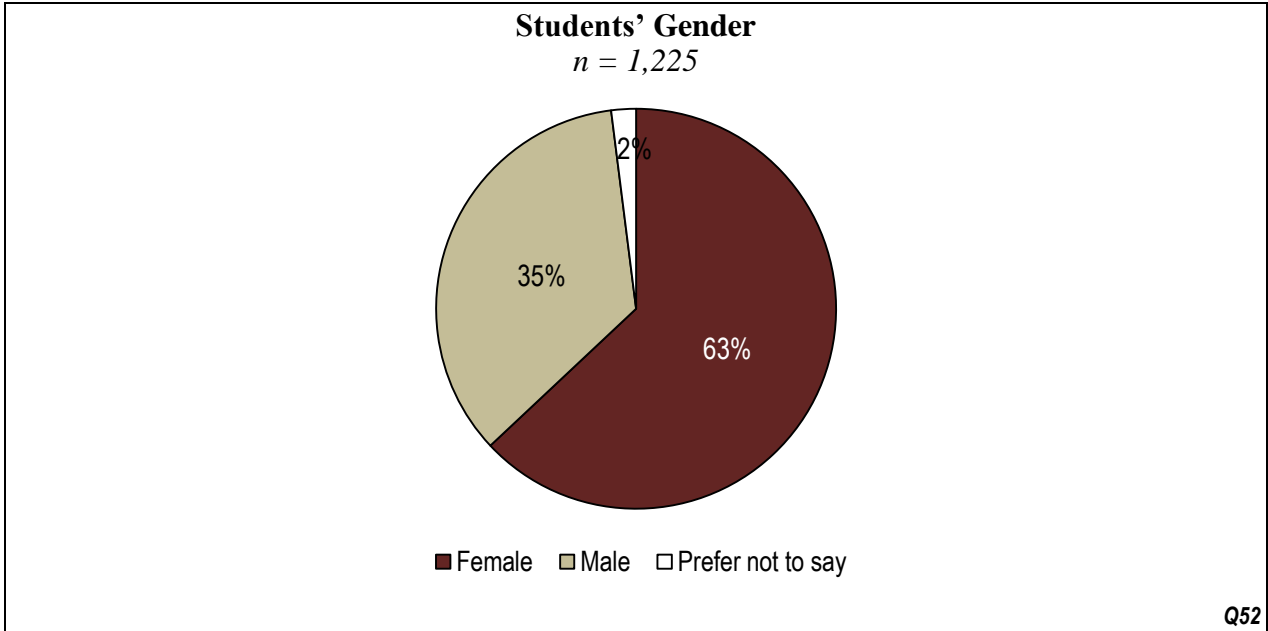
Figure 18. Students' reported gender.

Students' Age
n = 1,225

Under 18 years old	0%
18-24	49%
25-34	30%
35-44	11%
45-54	6%
55 years or older	1%
Prefer not to say	1%

0%　25%　50%　75%　100%
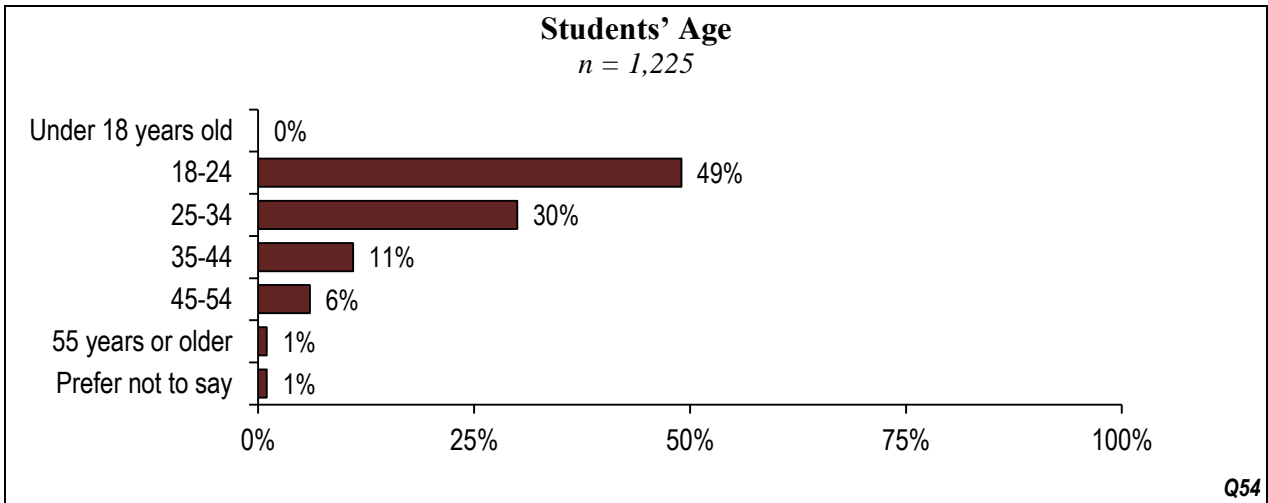
Figure 19. Students' reported age.

Students' Household Income in 2012
n = 1,225

Income	Percentage
Less than $25000	40%
$25000-$49999	23%
$50000-$74999	11%
$75000-$99999	4%
$100000-$149999	4%
$150000-$199999	1%
$200000 or more	1%
Don't know	6%
Prefer not to say	10%

Q55
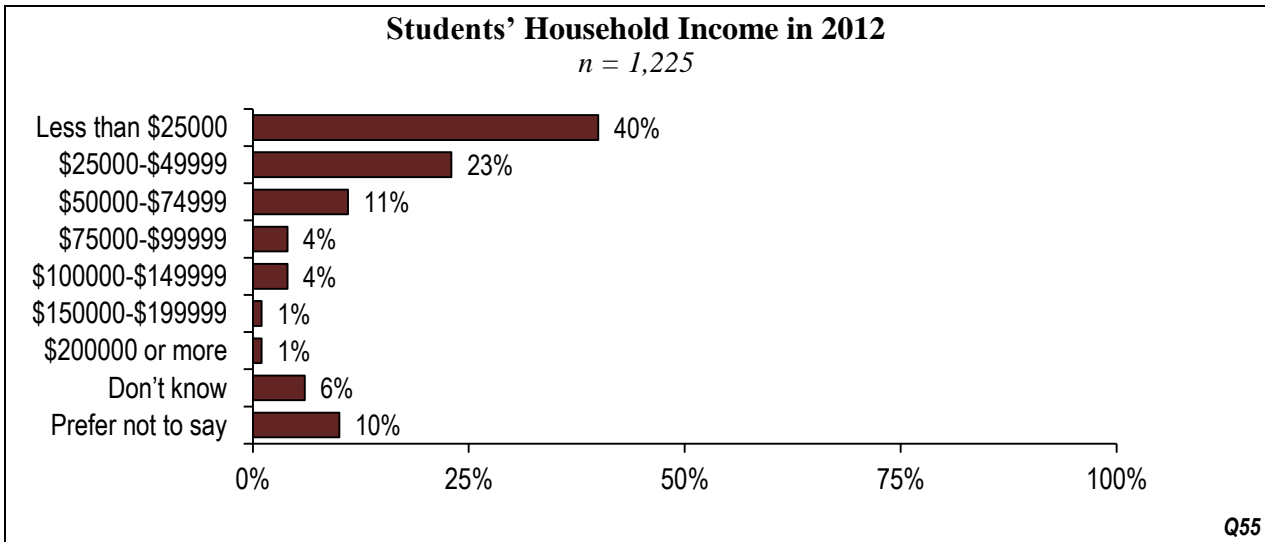
Figure 20. Students' reported yearly household income.

Students' Marital Status
n = 1,225

Status	Percentage
Single	64%
Married	25%
Divorced	6%
Separated	1%
Widowed	1%
Prefer not to say	3%

Q56
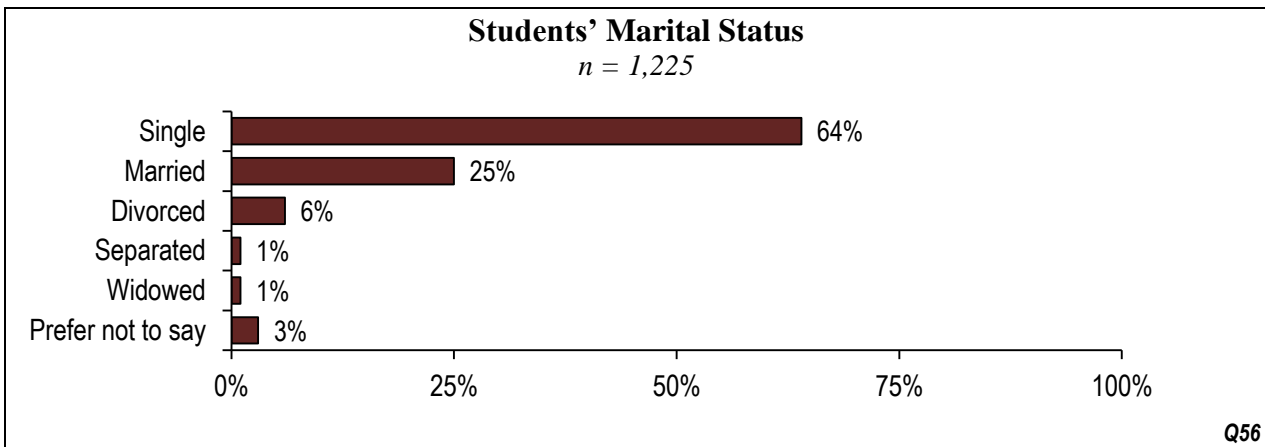
Figure 21. Students' reported marital status.

Overall Perceptions

In general, 2013 findings indicate that employees and students have favorable opinions of the Arizona transfer system as a whole, however both groups' responses suggest that students do not know enough about their transfer options. Overall, substantial percentages of each group agreed that AGEC was the most clearly defined component and provided students with the most preparation for transfer, consistent with 2007 findings.

Employees and students similarly noted that consistency and ease of transferring credits from community college to university were among the greatest strengths of the system, while lack of familiarity among students was the most commonly-cited weakness. Of note, community college employees mentioned procedural processes to be a weakness more often than university employees, suggesting a disconnection of perceptions of the transfer process between these two types of institutions.

Satisfaction with Transfer System

In general, college and university employees had favorable opinions of the state's transfer system (Figure 22). General satisfaction for AZTransfer and APASC were strong, with 72% and 65% respectively expressing overall satisfaction, and very few respondents suggesting they were dissatisfied. Percentages of satisfied employees were very similar for both community colleges and universities. APASC, while in existence when this survey was administered, has since been rebranded as the AZTransfer Steering Committee.
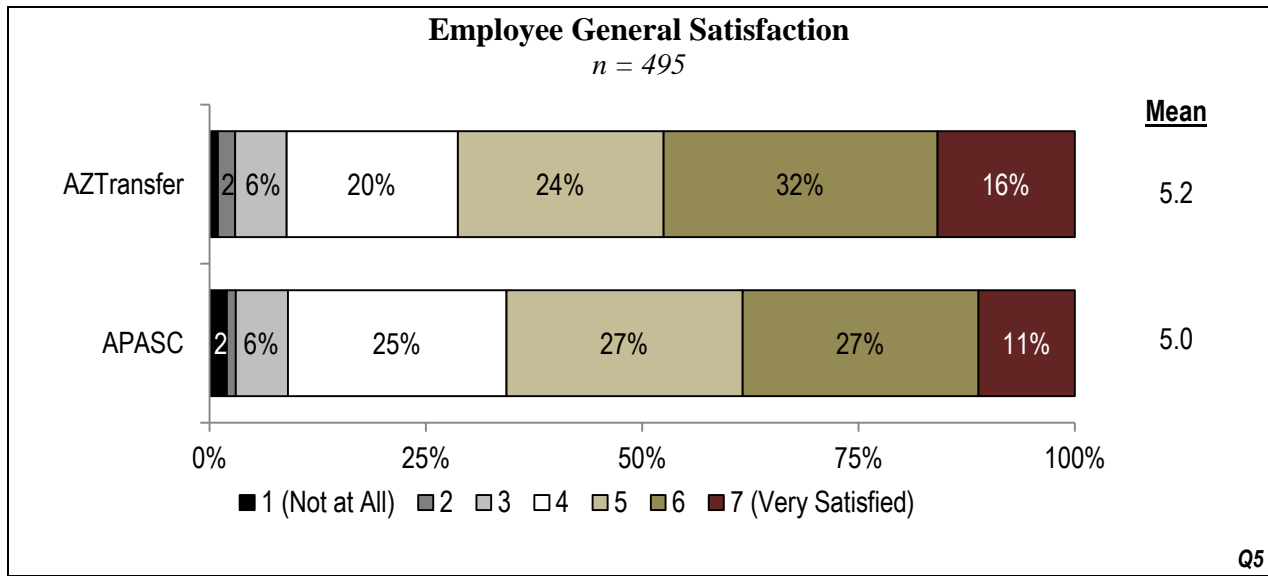
Figure 22. Overall employee satisfaction with AZTransfer and APASC.

Students also rated the overall Arizona transfer experience favorably (see Figure 23), with 79% indicating satisfaction. Generally, employee and student responses were similar and suggested that they were satisfied with the transfer system in Arizona.

In the 2007 surveys, employees and students were also asked about their level of satisfaction with the Arizona transfer system as a whole. Satisfaction levels then were very strong as well, with over 90% of employees and 80% of students indicating that they were very or somewhat satisfied with the system. Student satisfaction levels have remained steady since 2007; however, employee satisfaction, while currently high, was not as favorable in 2013 as in 2007. There were substantially more community college respondents in the current sample, however, making these two groups of employees difficult to compare.
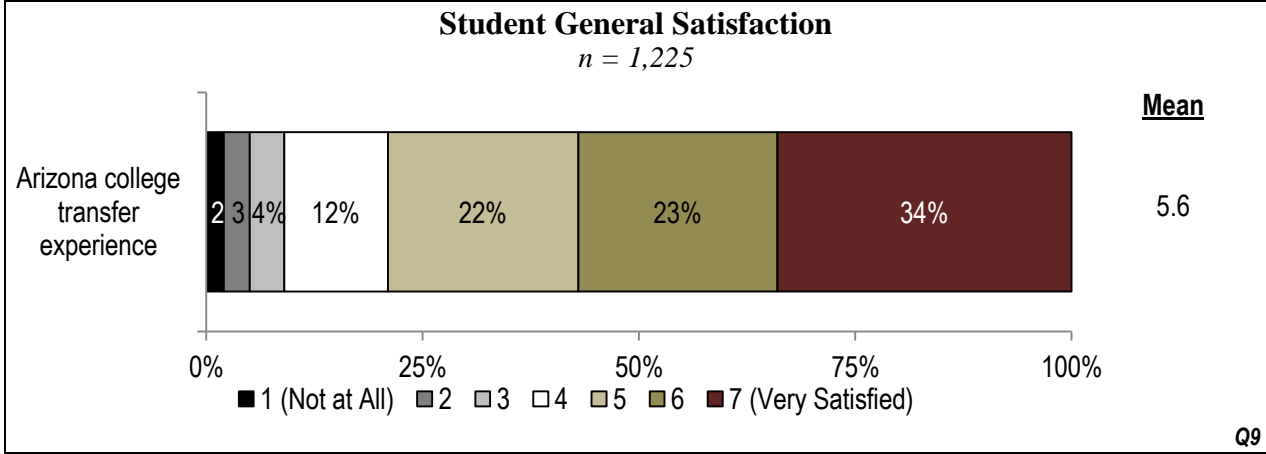
Figure 23. Students' general satisfaction with college transfer experience in Arizona

Transfer Students' Knowledge and Preparedness
Most employees agreed that both AZTransfer and APASC strengthened educational attainment throughout Arizona (68% and 62% of respondents, respectively). Community college employees' were somewhat more positive than university employees about both AZTransfer and APASC, with about 5% more community college employees agreeing than university employees. Employee opinion of students' knowledge of transfer opportunities was more tempered but, as seen in Figure 24, this was consistent with the knowledge that students suggested they have on transfer opportunities (Figure 25). University employees were more likely than community college employees to report that students knew about transfer, possibly because university employees work with students who have already transferred. Because approximately half of the employee and student samples agreed that students were knowledgeable about transfer opportunities, this is an area that may need additional attention.
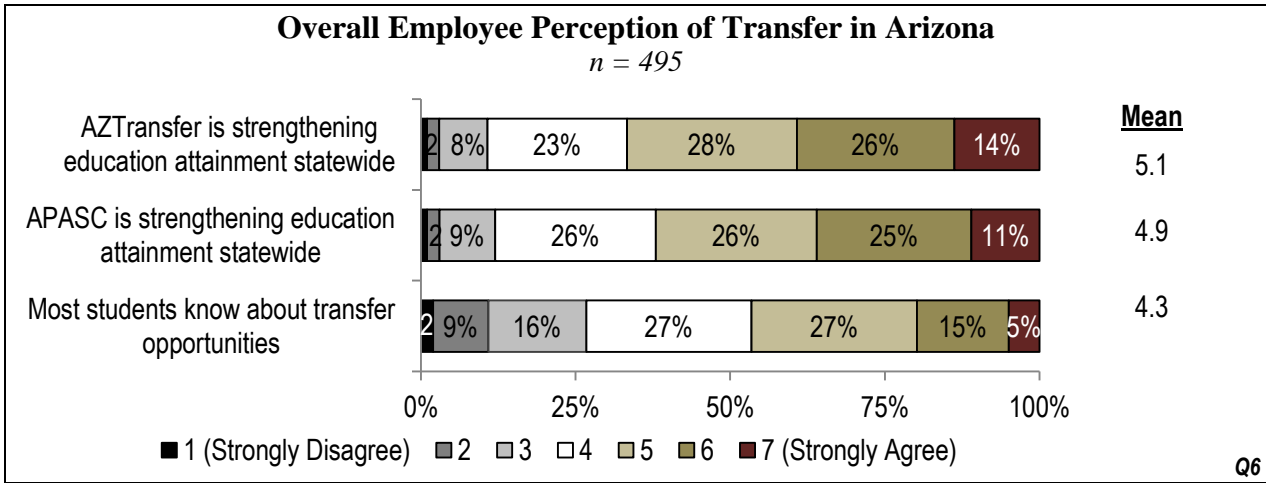
Figure 24. Employee perceptions of impact of transfer systems.

Overall Student Perception of Transfer in Arizona
n = 1,225

	Mean
Most students know about transfer opportunities — 6% / 7% / 12% / 17% / 18% / 16% / 16%	4.8

1 (Strongly Disagree) ■ 2 ■ 3 □ 4 □ 5 ■ 6 ■ 7 (Strongly Agree) ■
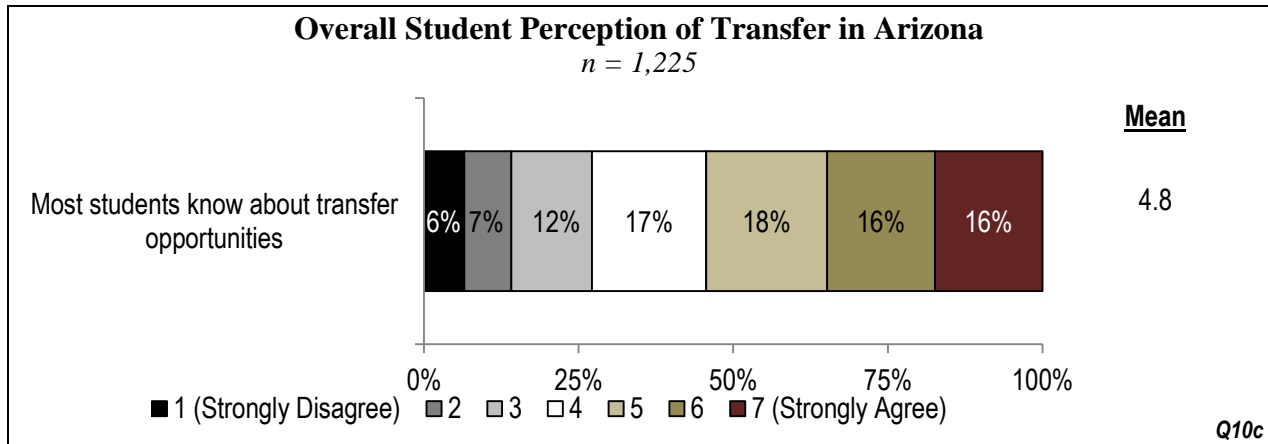
Figure 25. Student perceptions of impact of transfer systems.

In terms of students' academic readiness for university study, most employees agreed transfer students were well-prepared, though slightly fewer reported transfer pathway degree students as being prepared compared to AGEC Students, which may be due to unclear definitions of transfer pathway degrees. A summary of survey responses can be found in Figure 26. There were some differences in perception between community college and university employees, as approximately 70% of community college employees and 50% of university employees agreed that transfer students were generally well-prepared for university study, suggesting some differences between these two groups either in terms of definitions or expectations.

Employee Perceptions of Transfer Students' Preparation

	Mean
In General (n=495) — 4% / 9% / 21% / 26% / 26% / 14%	5.0
AGEC Students (n=475) — 2 3 / 8% / 22% / 28% / 24% / 13%	5.0
Transfer Pathway Students (n=478) — 3 / 7% / 32% / 25% / 24% / 8%	4.8

1 (Strongly Disagree) ■ 2 ■ 3 □ 4 □ 5 ■ 6 ■ 7 (Strongly Agree) ■
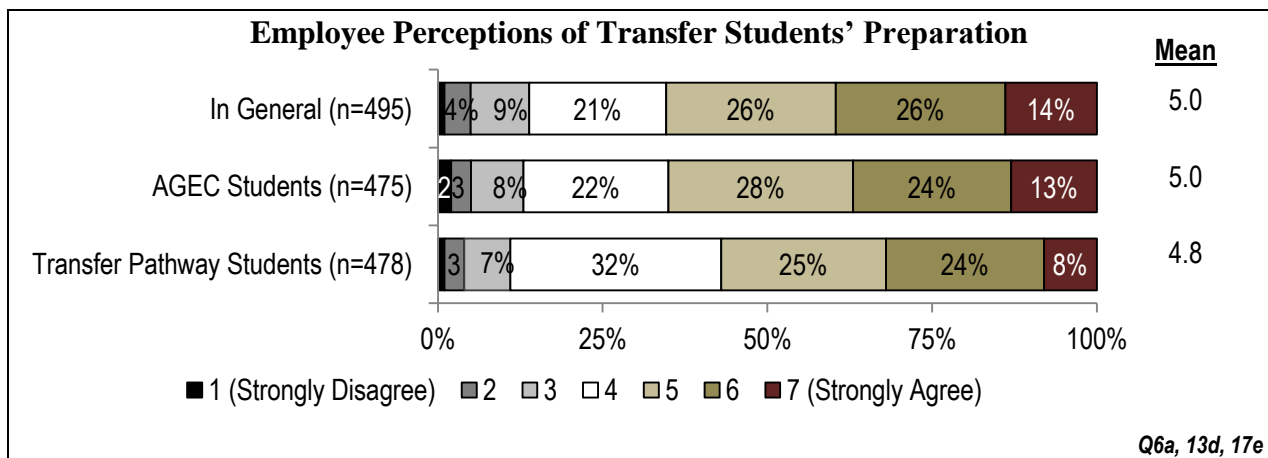
Figure 26. Employee perceptions of transfer students' university readiness. For perceptions of AGEC and Transfer Degree students, only those who reported familiarity with these components were included in response set.

Interestingly, students had higher opinions of transfer students' general level of preparedness for university study than did the employees, as shown in Figure 27. More than half of the students agreed that AGEC and transfer pathway students were prepared; however, as with the employee responses, slightly fewer felt transfer pathway students were prepared compared to AGEC students.

Student opinions of overall preparedness align with 2007 findings, where 85% of the university students surveyed felt very or somewhat prepared for university studies after transfer.

Student Perceptions of Transfer Students' Preparation
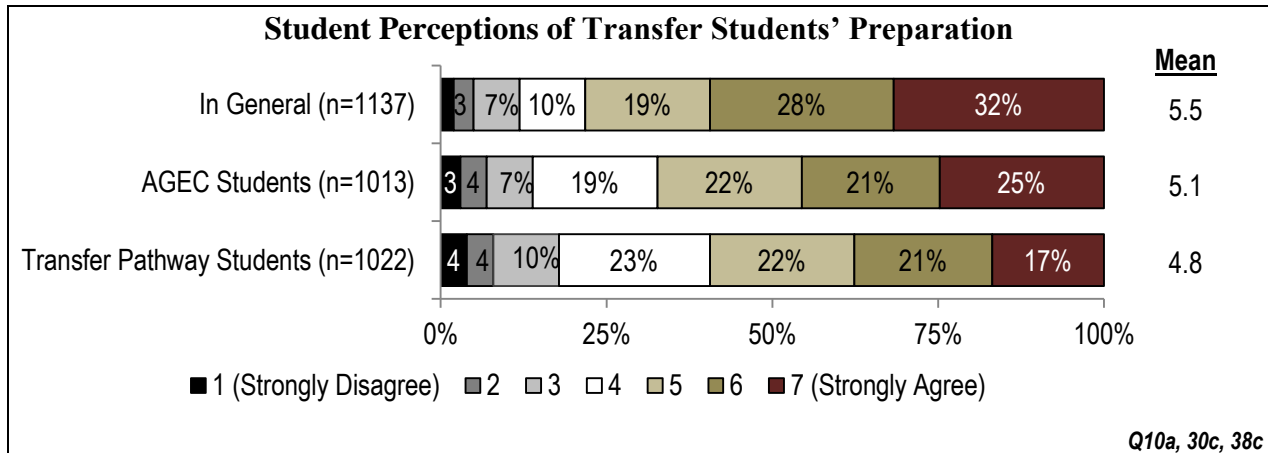
Figure 27. Student perceptions of university readiness. For perceptions of AGEC and Transfer Degree students, only those who reported familiarity with these components were included in response set. Students who chose "no opinion" for general student preparedness were not included.

As with other aspects of transfer, community college and university employees generally agreed that transfer components (AGEC, transfer pathways, and Common Course Matrices) and their requirements were well-defined (Figure 28). However, about 30% of respondents expressed neutral opinion with respect to transfer pathways and Common Course Matrices' clarity, suggesting these may be less well-defined than AGEC. This was similar to 2007 data, in which more than half of employee respondents indicated agreement that the transfer pathway components were clear. There were no data collected on employee perceptions of clarity regarding AGEC and Common Courses in 2007.

Employee Perceptions of Clearly Defined Components
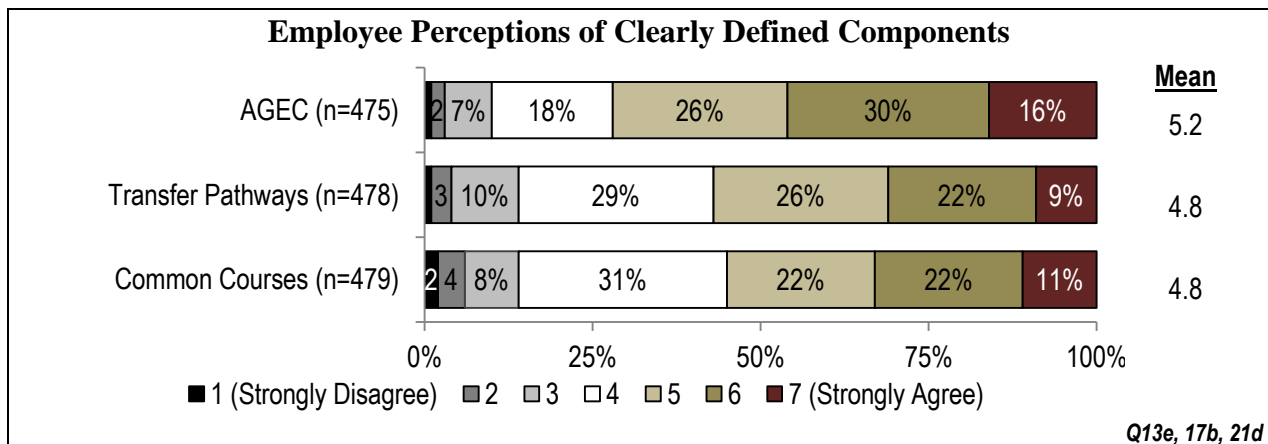
Figure 28. Employee perceptions of the requirements or definitions of components. Only those who reported familiarity with these components were included in response set.

Community college employees were more likely to agree that AGEC was clearly defined than their university counterparts, while the opposite was true for Common Courses. This might

simply be due to each groups' familiarity with one of these components. Both groups had similar levels of agreement with respect to transfer pathways.

More than 70% of students indicated agreement that AGEC components were clearly defined, while 58% felt that transfer pathway components were clear. This aligns closely with the employee data; however, more students indicated strong agreement for clarity of AGEC and transfer pathways than did employees. Two-thirds of students agreed that Common Course components were well-defined, which is higher than the 55% of employees who agreed. This suggests that students perceive themselves to understand aspects of the Common Courses that perhaps employees think are not clear for students. Percentages of student responses can be found in Figure 29.

Students in 2007 expressed similar levels of agreement toward clearly defined components of AGEC; however, more students agreed that the transfer pathways were clear than in 2013. This possibly suggests a declining understanding over time of the requirements of these particular components. Clarity of Common Courses was not asked of students in 2007.
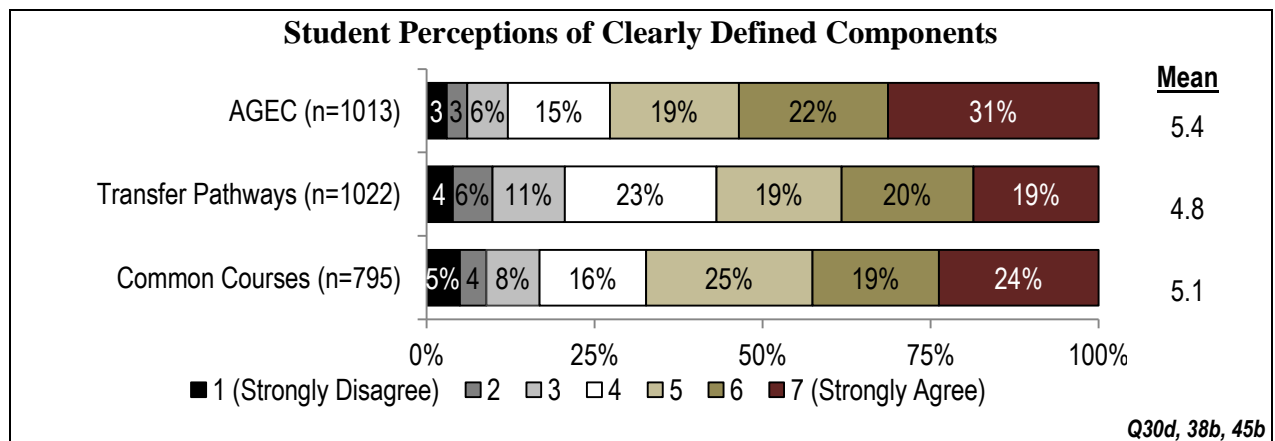
Figure 29. Student perceptions of the requirements or definitions of components. Only those who reported familiarity with these components were included in response set. Respondents who selected "no opinion" were recoded as missing.

Strengths and Weaknesses of Transfer System
Employees' most commonly cited strength across all of the transfer system components was "guaranteed course transfer," receiving almost 20% of the responses in all categories. Overall, however, respondents indicated that the increased consistency and standardization of the transfer process was its greatest strength. The fact that "credits transfer as a block" was seen as one of AGEC's greatest strengths suggests that this unique feature of AGEC is well-recognized. Percentages of respondents by transfer component are included in Table 17. In addition to the menu of responses, other respondents felt that the greatest strengths were that Common Courses provided additional flexibility and time for students in selecting an institution; and the transfer pathways resulted in increased education for students prior to receiving their bachelor's degree, potentially increasing their career opportunities. One university respondent suggested there were so many positive features of the transfer system, it "was difficult to select one."

Table 17. Employee Transfer System's Greatest Strength

Strength	Percent of Respondents			
	Overall (n = 484)	AGEC (n = 472)	Transfer Pathways (n = 458)	Common Courses (n = 452)
Guaranteed course transfer	16	18	18	19
Consistency/ standardization	19	12	12	14
Facilitates collaboration	17	6	8	7
Credits transfer as block	6	17	13	4
Useful framework of academic planning	8	10	15	12
Satisfies general education requirements	7	14	8	7
Easy to transfer	8	8	7	12
Maximizes student tuition dollars	5	6	8	6
Prepares students for university study	2	5	5	5
Available information resources	5	0	1	4

Note. Questions 7, 14, 18, 22. "Other" response percentages were excluded from the table.

University employees tended to focus on the consistency and collaboration between community colleges and universities as being the greatest strengths of the transfer system overall. While community college employees agreed that consistency between the different types of institutions was a substantial benefit, they were more likely to indicate that "guaranteed course transfer" was the greatest strength.

Student respondents' most commonly indicated strength for the overall transfer system was "satisfies general education requirements," at almost 15%. A substantial percentage of students also cited "maximizes tuition dollars," "guaranteed course transfer," and "easy to transfer." Some students also indicated that there was more than one strength for the transfer system: "All-in-all, it is a combination of several of these factors that made the system work for me." Percentage of survey responses can be found in Table 18.

Table 18. Student Transfer System's Greatest Strength

Strength	Percent of Respondents Overall (n = 1,225)
Satisfies general education requirements	14
Maximizes student tuition dollars	13
Easy to transfer	11
Guaranteed course transfer	11
University-community college consistency/standardization	9
Academic advising	7
Variety of courses	6
Prepares students for university study	5
Useful framework for academic planning	5
Completing necessary steps electronically	4
Getting help from my community college	4
Registering/enrolling	4
Available information resources	3
Other	3

Note. Question 11.

In regards to specific transfer components, students commonly indicated "satisfies general education requirements" as the greatest strength for both AGEC and Common Courses. While this was one of the more common responses for transfer pathway degrees, a greater percentage of students indicated that "maximizes student tuition dollars" was the greatest strength of transfer pathway degrees. Additionally, "guaranteed course transfer," and "easy to transfer" were also frequent responses. Percentages of survey responses can be found in Table 19. "Maximizing student tuition dollars" was also indicated by students who provided additional responses beyond the listed options, several indicating transfer pathway degrees help to save on the cost of tution. In 2007, students most frequently indicated ease of transferability as the most beneficial aspect of each of all three transfer components. Students also commonly indicated satisfying general education courses and saving on tuition costs as the most beneficial aspect. Survey data suggested all three transfer components exhibited strengths in what students considered to be the most beneficial aspects.

Table 19. Student Component Transfer System's Greatest Strength

Strength	AGEC (n = 892)	Transfer Pathway (n = 871)	Common Courses (n = 475)
	Percent of Respondents		
Satisfies general education requirements	22	16	19
Maximizes student tuition dollars	14	19	15
Guaranteed course transfer	16	12	14
Easy to transfer	14	14	14
Useful framework for academic planning	7	9	5
University-community college consistency/standardization	8	6	5
Prepares students for university study	5	8	6
Variety of courses	4	2	8
Academic advising	3	4	2
Quality of courses	2	2	4
Quality of teaching/instruction	2	3	3
Available information resources	1	2	1
Student record sharing	0	2	1
Other	3	3	2

Note. Questions 34, 41, 48.

While guaranteed course transfer was not the most commonly cited strength across the transfer components for students as it was for employees, a substantial percentage of students selected this strength. Satisfying general education requirements was cited as the greatest strength by more than 15% of students for all three transfer components, and for the AGEC, 22% of students. However, employees did not indicate this as the greatest strength as often; with 14% for the AGEC, 8% for transfer pathways, and 7% for both Common Courses and overall.

The most commonly cited weakness of the transfer system by employees was a "lack of student familiarity" with the transfer system overall and with the individual components. Many respondents suggested that a "lack of faculty familiarity" with the transfer pathway degrees and the Common Courses were the greatest weakness of those systems, while the inflexibility of AGEC for particular majors was cited as a weakness of this component (Table 20).

Community college employees were most likely to indicate that "lack of student familiarity" with the transfer system overall was the greatest weakness. University faculty believed that the greatest weakness of the transfer system was "inconsistent academic rigor between the community colleges and universities," while very few community college employees selected rigor discrepancies as a weakness.

Community college respondents were more likely to provide additional comments regarding weaknesses in the process than their university counterparts, with several respondents indicating that the transfer process was driven by the universities rather than through collaborative methods, and that universities were not accepting students' transfer credits, while at least one university respondent felt there were no weaknesses in the transfer system at all.

Table 20. Employee Transfer System's Greatest Weakness

Weakness	Percent of Respondents			
	Overall (n = 481)	AGEC (n = 460)	Transfer Pathway (n = 454)	Common Courses (n = 447)
Lack of student familiarity	17	14	13	15
Lack of faculty familiarity	9	7	12	11
Inflexible for certain majors	6	12	10	9
School-specific requirements not met/ Extra courses needed	6	10	9	5
Inconsistent academic rigor between CCs and universities	9	8	6	8
Lack of CC-University consistency/ standardization	7	8	9	9
Students do not use it	7	6	5	6
Lack of communication	7	5	6	6
It is confusing	6	4	4	5
Lack of advisor familiarity	4	4	5	6
Inability to share electronic student records	5	5	4	2
Students not prepared for university studies	5	5	3	3
Impedes curriculum growth/innovation	2	3	5	5

Note. Questions 8, 15, 19, 23. "Other" response percentages were excluded from the table.

Students most commonly indicated lack of familiarity, by the student or by the advisor/faculty member, as the overall transfer system's greatest weakness. Inconsistent course titles between community colleges and universities was also a frequently cited response. A summary of survey responses can be found in Table 21. Select students providing individual responses mentioned specific issues with information from advisors, unnecessary courses, and limited course/major options.

Table 21. Student Transfer System's Greatest Weakness

Weakness	Percent of Respondents Overall (n = 1,225)
Lack of student familiarity	14
Lack of advisor and/or faculty familiarity	13
Inconsistent course titles between community colleges and universities	11
Credit transferability issues	8
Inability to share electronic student records between community colleges and universities	7
Inflexible for certain majors	7
Lack of university-community college consistency/standardization	7
Students are not prepared for university studies	7
Course options are too limited	6
Inconsistent course difficulty between community colleges and universities	6
Inaccurate information	4
Transfer System is confusing	4
System is difficult to use	2
Other	7

Note. Question 12.

With respect to the individual components of the transfer system, students most commonly cited "lack of student familiarity" and "unnecessary courses included" as the greatest weakness. "Course options are too limited" was also a frequent response in regards to Common Courses. More than 10% of students indicated "inconsistent course titles between community colleges and universities" and "lack of advisor or faculty familiarity" as weaknesses of AGEC. Additionally, 10% of students specified the greatest weakness of transfer pathways degrees as "inflexibility for certain majors" (Table 22). In 2007, students commonly indicated the least beneficial aspect of AGEC was that it was too time consuming and lack of/bad advising and information. Students also indicated the least beneficial aspect of transfer pathway degrees as too time consuming or contained too many extraneous courses. This weakness seems to have persisted in 2013, as "unnecessary courses are included" was a frequent response for the greatest weakness of both AGEC and transfer pathway degrees.

Table 22. Student Component Transfer System's Greatest Weakness

Weakness	Percent of Respondents		
	AGEC (n = 892)	Transfer Pathway (n = 871)	Common Courses (n = 475)
Lack of student familiarity	14	12	11
Unnecessary courses are included	13	12	12
Course options are too limited	8	9	12
Inconsistent course titles between community colleges and universities	11	8	8
Inflexible for certain majors	9	10	8
Lack of advisor and/or faculty familiarity	10	9	7
Inconsistent course difficulty between community colleges and universities	6	6	8
Lack of university-community college consistency/standardization	6	7	7
Students are not prepared for university studies	6	6	7
Credit transferability issues	4	6	7
University specific requirements not met	3	4	5
It is confusing	4	2	2
Inaccurate information	2	3	2
Other	5	5	4

Note. Questions 35, 42, 49.

Both employee and student survey respondents most commonly indicated lack of student familiarity as the transfer system's greatest weakness. Students frequently indicated faculty and advisor familiarity as an overall weakness, whereas employees saw lack of familiarity a weakness primarily for transfer pathways and Common Courses.

Improving the Transfer System
For the most part, employee respondents' suggestions for improving the transfer system were consistent across the three transfer system components. As a result, only the suggestions for overall improvements are highlighted here (see Table 23), as percentages for the individual components were very similar, and often identical, to those for the overall system. Respondents were also allowed to select multiple responses and, on average, each person selected approximately three of the provided options. Of particular note in these findings was that of the top five responses, three of them relate to relationships and policies across the institutions, reinforcing results from prior questions that this is a potential areas for focus in future efforts to improve the transfer system.

Table 23. Employee Improving the Transfer System

Suggested Improvement	Overall Percent (n = 486)
Increase CC-University communication	32
Publicize transfer system to students	28
Increase CC-University consistency	28
Increase consistency across all higher ed institutions	23
Share electronic student records	24
Provide better training and tools for faculty/staff	22
Provide better information for students	21
Engage community colleges further	20
Simplify the transfer process	20
Increase community college involvement	19
Standardize the transfer process	18
Make the system more user-friendly	17
Engage K12 education system	16
Expand/include more courses and majors	15
Rename transfer system to be more memorable	5
Other	7

Note. Question 9. Multiple responses allowed.

University and community college employee respondents generally provided similar suggestions for improvement. Community college respondents were more likely to indicate that the transfer process should be simplified and that community colleges needed to be more engaged in the process than their university counterparts, suggesting some differences in perceptions of the system between these two groups.

Among the 32 respondents who provided additional, written suggestions for improvement, 27 were community college employees. A few of the university respondents suggested that additional consistency in course requirements and quality would improve the transfer system. The community college respondents agreed, but strongly suggested that the lack of collaboration and communication from the universities was to blame for any existing inconsistencies. Community college employees emphasized their capabilities for providing quality, rigorous 100- and 200-level coursework, but believed that their students were having to "retake the same course" due to inconsistencies in course numbering or the perception that university faculty believe "courses at the community college cannot possibly match theirs."

Several community college employees suggested possible solutions, such as "allowing community colleges to offer all 100- and 200-level classes," or adopting systems that "tie university funding to better cooperation with community colleges." The consensus among community college employee respondents was that their university counterparts were not engaging in the system to the same extent as their community college colleagues, while university employees rarely assigned blame to any one entity. These differences in perceptions between community colleges and universities will likely continue to present a challenge in strengthening the transfer system in Arizona in the future.

Student respondents were also able to provide more than one response for suggested improvements and, on average, they selected approximately three improvements for the overall transfer systems. The three most commonly suggested improvements were to increase communication and consistency between community colleges and universities and to inform high school students of community-college-to-university transfer options. Another commonly chosen response option was to provide better information for students. Percentages of student responses can be seen in Table 24. In addition to response options, some students also indicated improving advisement, specifically related to availability for appointments, appropriate courses to take, and transfer deadlines: "Have advisors who are more available to discuss the transfer system and degree check." Course equivalency in course titles, including courses that transfer as well as incorporation of SUN numbers, "The Shared Unique Number (SUN) system is the best thing to happen to transferring in AZ's educational system. I only wish all classes at the community college level included a SUN #," were also mentioned by students. Most of the additional responses were provided by students at universities who had already been through the transfer process.

Table 24. Student Improving the Overall Transfer System

Suggested Improvement	Percent of Respondents Overall (n = 1,225)
Increase consistency between community colleges and universities	42
Inform high school students of community college–university transfer options	42
Increase communication between community colleges and universities	41
Provide better information for students	36
Expand and include more courses and majors	35
Publicize the transfer system to students	30
Provide better training and tools for faculty/staff	26
Make the transfer system more user-friendly	24
Simplify the transfer process	24
Standardize the transfer process	24
Other	6

Note. Question 13. Multiple responses allowed.

On average, students indicated approximately two response options for each of the three transfer components (see Table 25). The most commonly suggested improvement for AGEC was to expand and include more courses and majors, with almost 40% of students selecting that option. The most common suggestions for transfer pathway degrees and Common Courses, "increase consistency between community colleges and universities" and "provide better information for students," were also frequent suggestions for AGEC.

Table 25. Student Improving Transfer Components

Suggested Improvement	Percent of Respondents		
	AGEC (n = 892)	Transfer Pathway (n = 871)	Common Courses (n = 475)
Expand and include more courses and majors	39	33	30
Increase consistency between community colleges and universities	36	36	33
Provide better information for students	34	36	31
Increase communication between community colleges and universities	29	31	29
Publicize component to students	31	27	23
Provide better training and tools for faculty/staff	22	24	15
Make the component more user-friendly	18	21	19
Rename component to a more memorable name	9	9	10
Other	3	4	4

Note. Questions 36, 43, 50. Multiple responses allowed.

Three of the top five employee suggestions for improvements to the transfer system related to relationships and policies across institutions; some of these suggestions were also made by students. Both employees and students suggested that increasing both communication and consistency between community colleges and universities would be beneficial overall. A discrepancy exists between students and employees on where improvements should be made to the transfer system. Expanding and including more courses and majors, as well as providing better information for students, were the most common suggestions for improvement by students for the three transfer components. While there were substantial percentages of employees who also indicated these improvements, they were not some of the most common suggestions. Only 15% of employees indicated expand and include more courses and majors while more than double that percentage of students made the same suggestion across the transfer system. A similar gap exists between students and employees in reference to providing better information for students, suggesting that employees and students were not always on the same page in terms of the best strategies for improving the system.

Transfer System Components
Arizona's transfer system includes multiple components. The survey items specifically probed respondents' familiarity, usefulness, satisfaction, and component-specific perceptions.

Familiarity
Of the Arizona transfer system's components, over 75% of employee respondents were familiar with AGEC, transfer pathways, and Common Courses (ratings of 5 and above), and over 60% were familiar with Exams to Earn Credit (see Figure 30). Despite having been launched just in the past few years, more than 50% of respondents indicated they were familiar with SUN System, suggesting that early efforts to promote this system have had the desired effect. These high levels of familiarity of the transfer system components indicate that communication with employees regarding the transfer system has been successful.

These findings were consistent with continued growth in familiarity since the 2007 findings, where the majority of respondents (advisors and faculty only) indicated they were at least somewhat familiar with AGEC, transfer pathways, and Common Courses. Exams to Earn Credit were not included in the 2007 survey and the SUN System was not in place at that time.

Employee Component Familiarity
n = 495

Component		Mean
AGEC	4 4 4 9% 15% 24% 40%	5.6
Transfer Pathways	3 4 6% 12% 20% 25% 30%	5.4
Common Courses	3 3 4 12% 20% 25% 32%	5.5
Exams to Earn Credit	4 6% 9% 17% 20% 23% 20%	4.9
SUN System	22% 6% 5% 12% 14% 20% 21%	4.4

0%   25%   50%   75%   100%

■1 (Not at All) ■2 □3 □4 ■5 ■6 ■7 (Very)

Q10
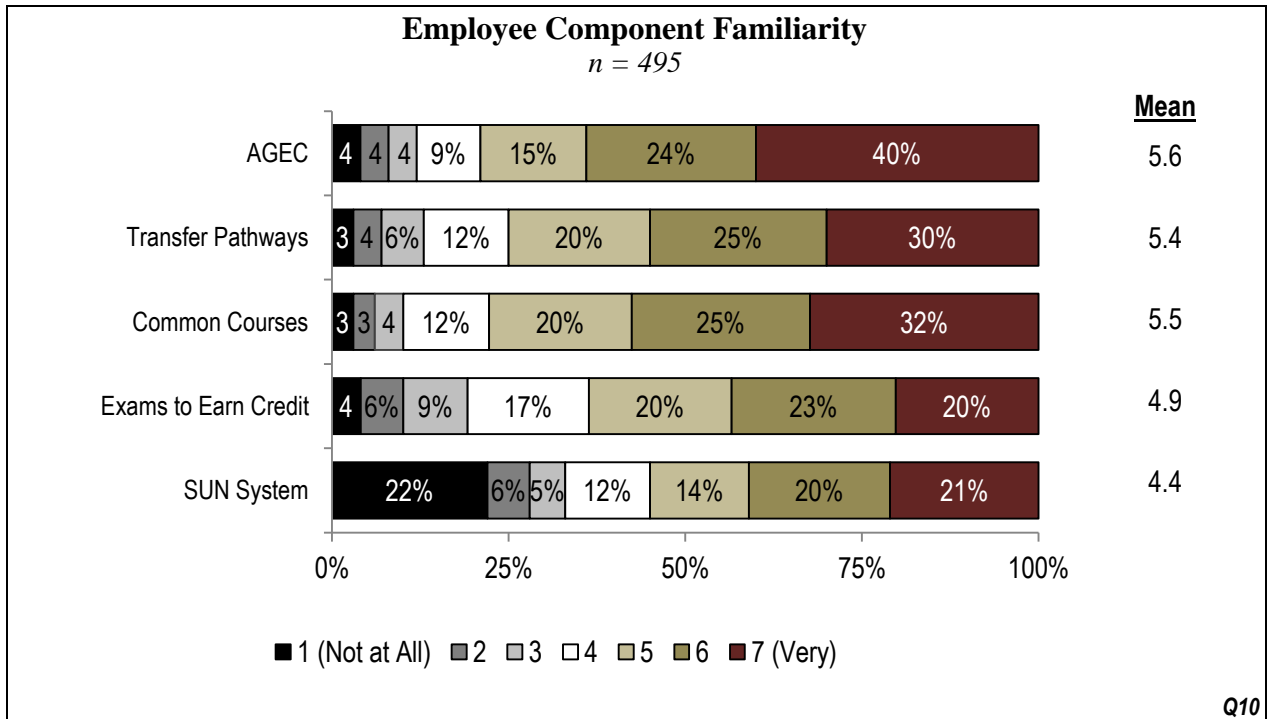
Figure 30. Employee familiarity with transfer system components.

As displayed in Figure 31, students indicated the most familiarity with AGEC among the transfer system components, at 66%. Less than half were familiar with the Exams to Earn Credit component and less than 20% indicated awareness of the SUN System. Because the SUN System is relatively new, it is not surprising that students are not as familiar with it as other components.

Familiarity with AGEC, transfer pathways, and Common Courses among students in 2007 was consistently higher than in this year's findings, particularly with the two latter components. This may indicate that there has been a decline in effective communication with students concerning these transfer components.
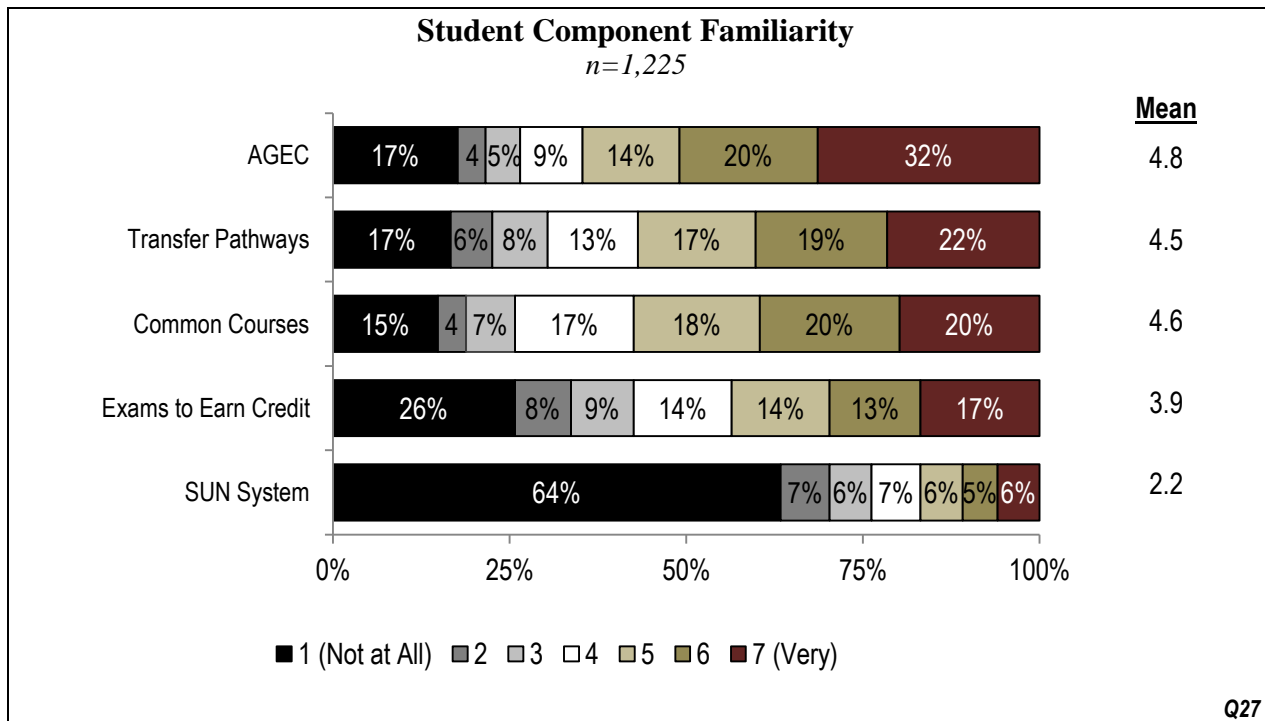
Figure 31. Student familiarity with transfer system components.

In general, students indicated less familiarity with the five components than did employees. While there was demonstrated success in communicating information with employees, data suggest that dissemination to students was not quite as effective. In particular, Exams to Earn Credit and the SUN System were known by relatively few students in the survey. It is also possible that students were less familiar with the names of the components but more familiar with the practices inherent in the transfer system, though this was not specifically addressed with the survey questions.

Usefulness
Employee respondents indicating some familiarity with each component were asked to rate the usefulness of each transfer element. Over 65% of respondents rated all of the components as useful, suggesting that employees view the Arizona transfer system overall as including valuable resources to enhance the transfer process. Employees found AGEC, transfer pathways, and Common Courses most useful, with almost 90% of respondents rating each as a 5 or above. Utility of Exams to Earn Credit and the SUN System were more mixed, but were still rated as useful by strong majorities of respondents (see Figure 32).

Employee Perceptions of Component Usefulness

	Mean
AGEC (n=450): 3, 7%, 9%, 21%, 58%	6.2
Transfer Pathways (n=436): 3, 9%, 12%, 28%, 48%	6.0
Common Courses (n=428): 2, 3, 9%, 18%, 26%, 42%	5.9
Exams to Earn Credit (n=429): 2, 5%, 9%, 12%, 22%, 23%, 28%	5.3
SUN System (n=320): 8%, 6%, 8%, 12%, 17%, 22%, 27%	5.0

Legend: ■ 1 (Not at All) ■ 2 □ 3 □ 4 □ 5 □ 6 ■ 7 (Very)

Q11
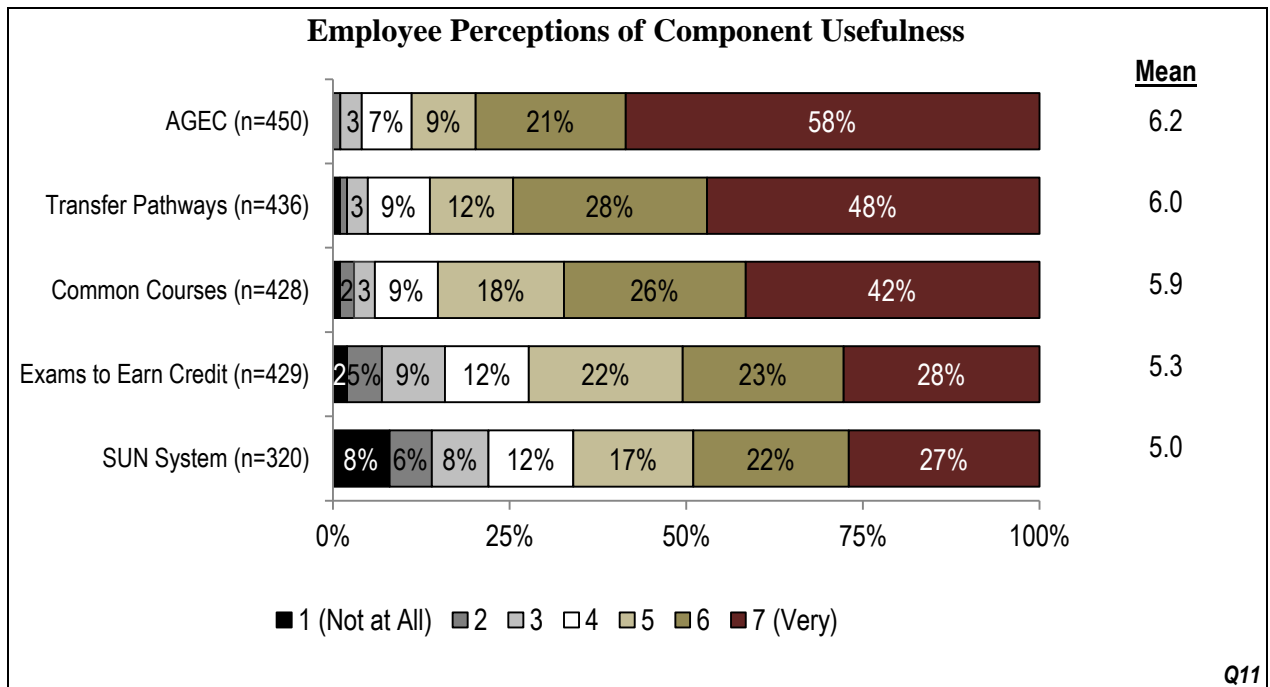
Figure 32. Employee perceptions of component usefulness. Asked only of respondents indicating component familiarity (Q10 >1). Results exclude respondents indicating "no opinion."

Of those students who were familiar with transfer components, many found them to be useful (Figure 33). Approximately 80% of respondents rated AGEC, transfer pathways, Common Courses, and Exams to Earn Credits as somewhat useful or higher. Less indicated an opinion of usefulness for the SUN System; again, because this is relatively new, students may not be aware of all aspects of its functionality.

Student Perceptions of Component Usefulness

		Mean
AGEC (n=952)	4	2	5%	8%	14%	18%	49%	5.8
Transfer Pathways (n=920)	3	2	4	8%	15%	21%	47%	5.8
Common Courses (n=899)	3	2	4	11%	19%	22%	39%	5.6
Exams to Earn Credit (n=789)	6%	3	4	10%	17%	19%	42%	5.5
SUN System (n=445)	19%	4	6%	13%	18%	15%	26%	4.6

0%   25%   50%   75%   100%

■1 (Not at All) ■2 □3 □4 □5 ■6 ■7 (Very)

Q28
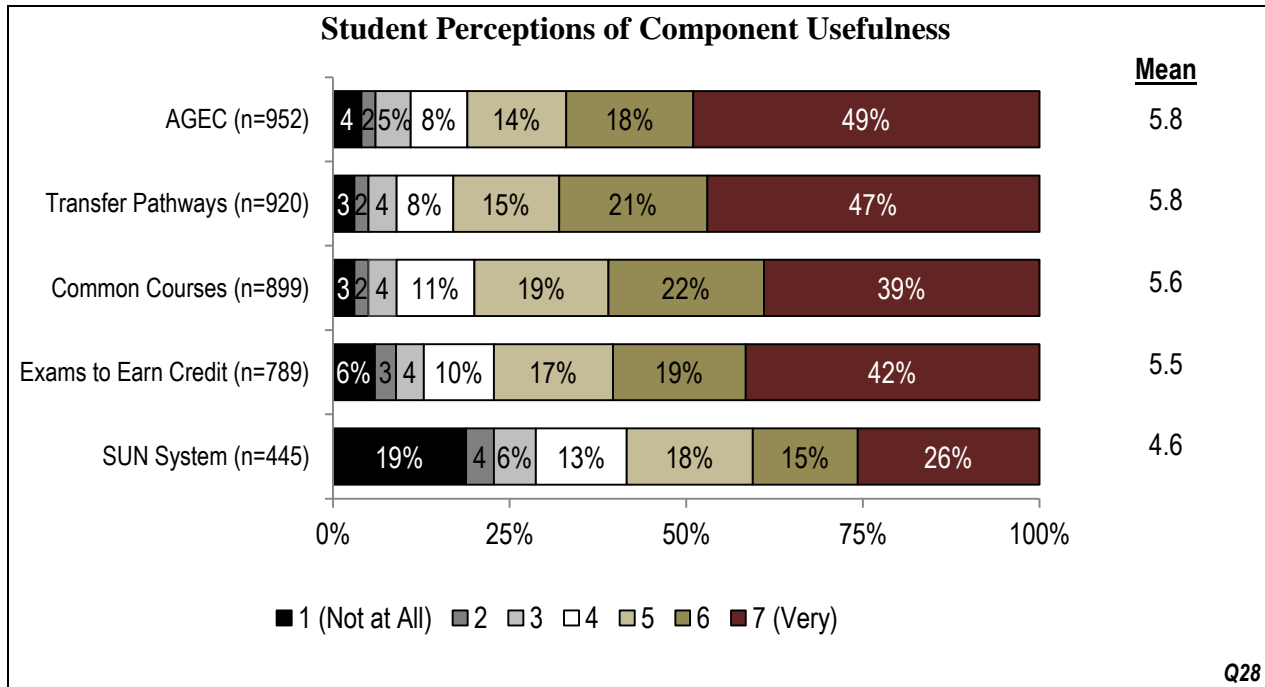
Figure 33. Student perceptions of component usefulness. Results exclude respondents indicating "no opinion."

Overall, employee and student perceptions on transfer component usefulness were aligned, with both employees and students showing favorable opinions of AGEC, transfer pathways, Common Courses, and Exams to Earn Credit.

Satisfaction
Given community college and university employees' favorable disposition to the usefulness of AGEC and transfer pathway degrees, the high satisfaction levels were not surprising (see Figure 34). Satisfaction with AGEC in particular was very high (85% satisfied), suggesting this was seen as an extremely valuable component of the transfer system, consistent with the findings from 2007. Satisfaction ratings for all elements of the transfer system were quite positive, though employees are most satisfied with AGEC, transfer pathways, and Common Courses.

Employee Component Satisfaction

Mean

AGEC (n=435)	5.9
Transfer Pathways (n=421)	5.4
Common Courses (n=416)	5.5
Exams to Earn Credit (n=401)	5.0
SUN System (n=320)	4.8

Legend: ■1 (Not at All) ■2 □3 □4 □5 ■6 ■7 (Very)

Q12
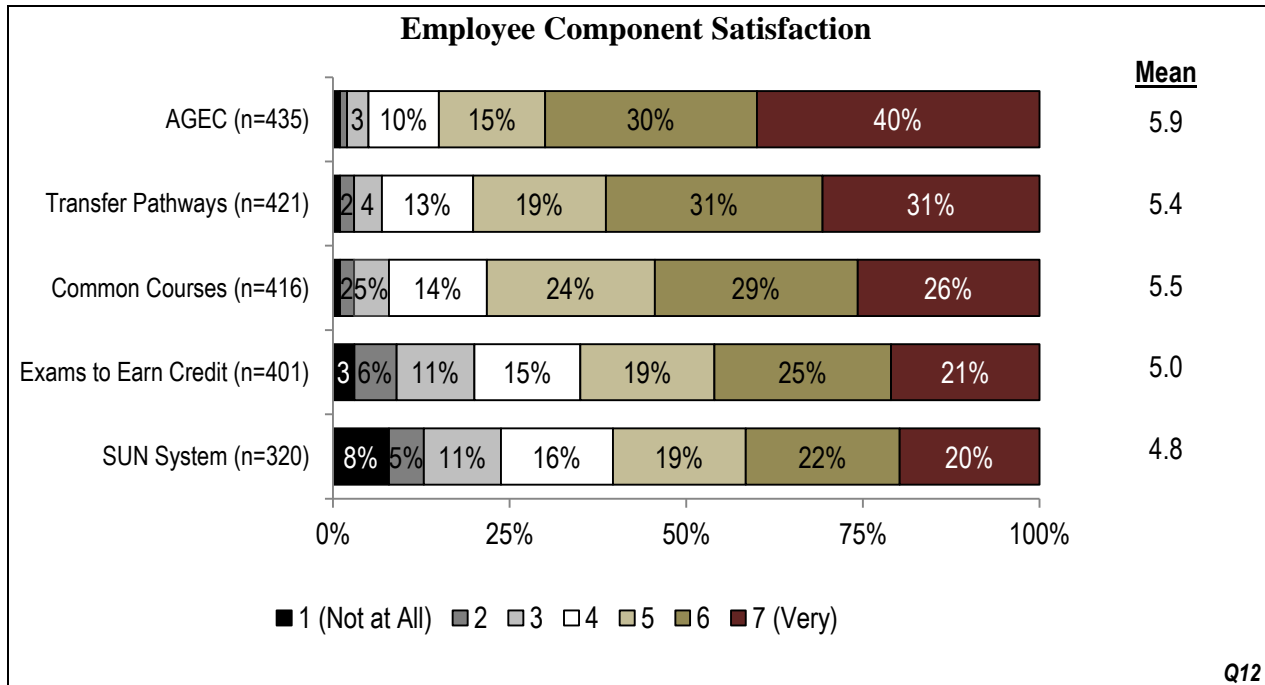
Figure 34. Employee satisfaction with transfer system components. Asked only of respondents indicating component familiarity. Results exclude respondents indicating "no opinion."

Student satisfaction was positive overall as well, with AGEC and transfer pathways garnering the highest ratings (both with 83% satisfied), and Common Courses and Exams to Earn Credit close behind. This suggests that students viewed AGEC and transfer pathways as important parts of the system. Details on student responses can be found in Figure 35.

In 2007, students were only asked to rate their satisfaction with AGEC. The 2007 sample indicated somewhat higher satisfaction than the current data, with almost 90% of students expressing that they were somewhat or very satisfied.

Student Component Satisfaction

		Mean
AGEC (n=937)	4 · 2 · 4 · 8% · 15% · 22% · 46%	5.8
Transfer Pathways (n=883)	3 · 2 · 4 · 9% · 16% · 21% · 46%	5.8
Common Courses (n=870)	4 · 2 · 5% · 10% · 19% · 23% · 37%	5.6
Exams to Earn Credit (n=650)	8% · 4 · 5% · 11% · 18% · 17% · 38%	5.3
SUN System (n=412)	16% · 6% · 6% · 11% · 20% · 16% · 25%	4.6

Legend: ■ 1 (Not at All) ■ 2 ▫ 3 ☐ 4 ■ 5 ■ 6 ■ 7 (Very)

Q29
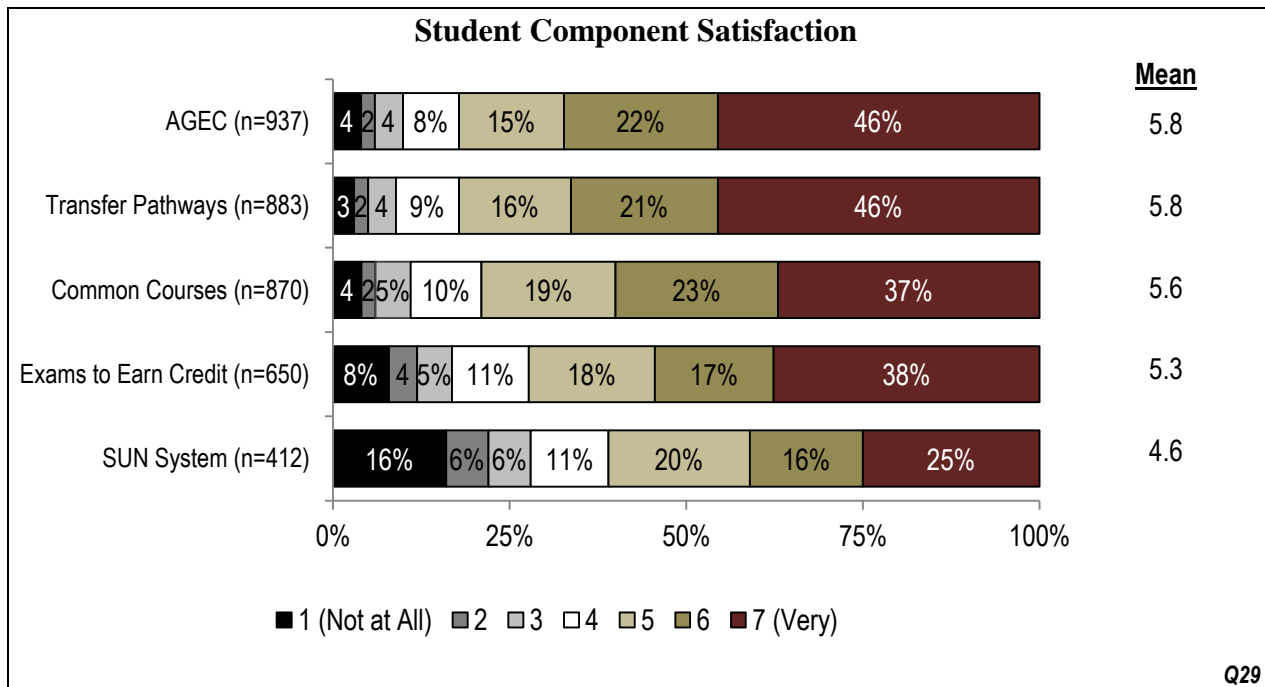
Figure 35. Student satisfaction with transfer system components. Asked only of respondents indicating component familiarity. Results exclude respondents indicating "no opinion".

Ratings of satisfaction between employees and students were consistent across the transfer components. Both groups mainly indicated high levels of satisfaction for the components; AGEC and transfer pathways were particularly popular.

AGEC-Specific Perceptions
Delving into employee perceptions of AGEC reveals more than 80% had a favorable disposition toward AGEC and its contributions toward students completing bachelor's degree requirements and reducing student barriers to transfer. Employee perceptions towards these two contributions in 2007 were similar, with the majority indicating agreement. A summary of the 2013 survey responses are found in Figure 36.

On the procedural front, reactions to consistent designation of AGEC on community college student transcripts yielded a generally favorable response, but there were 13% indicating a disagreement rating of 1-3 and 32% neutral. The relative large number of neutral responses may be due in part to employees who lack direct experience with student transcripts.

Employee AGEC Perceptions
n = 475
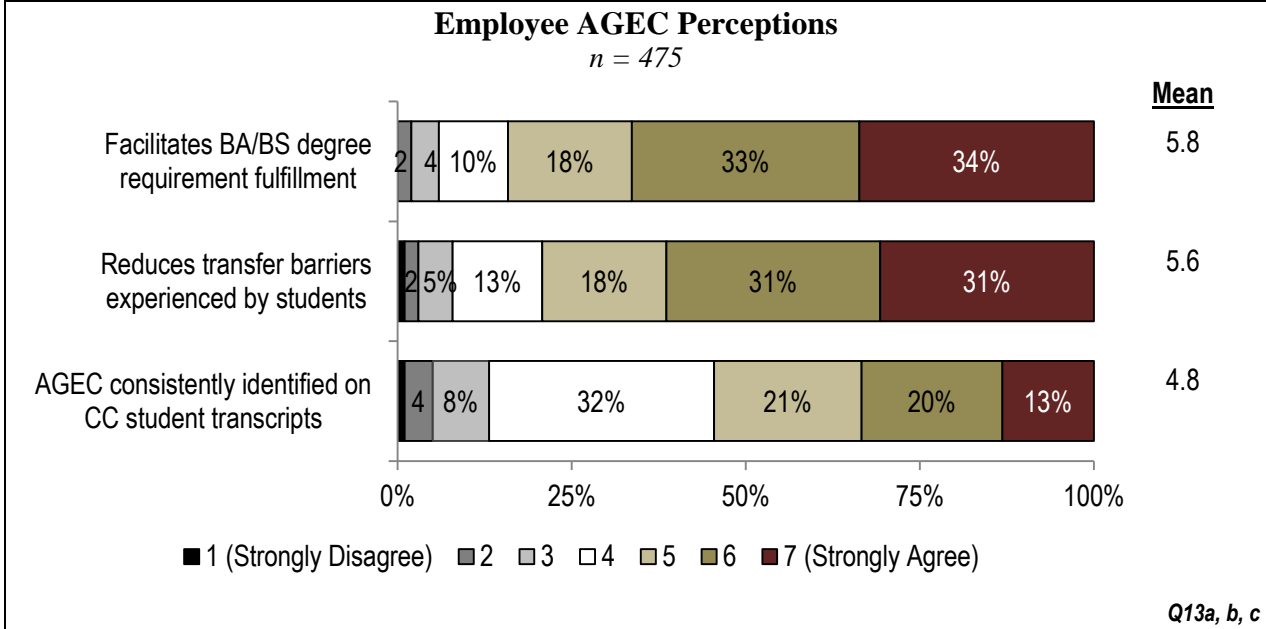
Figure 36. Employees' perceptions of AGEC as a mechanism to facilitate transfer. Response base limited to individuals reporting component familiarity.

A majority of students agreed that AGEC enabled them to meet bachelor's degree requirements and reduced barriers to transferring, as shown in Figure 37. Few students expressed disagreement with these statements, reinforcing students' overall positive perceptions of AGEC.

Student AGEC Perceptions
n = 1013
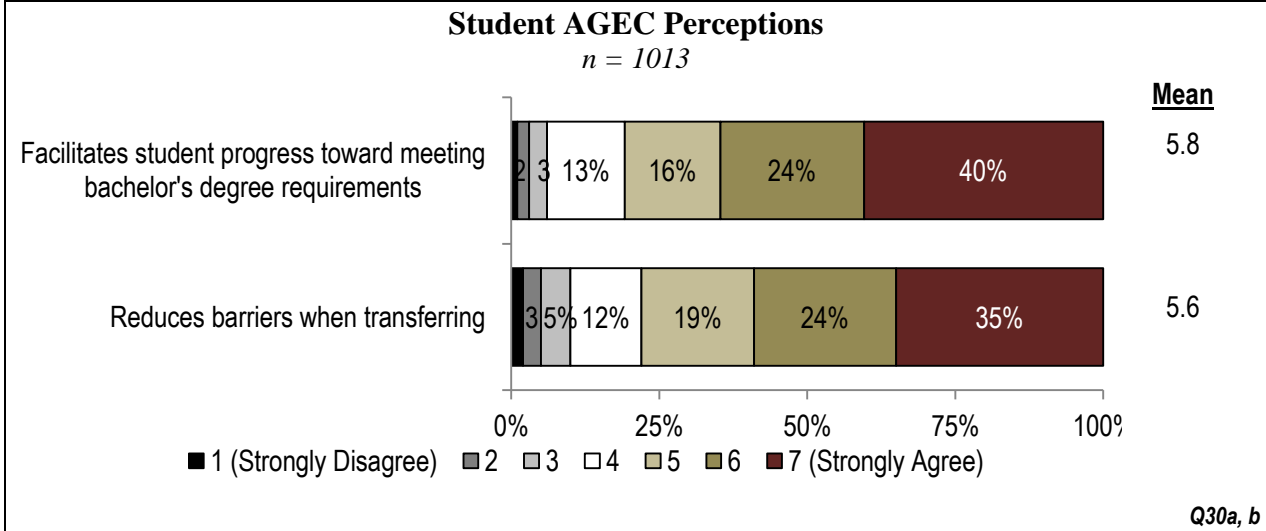
Figure 37. Students' perceptions of AGEC as a mechanism to facilitate transfer. Response base limited to individuals reporting component familiarity.

AGEC's role in facilitating progress toward graduation and reducing barriers to the transfer process were viewed positively by both students and employees. Alignment of these perceptions demonstrates that AGEC played an important role in students successfully navigating the transfer system and preparing for a 4-year degree.

In terms of the processes involved with AGEC transfer, students generally responded positively, as shown in Figure 38. Responses indicated that students had a solid understanding of the AGEC transfer process and felt it was easy to navigate.
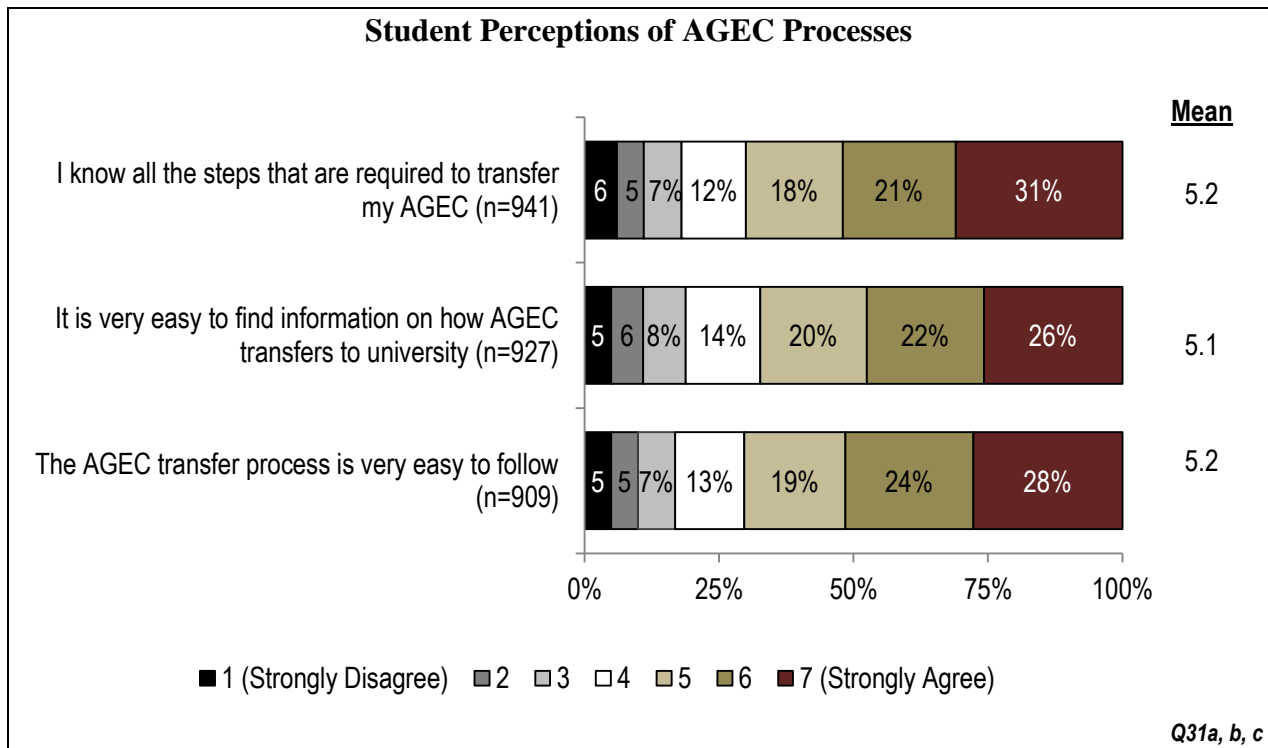
Figure 38. Students' perceptions of the AGEC process and resources.

AGEC-Suggested Improvements
The most common suggestion for improvement of AGEC by employees was publicizing AGEC to students. Based on student responses regarding their familiarity with AGEC (66% were familiar, but 17% had no familiarity at all); this is likely a necessary pursuit. Of those respondents who provided individual suggestions, ideas tended to revolve around substantive issues rather than branding/identity concerns. University respondents expressed concerns that "AGEC works for some majors, but actually increases the amount of time students need to spend in school for most majors," primarily due to required courses not being offered at community colleges. They also suggested that increasing rigor, either in the K12 system, the community college system, or both, was a necessary improvement.

A need for consistency was a common theme across employee respondents, suggesting additional consistency of AGEC curriculum across colleges and consistency of degree requirements across the universities would benefit students. A few believed there was too much emphasis on AGEC, and that changes that focused more on allowing students to transfer their associate degree coursework in a block, or providing an easy process for adding courses to the list of acceptable courses, would be beneficial.

Other suggestions focused on improved communication between universities and community colleges so that universities "understand the community colleges more fully," and between advisors and faculty, as lack of communication can result in "misadvised" students.

Perceptions of Transfer Pathway Degrees
Employee opinions related to transfer pathway degrees generally were positive, but the dispositions were somewhat varied, as shown in Figure 39. Pathways were favorably viewed as supporting curricular planning (60% indicating agreement), remaining stable over time (55% agreement), and supporting course instruction/delivery (49% indicating agreement), but approximately 30% of respondents were neutral on all three items. Approximately half of respondents indicated agreement that transfer pathway degrees remained stable over time in 2007, consistent with these findings.

Employee Transfer Pathway Degree Perceptions
n = 478

	Mean
Support curricular planning: 2, 3, 8%, 28%, 26%, 24%, 10%	4.8
Have remained stable over time: 2, 5%, 10%, 29%, 27%, 21%, 7%	4.7
Support course instruction/delivery: 2, 5%, 12%, 32%, 23%, 20%, 6%	4.5

■1 (Strongly Disagree) ■2 ▢3 ▢4 ▢5 ■6 ■7 (Strongly Agree)

Q17a, c, d
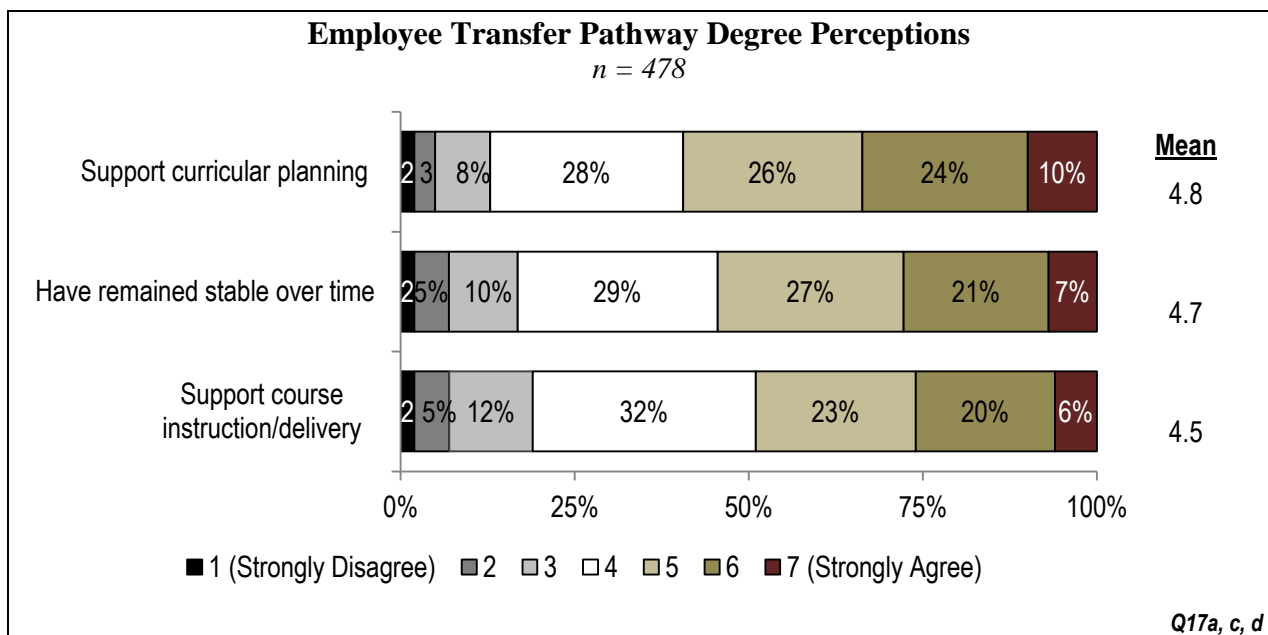
Figure 39. Employees' perceptions of transfer pathway degrees. Asked only of individuals reporting component familiarity.

University respondents were more likely to provide additional feedback on improving transfer pathways than their community college counterparts. Many of the comments focused on fostering "better communication" between the institutions in order to "develop transfer pathways that work for the community college and the university."

More than half (59%) of student respondents agreed that transfer pathway degrees have not changed since they began community college, showing generally positive perceptions of their consistency, as shown in Figure 40. However, almost a quarter of respondents were neutral, suggesting that these respondents were not familiar enough with the component to indicate an opinion, or were possibly too new in the educational process to judge consistency.

Student Transfer Pathway Degree Perceptions
n = 1,022

Transfer pathway degrees remained the same since I started at community college: 6% | 5 | 8% | 23% | 19% | 21% | 19%

Mean
4.8

0% — 25% — 50% — 75% — 100%

■ 1 (Strongly Disagree) ■ 2 □ 3 □ 4 □ 5 ■ 6 ■ 7 (Strongly Agree)

Q38a
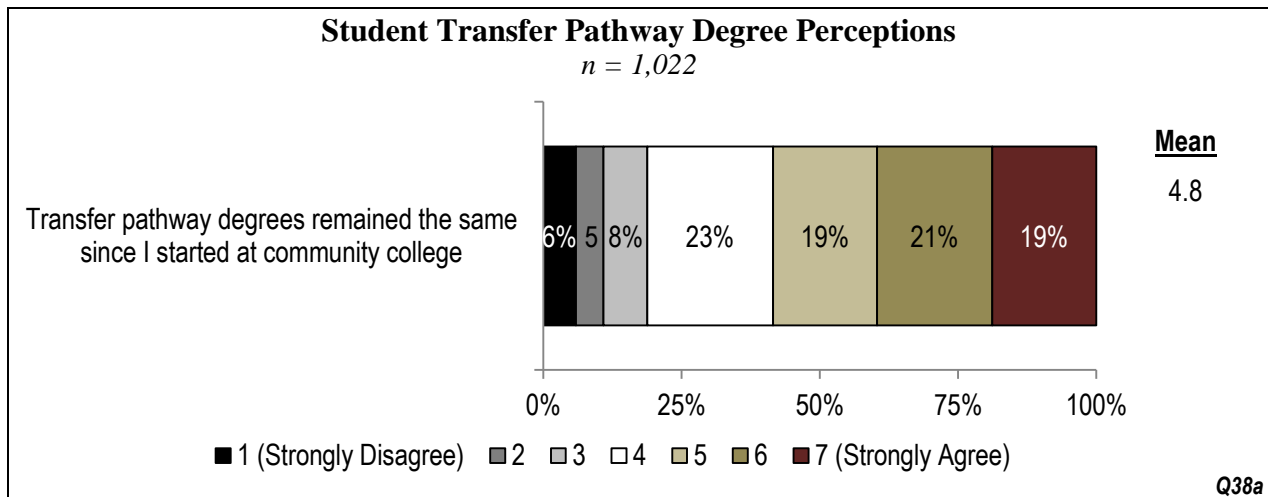
Figure 40. Students' perceptions of transfer pathway degrees. Asked only of individuals reporting component familiarity.

Employee and student responses concerning the stability of the transfer pathway degrees component were very similar, with more than half showing favorable opinions and approximately 30% taking a neutral stance in each group. This suggests that the component has in fact remained consistent, but some employees and students may not be familiar enough with it to make the determination. With respect to students, the transfer pathway degree requirements under which they enter the community college remain the same until they complete their college degree, thus the stability issue may not be relevant for many students.

Common Course Matrix Perceptions
Common Course Matrices were favorably viewed as a planning tool to support student transfer (67% indicating agreement) and a curriculum planning foundation (62% agreed). Employees were somewhat less positive about matrices' flexibility to support curricular growth (50% agreement). A summary of survey responses can be found in Figure 41. Those who provided written responses reinforced that the matrices seemed "to stifle curriculum creativity at community colleges," as they only covered the minimum common courses. Over 70% of 2007 respondents agreed that Common Course Matrices were an effective planning tool that supported student transfer, slightly higher than the current data, possibly indicating that the matrices have not been as effective as employees once thought. A few respondents recommended eliminating them completely, while others suggested that simple formatting changes (such as using actual university course numbers or adding icons) would make them more useful.

It seems worthwhile to note that the Common Course Matrices were a reflection of ATF and faculty agreements. ATF and faculty members drove the decision-making process, while APASC facilitated the discussion, and documented the faculty decisions. It is possible that revisiting this process in order to facilitate additional discussion may prove helpful to faculty who feel adjustments would increase utility.

Employee Common Course Matrices Perceptions
n = 479

	Mean
Effective in helping students plan for transferring from CC to University	5.2
Stable enough to support curriculum planning	4.9
Flexible and allow adequate room for curriculum change and growth	4.5

Effective in helping students plan for transferring from CC to University: 3 | 8% | 22% | 23% | 23% | 21%

Stable enough to support curriculum planning: 2 3 | 9% | 26% | 27% | 23% | 12%

Flexible and allow adequate room for curriculum change and growth: 2 5% | 12% | 32% | 25% | 17% | 8%

■1 (Strongly Disagree) ■2 □3 □4 □5 ■6 ■7 (Strongly Agree)

Q21a, b, c

Figure 41. Employees' perceptions of Common Course Matrices. Asked only of individuals reporting component familiarity.

Nearly 80% of students surveyed agreed that the Common Course Matrices helped them to plan for transfer to a university, suggesting favorable opinions of the component among this stakeholder group (see Figure 42). A higher percentage of students found the Common Course Matrices to be helpful in this aspect than employees; however more than two-thirds of each group were in agreement, an overall favorable view.

Student Common Course Matrices Perceptions
n=1,038

	Mean
Common Course Matrices help plan community college-university transfers	5.5

Common Course Matrices help plan community college-university transfers: 2 2 5 | 13% | 21% | 25% | 32%

■1 (Strongly Disagree) ■2 □3 □4 □5 ■6 ■7 (Strongly Agree)

Q45a
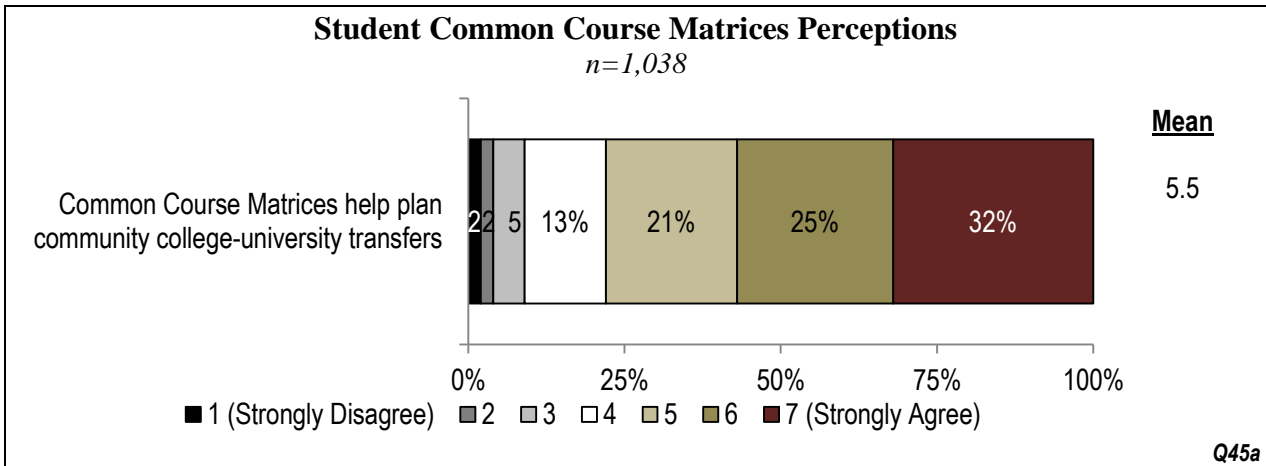
Figure 42. Students' perceptions of Common Course Matrices. Asked only of individuals reporting component familiarity.

Specific Transfer Processes
Depending on whether they worked for a community college or university, employees were asked about specific transfer processes. Across all the procedural aspects and across all job categories, there were very high incidences where respondents did not know how their institution handled specific transfer processes. While all of the respondents did not have direct student

advising responsibilities, all surveyed employees provided guidance to students or employees on transfer matters. The procedural unfamiliarity is worthy of further exploration to ensure everyone (students and employees) is receiving consistent guidance. Specific areas needing attention include the application process and standards as well as transcript notation practices.

Community College AGEC Application Process
According to the respondents, academic advisors were most commonly the ones to facilitate student AGEC applications, followed by the registrar's office (see Figure 43). Written responses indicated the student was responsible for applying for AGEC before graduation. Many community college employees did not know how students applied for AGEC, which might impact employees' abilities to direct interested students to the appropriate institutional contact.
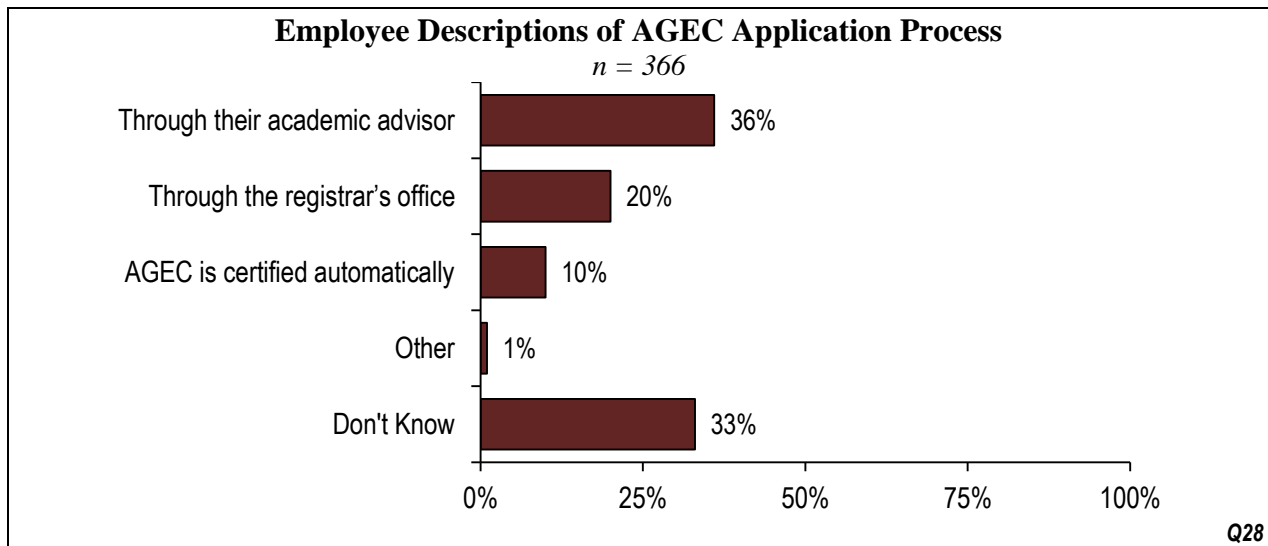
Figure 43. Employees' descriptions of how students apply for AGEC. Asked only of community college respondents.

There was some variation with respect to when students can apply for AGEC based on responses of those who were aware of the appropriate timing (see Figure 44). More than half of employees were not aware of when students could apply for AGEC at their institution, while the most commonly provided Other response was that AGEC was recorded during the semester that the requirements were met.

Employee Perceptions of AGEC Application Timing

n = 367

Upon completion of all AGEC requirements	15%
Semester prior to graduation	12%
Semester of graduation	11%
Other	2%
Don't Know	59%

0%   25%   50%   75%   100%

Q29
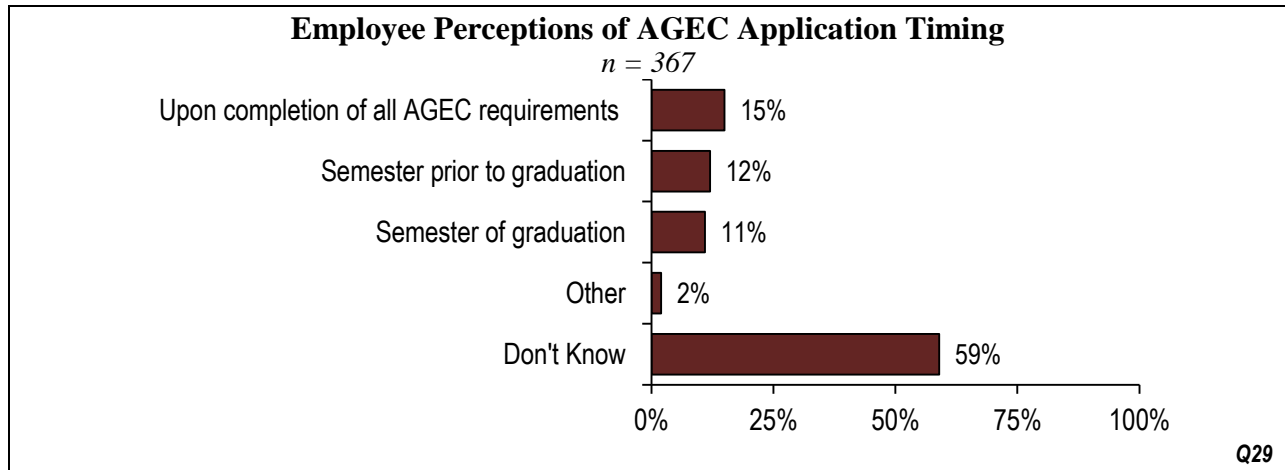
Figure 44. Employees' perceptions of when students can apply for AGEC. Asked only of community college respondents.

Transcript Notation Standards
AGEC designation on student transcripts varies, and no singular standard emerges (Figure 45). Some community colleges printed it at the end of the transcript, although locating the designation on the top of the transcript was also noted. Some colleges recorded the attainment as a certificate or award and made course-level notations.

Employee Indications of AGEC Transcript Recording

n = 130

Printed at the end of a transcript	38%
As a certificate	30%
AGEC courses are followed by the appropriate letter (A, B, or S)	20%
As an award	10%
Other	2%

0%   25%   50%   75%   100%

Q30
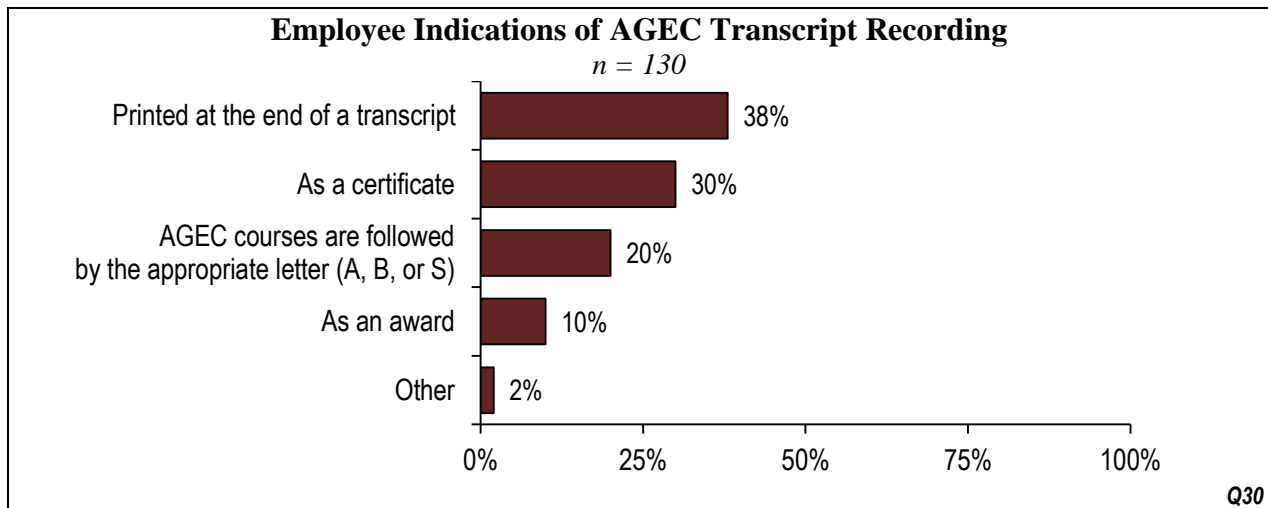
Figure 45. Employees' reporting of how AGEC is recorded on transcripts. Asked only of community college respondents.

AGEC in progress designations were less consistent than AGEC completion notations (see Figure 46). Among those who were aware of transcript notation processes, nearly half (49%) indicated there was no "in progress" designation. A few respondents clarified the designation was only included at student request. Several respondents who selected "Other" indicated it was recorded by student request only.

Employee Indications of "AGEC in Progress" on Transcripts

n = 368

Category	Percentage
Not recorded on transcript	10%
Recorded as "General Education Award/Certificate in progress"	8%
Recorded on a separate document which accompanies transcript	2%
Other	1%
Don't Know	79%

Q31
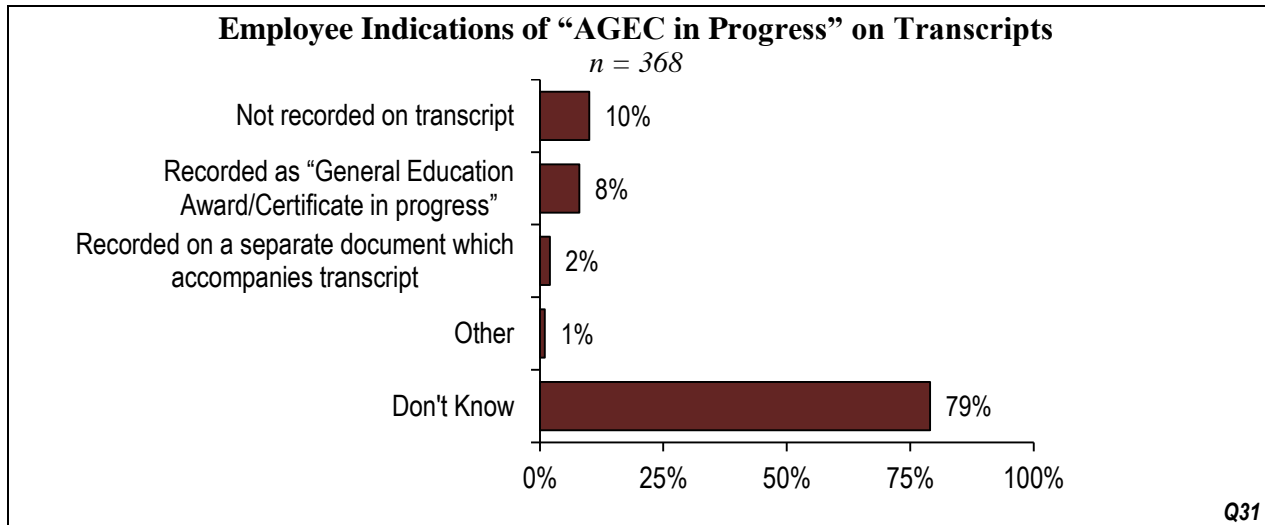
Figure 46. Employees' description of the recording of AGEC in Progress on transcripts. Asked only of community college respondents.

University Admissions and "AGEC in Progress"

University employees indicated that community college transfer students with AGEC in progress would typically follow standard admissions procedures (27%); however, 10% of respondents indicated there was some potential to waive admission requirements for AGEC in progress students. The majority of respondents (62%) did not know the process in this circumstance, possibly because they were not involved in admissions.

Generally, university departments were notified of a student's AGEC status from transcript notations (see Figure 47); however, this practice was not universal, and database or software programs also conveyed the information. The most common written response was that it was not communicated. Even within the individual institutions, there was variability in the communication conduit. There were relatively small samples from the individual universities, however, so it was not possible to draw firm conclusions based on these findings.

Employee Methods for Notification of AGEC Status

n = 117

		ASU *(n=56)*	NAU *(n=38)*	UA *(n=23)*
Recorded on student transcript	43%	32%	58%	44%
Internal database	17%	18%	16%	17%
Software program	16%	18%	8%	26%
Other	13%	20%	8%	4%
Don't Know	11%	13%	11%	9%

Q33
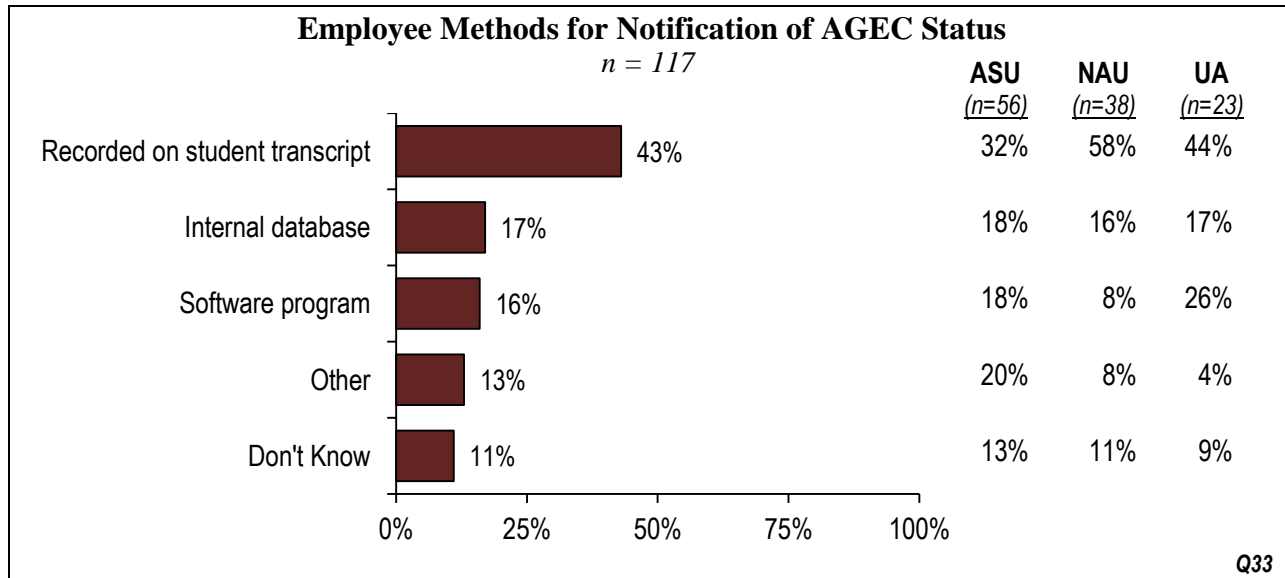
Figure 47. Employees' report of methods for notifying departments of students' AGEC status. Asked only of university respondents.

Promoting Transfer Options

Community colleges employ a variety of promotional methods to build student awareness of transfer options, but no single or dominating method emerged (Figure 48). One-on-one academic advising was the most common method, followed by website and printed information. Additional options included were through email blasts to students and from faculty members during in-class advising sessions.

Employee Indications of Community College Transfer Promotion Methods

n = 368

One-on-one academic advising	23%
Website information	18%
Printed material	16%
Transfer fairs/events	14%
Orientation session for interested students	12%
Course to assist/prepare student for transfer	5%
Email blasts to all registered students	5%
Social media	5%
Other	1%
Don't know	1%

Q25
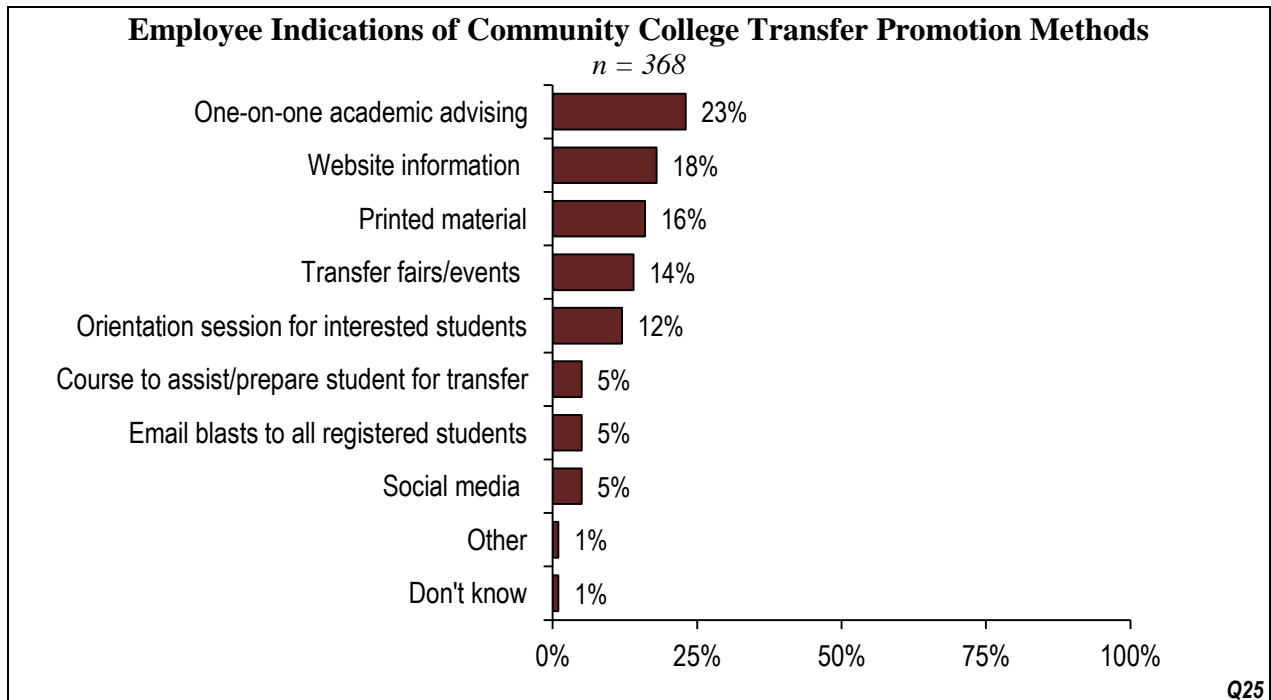
Figure 48. Employees' views of how community colleges promote transfer options to students. Asked only of community college respondents. Multiple reponses allowed.

The most common way that students learned about the transfer process was through direct communication with others, such as advisors or faculty members. These findings suggest that students most often receive information on the transfer system directly from other people in an advisory, instructional, or peer role. Students who provided responses beyond the listed options indicated independent research through the internet, and friends or family. A summary of student responses can be found in Figure 49.

When students were asked for other promotion ideas, several face-to-face suggestions were made including transfer fairs, orientations, and seminars or courses. Students also mentioned advertisement of transfer options through emails, websites, and brochures or fliers in advising and transfer offices on campus that provided information required for transferring. Reinforcing previous student survey findings, several students suggested better communication and promotion of transfer options by advisors and faculty.
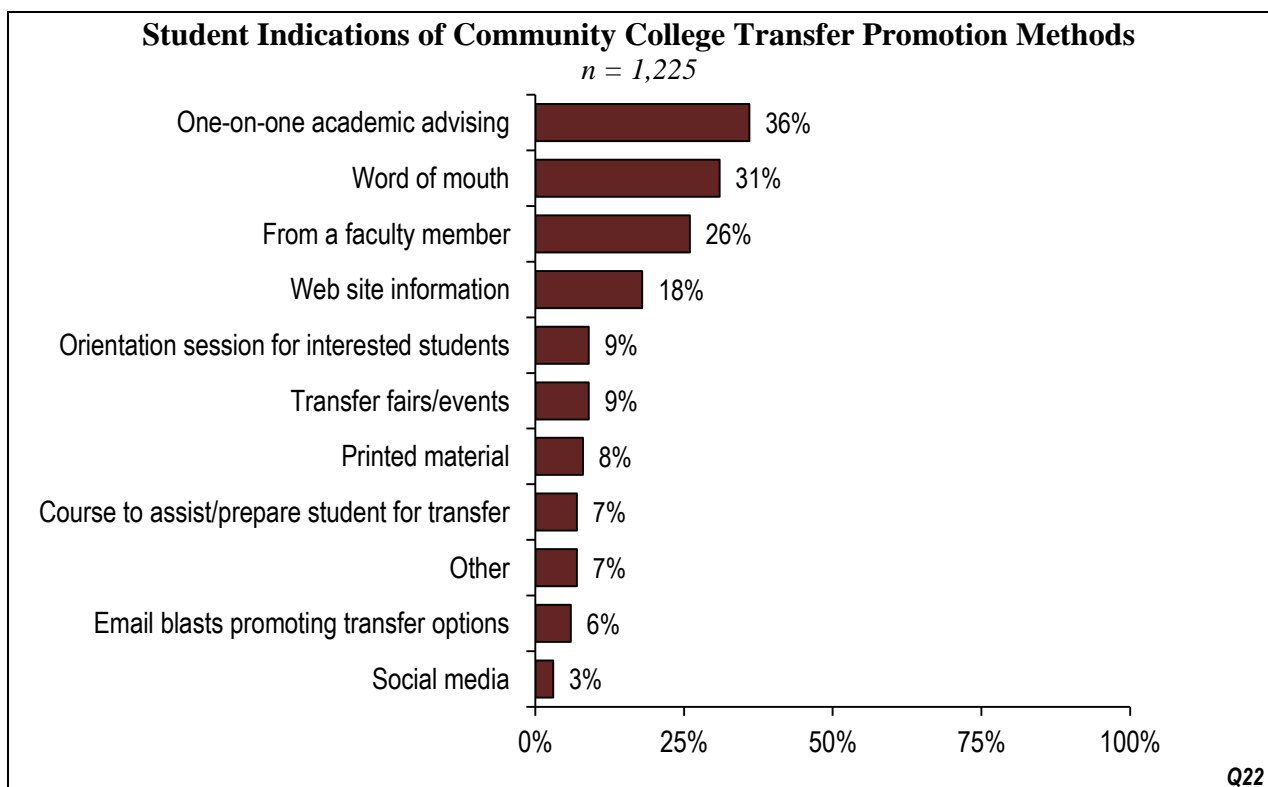
Figure 49. How students reported learning about transfer options. Multiple responses allowed.

Both students and employees agreed that during one-on-one academic advising was the best way to disseminate and receive transfer information. This alignment suggests that targeting additional resources towards one-on-one advising would likely enhance the communication of transfer-relevant information to students. Ensuring that advisors and faculty are fully aware of and abreast of any changes to transfer components so they can communicate accurate information to students is key to the success of the transfer system.

Fewer than 20% of employees cited website information as a place they promote transfer options, and less than 20% of students indicated they learned about transfer options from website

information. While it seems as though these align well, perhaps students are not using website information because transfer information is not available. Developing more effective promotional material online would encourage students to use websites more frequently to gain basic knowledge on the system before seeking additional help.

Employees considered nearly all of the promotion approaches to be effective. From the employee point of view, the very personalized experience of one-on-one advising was overwhelmingly considered the most effective, with 88% of all respondents agreeing that this was an effective outreach approach (Figure 50). Targeted group outreach approaches of transfer orientation sessions and courses to assist/prepare students for transfer were favorably viewed as well, and were seen as more effective than general awareness-building transfer fairs/events. Content dissemination through website and print materials complemented the targeted group outreach, and employees viewed it with similar and favorable regard. Employees viewed social media and email blasts to students as the least effective methods.
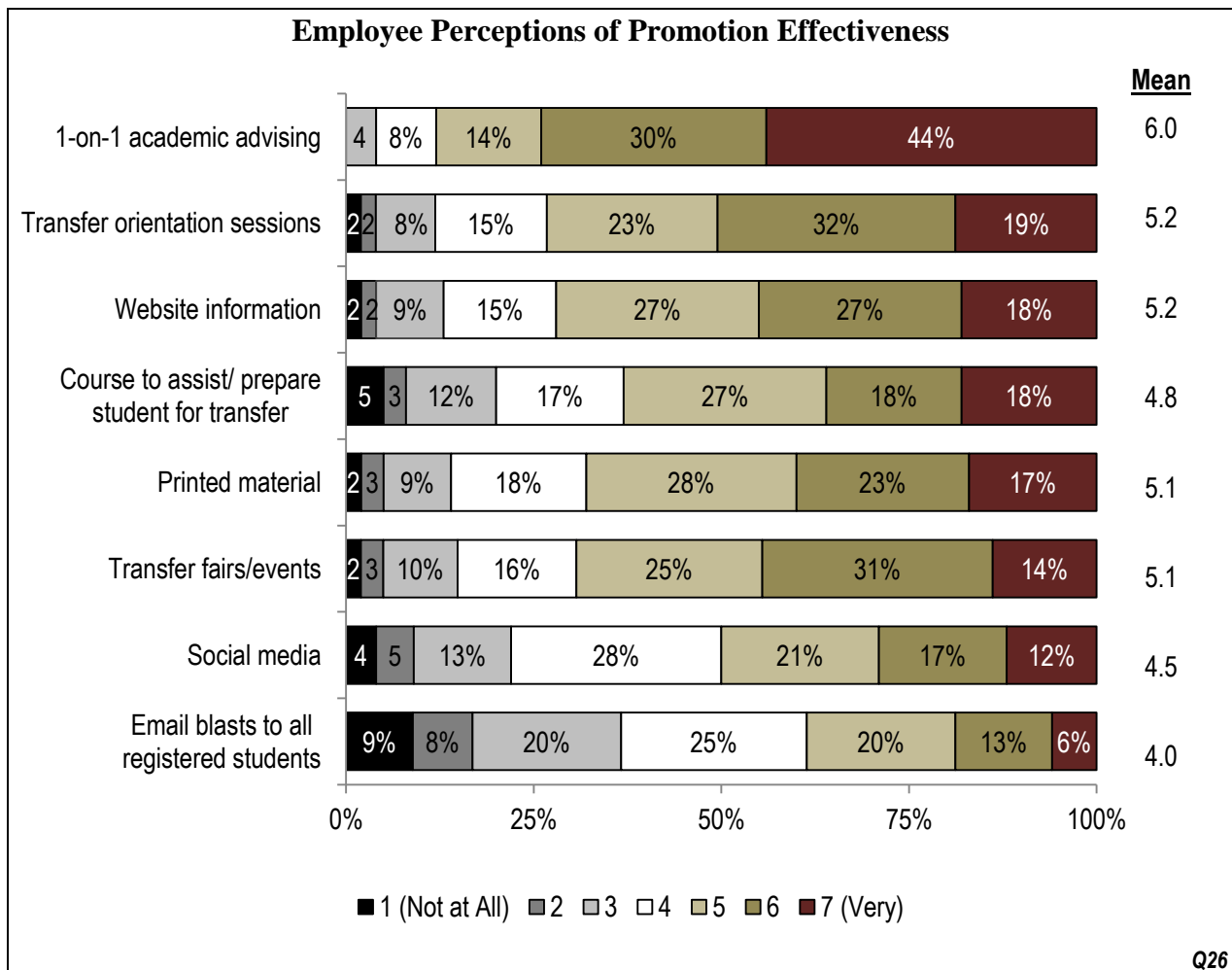
Figure 50. Employees' perceptions of effectiveness of transfer promotion efforts. Asked only of community college respondents.

Student perspectives on promotional effectiveness, shown in Figure 51, aligned closely with employee responses. Like employees, students indicated that one-on-one academic advising was the most effective means of gaining information on transfer options. Employees had less favorable views of social media and email blasts than did students, but both groups ranked these high-tech methods as least effective. Both groups also agreed on the effectiveness of transfer orientation sessions and website information, despite less than 20% of both employees and students indicating they used the website for promotional activities or to retrieve information. Lastly, students rated word-of-mouth as the third most effective means of learning about transfer options (72% in agreement). This was not a choice on the employee survey; however, employees should be aware of this avenue of communication among their students, and encourage dissemination of accurate information.
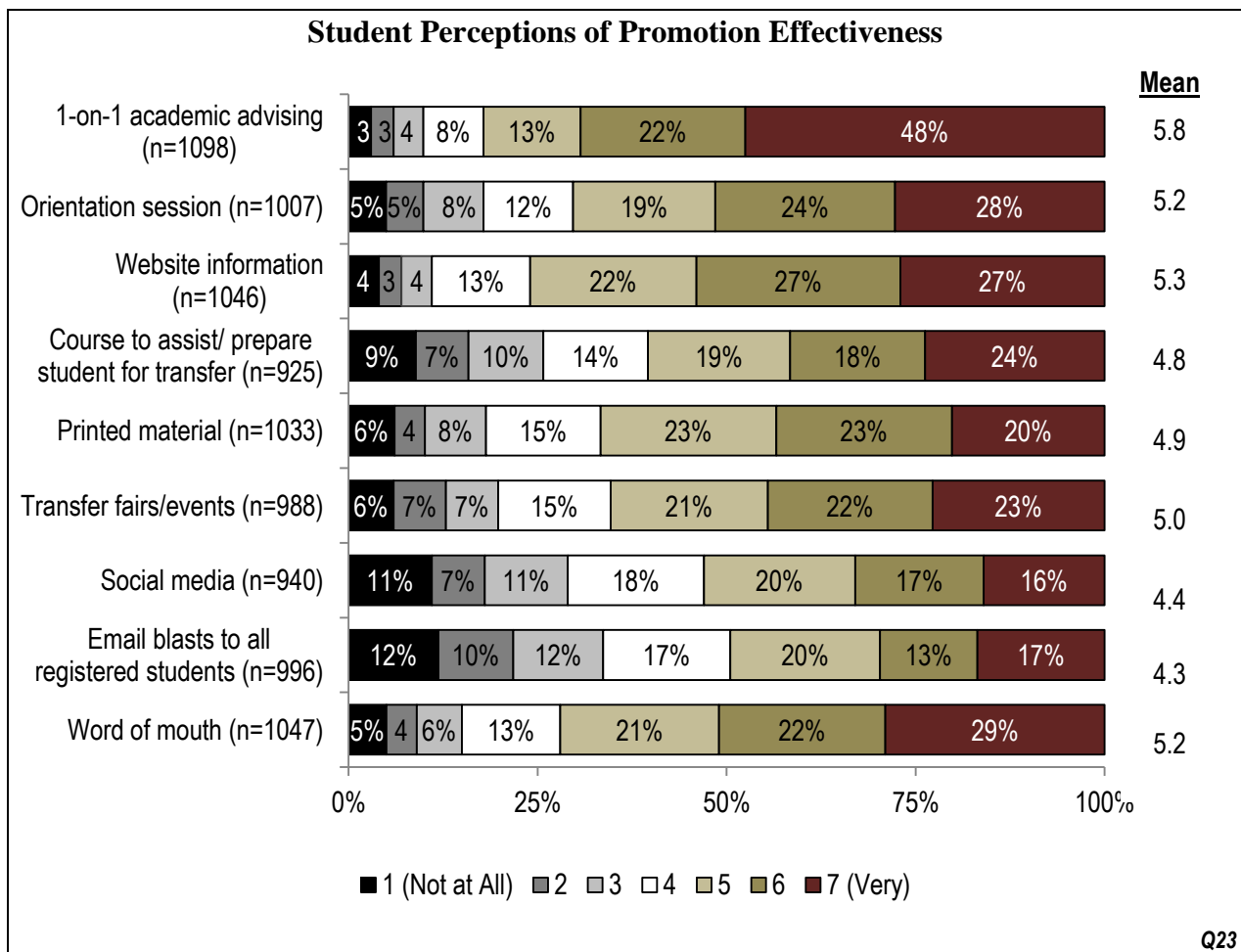
Figure 51. Students' perceptions of the effectiveness of transfer promotion efforts.

Additional Outreach Suggestions
When asked for additional promotion ideas, community college employees suggested primarily face-to-face approaches. Many comments centered on student advising, including increasing the number of advisors (whether they be faculty or student advisors), providing major-specific advisors to ensure students receive guidance that is appropriate for their intended educational path, or offering dual community college/university advising sessions.

Employees also suggested providing self-serve information that students can access on-demand, particularly online resources. As "students want to be able to obtain all information online," providing easy-to-understand information in multiple formats (i.e., print and web), possibly even linked to the online registration system, can help "keep the information in front of the student as much as possible."

Perspectives on the Transfer Experience
Opinions from employees on the front line of student advising signaled a need for increased information and communication. Generally, advisors were more positive about the information and opportunities available to students than those available to them for their professional needs. A summary of survey responses can be found in Figure 52.

Over 40% of advisors felt students had adequate information and resources for transfer, but many indicated they did not receive timely notification of transfer system changes (39% rating 1-3), and lacked awareness of all components of the transfer system (49% rating 1-3). This was in contrast to 2007 data, where community college advisors indicated much stronger agreement with respect to receiving notification of transfer system changes in a timely manner and awareness of all components of the transfer system. In addition, 63% of advisors agreed or strongly agreed that students had adequate opportunities to discuss articulation issues during pre-enrollment sessions; a higher percentage than in 2013. These differences between 2007 and 2013 suggest problems with communication of changes and availability of adequate time and/or resources to disseminate information to students during pre-enrollment have arisen since the prior survey.
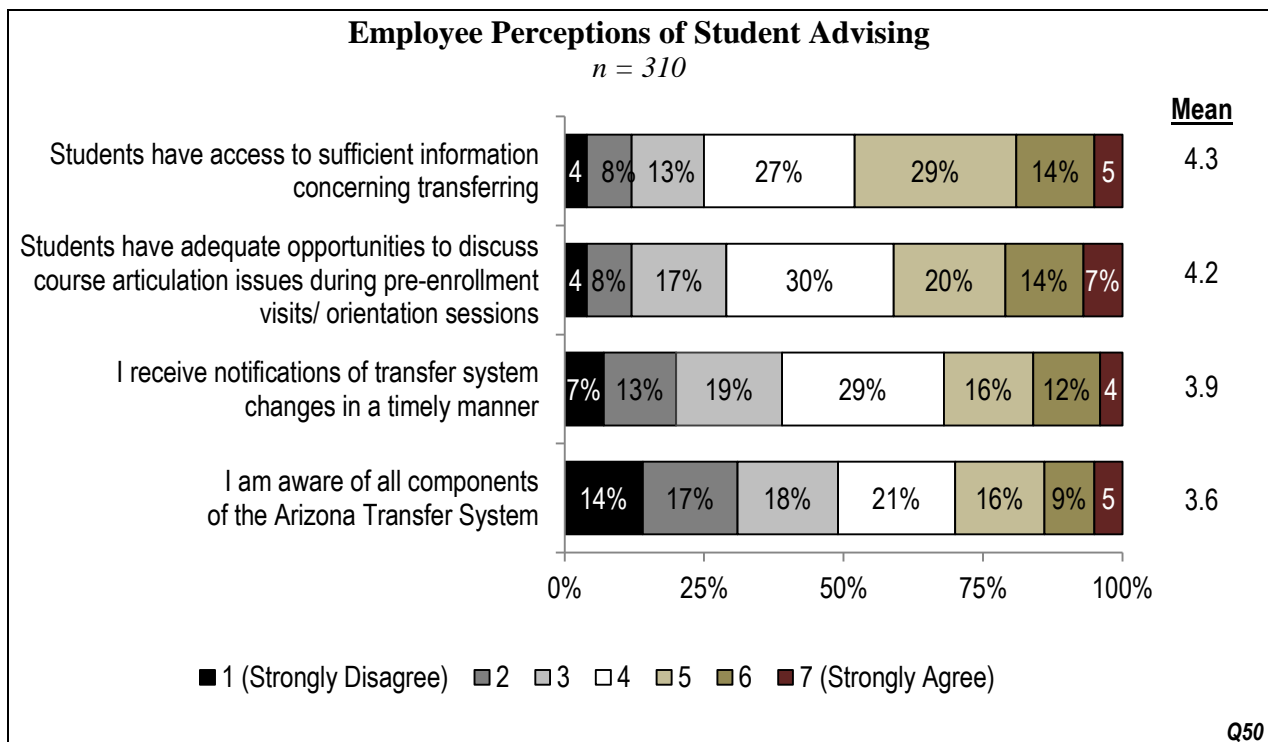
Figure 52. Advisors' perceptions of student advising opportunities and resources. Asked only of AZTransfer liaisons and respondents who indicated they had a student advising role.

Student perceptions on the transfer experience were more favorable than employees (see Figure 53). More than 60% of students expressed agreement that they had access to information and had sufficient opportunities to discuss transfer issues. Employees rated these somewhat lower, suggesting differences in perception between what the employees thought the students were gaining during the advising experience and what students were actually were taking away. Over half of student respondents felt they were regularly notified of changes in the transfer system, while approximately the same number of students agreed as disagreed that they were aware of the components of the transfer system. This seemed to be an area of concern for both students and employees, indicating that efforts to communicate the components of the system are still needed.
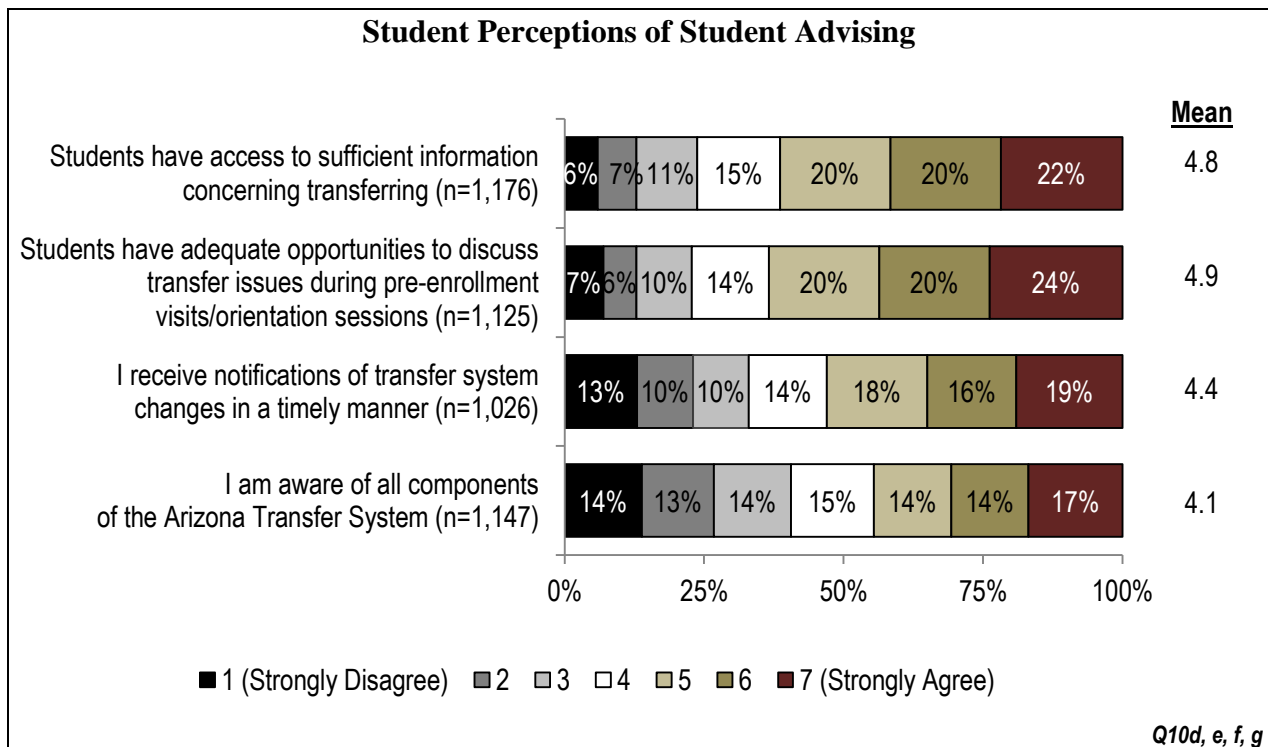
Figure 53. Student perceptions of transfer advisement.

Of those who indicated they had advised students through the transfer process in the last year, approximately 85% experienced some or no difficulties (see Figure 54). Extreme difficulties and inability to transfer were relatively rare, indicating that transfer processes are effective in facilitating students' transfer to universities.

Employee Perceptions of Students' Transfer Experiences
n = 71

Category	Percent
Transferred with no difficulties	52%
Transferred but with some difficulties	33%
Transferred but with many difficulties	11%
Unable to transfer/did not transfer	4%

0%   25%   50%   75%   100%

Q51, 52
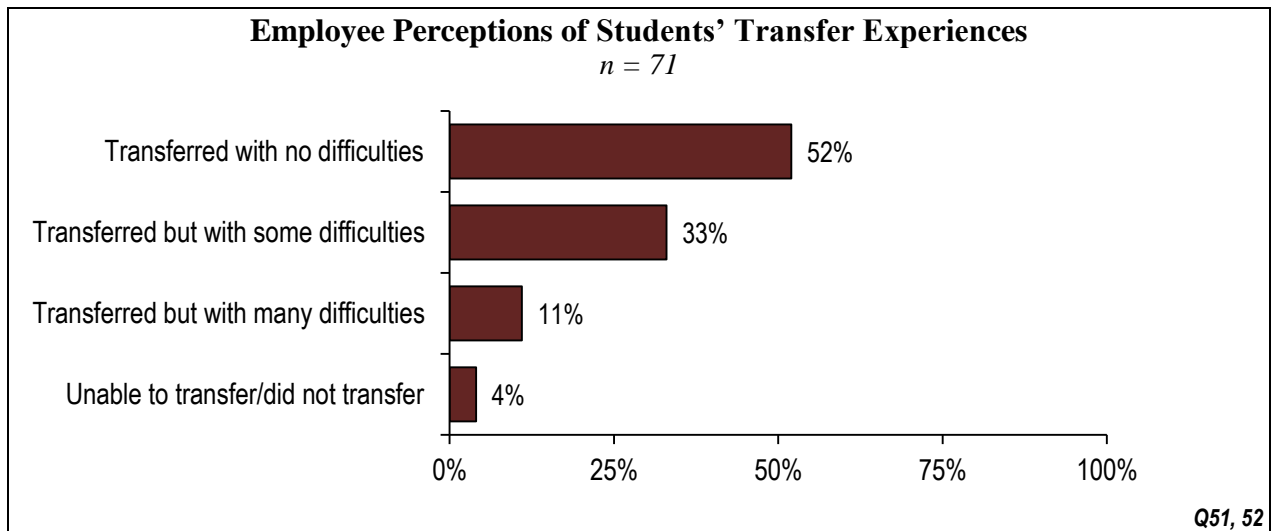
Figure 54. Advisors' perceptions of students' transfer experiences. Reporting the mean percent of advised students with each transfer experience. Asked only of respondents who indicated they had a student advising role and AZTransfer liaisons who advised at least one transfer student in the past year.

Transfer Barriers
From a college or university employee perspective, the predominant transfer barriers that students encountered were the result of lack of knowledge of either the transfer process or course requirements. Problems related to the universities accepting students' coursework, either as a result of not applying to their major course of study or due to a lack of standardization, were also primary barriers that impacted students.

The most commonly cited barrier in the 2007 advisor survey remained a predominant issue in 2013: Community college courses did not align with the university program. A summary of the 2013 survey responses can be found in Figure 55.

Employee Perceptions of Most Common Transfer Barriers

n = 280

Barrier	Percentage
Students do not know enough about the transfer process	30%
Community college courses do not apply to program	26%
Confusion regarding required courses	25%
Lack of university-community college consistency/standardization	18%
Students not prepared for university studies	11%
Course availability	10%
Confusion regarding program completion time	10%
Acclimation to university	10%
Advising availability issues	7%
Student hasn't chosen major	7%
Student didn't choose major in time	7%
AGEC transcript issues	4%
Student didn't change major in time	2%
Other	7%

Q53

Figure 55. Advisors' perceptions of students' transfer barriers. Up to two responses allowed. Asked only of respondents who indicated they had a student advising role and AZTransfer liaisons who advised at least one transfer student in the past year.

Students' top two responses both related to courses, either confusion over course requirements or community college courses not applying at their university (Figure 56). Lack of consistency between community college and university programs and systems was also among the top five barriers indicated by students. Despite the improvements to the transfer system, issues with transferring coursework from community colleges to the universities continue to be a problem for transferring students.

There were some key differences between students' and employees' perceptions of the barriers. Notably, transcript issues were selected as a barrier 26% of the time by students, while employee respondents only chose this 4% of the time. This suggests that employees were not aware of the extent of problems students are having with their transcripts upon transfer. Another substantial

difference was that course availability was chosen 25% of the time by students as an impediment to transferring, while it was only chosen 10% of the time by employees. It was not specifically indicated in the question whether this issue was a community college or university problem, but students' comments suggested that there were more issues with both the extent of community college offerings and the ability to enroll in courses than employees realized. Students also cited advising availability as a barrier far more often than employees (21% and 7%, respectively), implying that there may be difficulties with students' and advisors' schedules that may not be apparent to employees.

In 2007, students' most common transfer barriers were bad advising, transferability of courses, adjustment to the university setting, and transcript and paperwork issues. While there were some similar barriers for students in both the 2007 and 2013 survey data, issues specifically related to coursework seem to have become more of a problem over time, or possibly other issues (like advising and paperwork) have become less of a problem, causing the coursework issues rise to the top of the barriers.

While only 10% of students chose "Other" there were some common responses provided. Issues with academic advisors and faculty not being familiar with transfer programs or recommending courses that were not required were mentioned as well as transcript issues. Despite these transfer barriers, there were many students who indicated they had no issues transferring or there were no barriers to their transfer process.

Student Perceptions of Most Common Transfer Barriers

n = 886

Barrier	Percentage
Confusion regarding required courses	34%
Courses taken at community college do not apply to university	30%
Transcript issues	26%
Didn't know enough about the transfer process	26%
Lack of university-community college consistency/standardization	25%
Course availability	25%
Advising availability issues	21%
University admission problems/delays	18%
Confusion regarding program completion time	18%
Acclimation to university	17%
Requirements for declaring a major	16%
Other	10%

Q26

Figure 56. Students' perceptions of students' transfer barriers. Multiple responses allowed

Student Motivations

When asked for the primary reason for completing one of the transfer components, student responses varied slightly for each component. A summary of students' responses can be seen in Table 26. In regards to AGEC and Common Courses, students most frequently indicated it fit their 4-year degree requirements. Saving money was the most common motivation for completing a transfer pathway; however, this was also a commonly indicated motivation for completing an AGEC or Common Courses. Completion of requirements or degree was a common motivation for all three transfer components. Students also indicated that completing the AGEC helped credits transfer to a university. In 2007, students indicated similar motivations, with ease of transfer and fulfilling core requirements cited most often. Fitting core degree requirements was also the primary motivation for completing Common Courses.

Table 26. Students' Primary Motivation for Completing Transfer Component

Motivation	Percent of Respondents		
	AGEC (n = 892)	Transfer Pathway (n = 871)	Common Courses (n = 475)
Fit my 4-year degree requirements	24	23	26
Save money	15	25	20
Completion of requirements or degree	17	12	19
Credits easily transfer to a university	14	8	9
Fit my career goals	5	11	5
Improve chances for university admission	5	6	3
Academic advisor recommendation	6	3	4
Simplified my academic planning	4	4	4
Not sure	4	2	3
Personal satisfaction/feeling of accomplishment	2	4	2
Save time	2	1	4
Other	2	2	1

Note. Questions 33, 40, 47.

Students' motivations for not completing transfer components can be seen in Table 27. The primary motivations for not completing an AGEC were choosing to complete an associate degree instead or planning to transfer before graduating from community college. Common student responses for the transfer pathways included knowing the university and degree and following the transfer guide and intending to transfer to university before graduating from community college. There was a substantial percentage of students who indicated other reasons for not completing a Transfer Pathway; most of the additional responses included choosing to complete an AGEC, changing majors, and in the process of completing a Transfer Pathway. In regards to Common Courses, students frequently indicated knowing the university and degree and following the transfer guide as well as not being aware of the option as their primary motivation.

Table 27. Students' Primary Motivation for Not Completing Transfer Component

Motivation	Percent of Respondents		
	AGEC (n = 121)	Transfer Pathway (n = 357)	Common Courses (n = 475)
I knew my university and degree and followed the transfer guide	21	24	29
Not aware of the option	15	19	25
Intended to transfer to university before graduating from community college	22	23	9
Wanted to complete associate degree instead	22	-	7
It didn't align with my degree program	12	8	13
Not sure which university I want to attend	3	5	9
Other	6	22	9

Note. Questions 37, 44, 51.

Website Perceptions
Two websites have supported community-college-to-university transfer in Arizona: AZTransfer.com and APASCAZ.org. Both sites were managed by APASC as a part of the statewide collaborative project to support Arizona's higher education productivity goals. The decision to accommodate the state's transfer needs in two websites was deliberate.

AZTransfer.com, intended for advisors, students, and public use, provided an informational platform to help students navigate their higher-education options in the state of Arizona. The website was launched in August 2012, and replaced AZ.Transfer.org/CAS. APASCAZ.org had a narrower focus. Launched in 2011, the site was intended for community college and university employee use.

APASC utilized web analytics as a part of their standard website management process, but to better understand users' needs and perceptions, surveys included items asking employees about their perceptions of and interactions with both websites, while students were asked only about AZTransfer.com.

Website Use
Of the two websites, employees reported using AZTransfer.com more than APASCAZ.org (see Figure 57). However, most employees reported infrequent use, accessing the site quarterly or less often. The intermittent use was consistent with APASC expectations for episodic visitation. Large portions of the respondents reported never using the websites (24% for AZTransfer.com and 40% for APASCAZ.org), though the reasons for this lack of use were not explored in this research.

In 2007, employees were also asked about how frequently they used AZTransfer.com. Findings suggested use has declined since 2007, when more than 50% of respondents reported using the website at least once per week. Only 7% indicated they never used the website, in contrast to the 24% that never used it in the most recent survey. However, in 2007, academic advisors were represented in the sample at a much higher percentage than in 2013. Academic advisors in 2007 also indicated that they used the website at least once per week (72%), while more than 50% of faculty stated that they used the website less than once per month or never. This may suggest differences in website use by role and, therefore, differences in the two samples may be the cause of the overall differences rather than actual declines in website use. Further research is needed to examine the details.
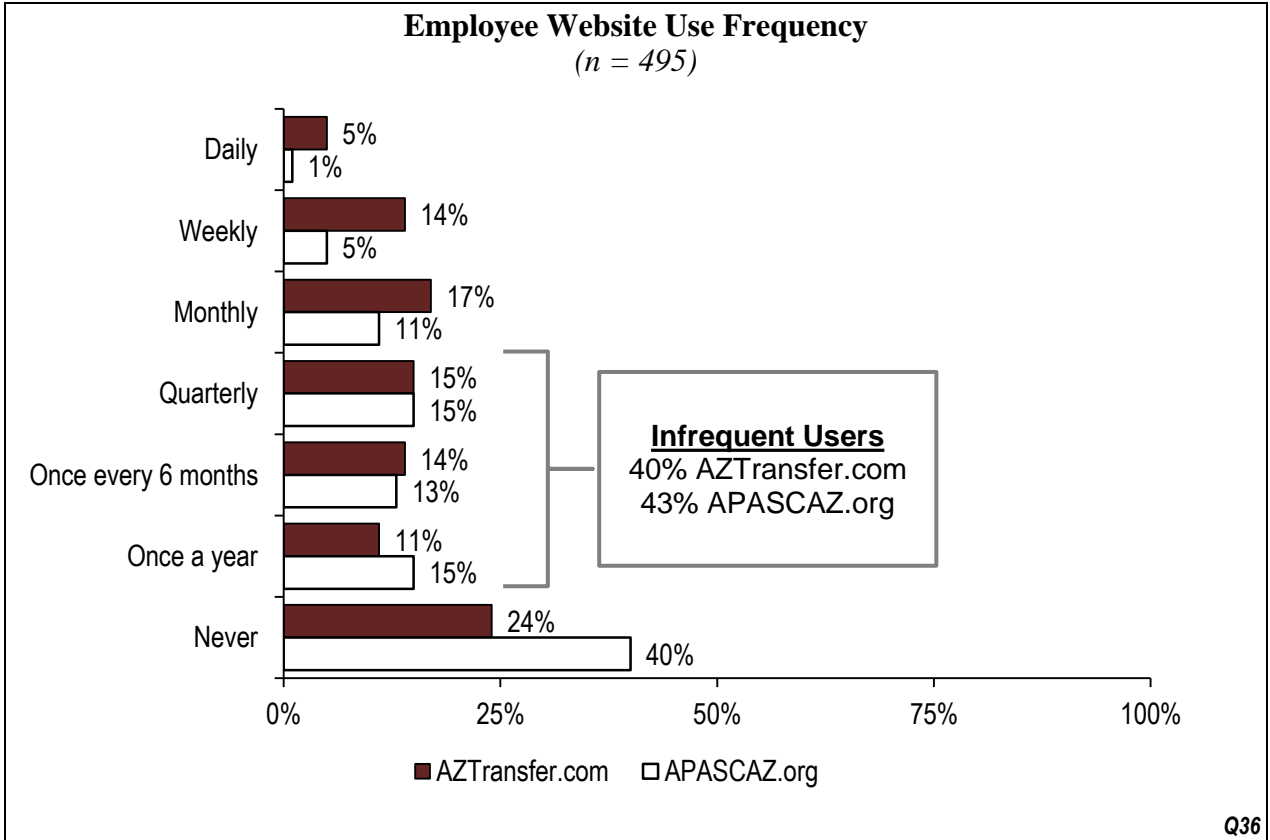
Figure 57. Employee frequency of use of AZTransfer.com and APASCAZ.org.

Student responses concerning their use of AZTransfer.com suggest that they visit the site less frequently than employees (see Figure 58). Very few students indicated that they visited the site daily, weekly, or monthly (11% combined), while 36% of employees utilized the site with that frequency. Nearly half of students surveyed expressed that they visit AZTransfer.com less often than once per year, indicating minimal use of the site by students.

A similar number of students indicated that they used the AZTransfer website daily or weekly in 2007 (1% and 2%, respectively) to those that did in the current survey. However, the percentage of students indicating they used it monthly to once per year in the current sample was greater than in 2007 (32% in 2007; 42% in the current data). And, fewer students in this sample noted that they never used the website than did in 2007. This suggests that, while students do not currently visit the site frequently, use among this group has increased since 2007.

Student Website Use Frequency
n = 718
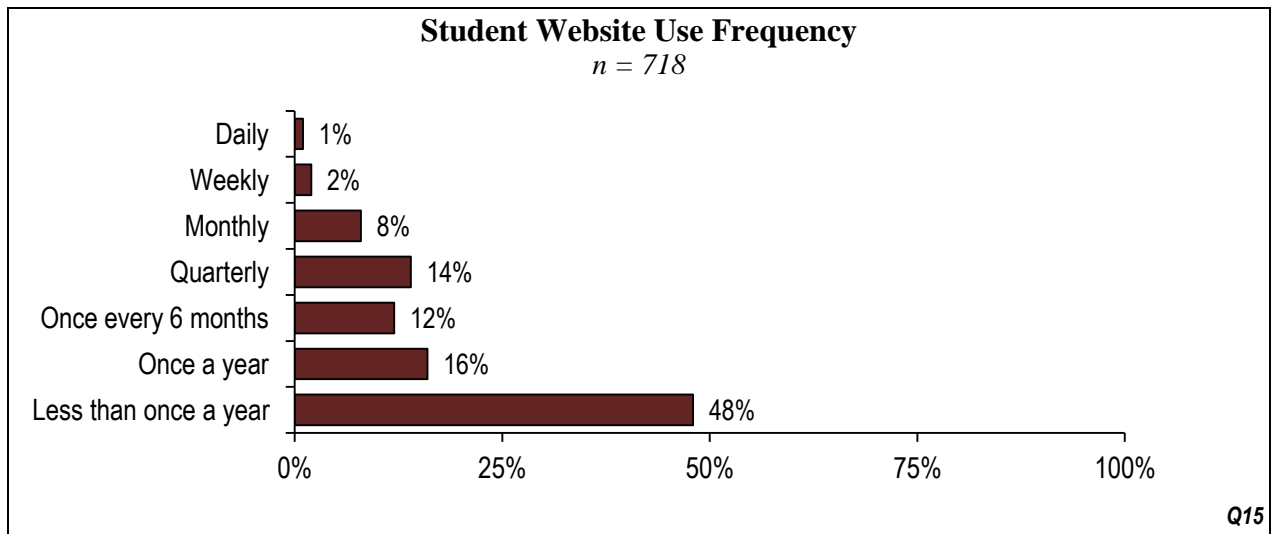
Figure 58. Student frequency of use of AZTransfer.com.

Website Satisfaction

Despite respondents' infrequent use, most employees reported strong satisfaction with AZTransfer.com (see Figure 59). Based on these reported ratings, web pages were loading well with an appealing visual interface, information was generally easy to find with good content quality, visitors were able to locate the desired information easily, and the site was satisfactorily facilitating the transfer and advising process. Overall, almost 90% of employees who used the website were satisfied, with very little disagreement in any category. This suggests that employees are satisfied with AZTransfer.com as a transfer resource.

In 2007, respondents were asked to indicate how "good" they found particular aspects of AZTransfer.com. Results were similar to the current data, where over 85% of employees chose "good" or "very good" for the quality of information, more than 75% found AZTransfer.com's facilitation of the transfer process as "good" or "very good," and more than 65% indicated a "good" or "very good" visual look. These results were differentiated between advisors, faculty, and staff; staff tended to have lower rankings for the qualities of the website than the other groups. Overall, views of the AZTransfer website were stable or improved since 2007.

AZTransfer.com Employee-User Satisfaction
n = 376

	Mean
Overall	5.7
Web page load speed	5.2
Finding information easily	5.2
Quality of information	5.2
Facilitating transfer and advising process	5.1
Visual look	5.0

Overall: 2 | 5 | 10% | 20% | 41% | 26%
Web page load speed: 5 | 21% | 26% | 31% | 16%
Finding information easily: 6% | 21% | 27% | 29% | 15%
Quality of information: 6% | 18% | 29% | 32% | 14%
Facilitating transfer and advising process: 3 | 8% | 19% | 29% | 27% | 14%
Visual look: 3 | 9% | 22% | 27% | 27% | 13%

Legend: ■1 (Not at All) ■2 ■3 □4 ■5 ■6 ■7 (Very Satisfied)

Q35, 41

Figure 59. Employee satisfaction with AZTransfer.com. Those who indicated they did not use the website were not included.

Students generally expressed satisfaction with AZTransfer.com overall, with 78% indicating they were at least somewhat satisfied. Students rated the information quality and the speed of page loading the highest, while they found transfer and advising facilitation to be the least satisfying. Interestingly, while employees indicated higher satisfaction than students with the website overall, most viewed the individual components slightly less favorably than the students. Percentages of student responses can be found in Figure 60.

In 2007, students were asked to rate AZTransfer.com aspects as "good" or "bad." While not directly comparable, those that chose "good" or "very good" are assumed to indicate satisfaction. More students noted that the website's facilitation of the transfer process and visual look was "good" or "very good" in 2007 than the current sample's percent satisfied for these features. Students' perception of the quality of information remained the same. Ease of navigation was not consistent; in 2007 more community college students found this property "good" or "very good" than the current sample, while fewer university students found navigability "good" or "very good." Community college respondents in 2007 claimed that they used the website less frequently than university students; therefore their higher rankings may be due to less familiarity or recall of the website at the time of the survey. Overall satisfaction and web page load speed were not included in the 2007 survey.

AZTransfer.com Student-User Satisfaction
n=371

	Mean
Overall	5.4
Web page load speed	5.7
Finding information easily	5.3
Quality of information	5.6
Facilitating transfer and advising process	5.2
Visual look	5.4

Legend: ■1 (Not at All) ■2 ▢3 ▢4 ▢5 ■6 ■7 (Very Satisfied)

Q16, 17
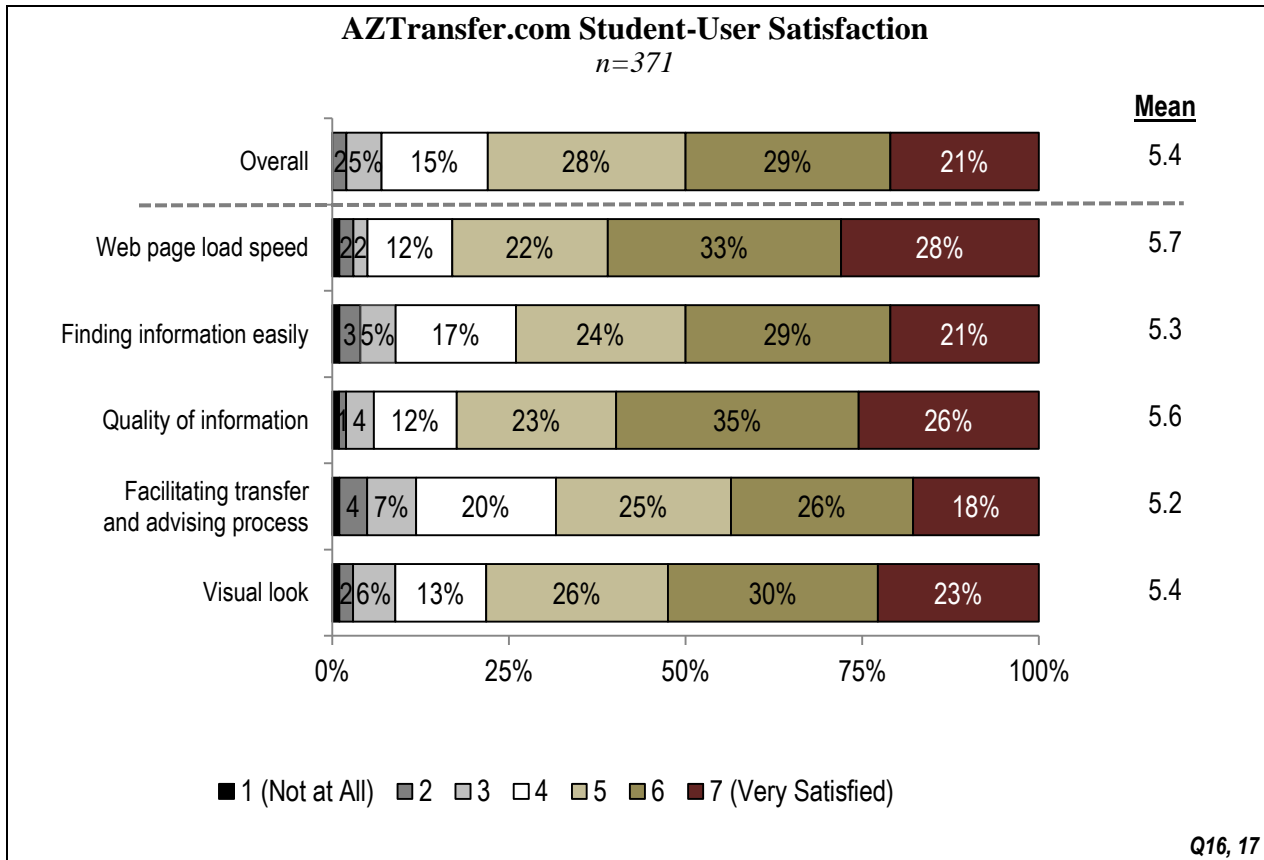
Figure 60. Student satisfaction with AZTransfer.com. Those who indicated they did not use the website are not included.

Compared to AZTransfer.com, satisfaction levels with APASCAZ.org were slightly lower, but still very positive (see Figure 61). Over 75% of all users reported high overall satisfaction. Respondents ranked the quality of information provided on the website the highest of the specific website characteristics, but rated all aspects of the website favorably, with over 50% agreement on all criteria.

APASCAZ.org Employee-User Satisfaction
n=295

	Mean
Overall	5.4
Web page load speed	5.2
Quality of information	4.9
Visual look	4.9
Facilitating transfer and advising process	4.8
Finding information easily	4.7

Legend: ■ 1 (Not at All) ■ 2 □ 3 □ 4 □ 5 ■ 6 ■ 7 (Very Satisfied)

Q35, 37
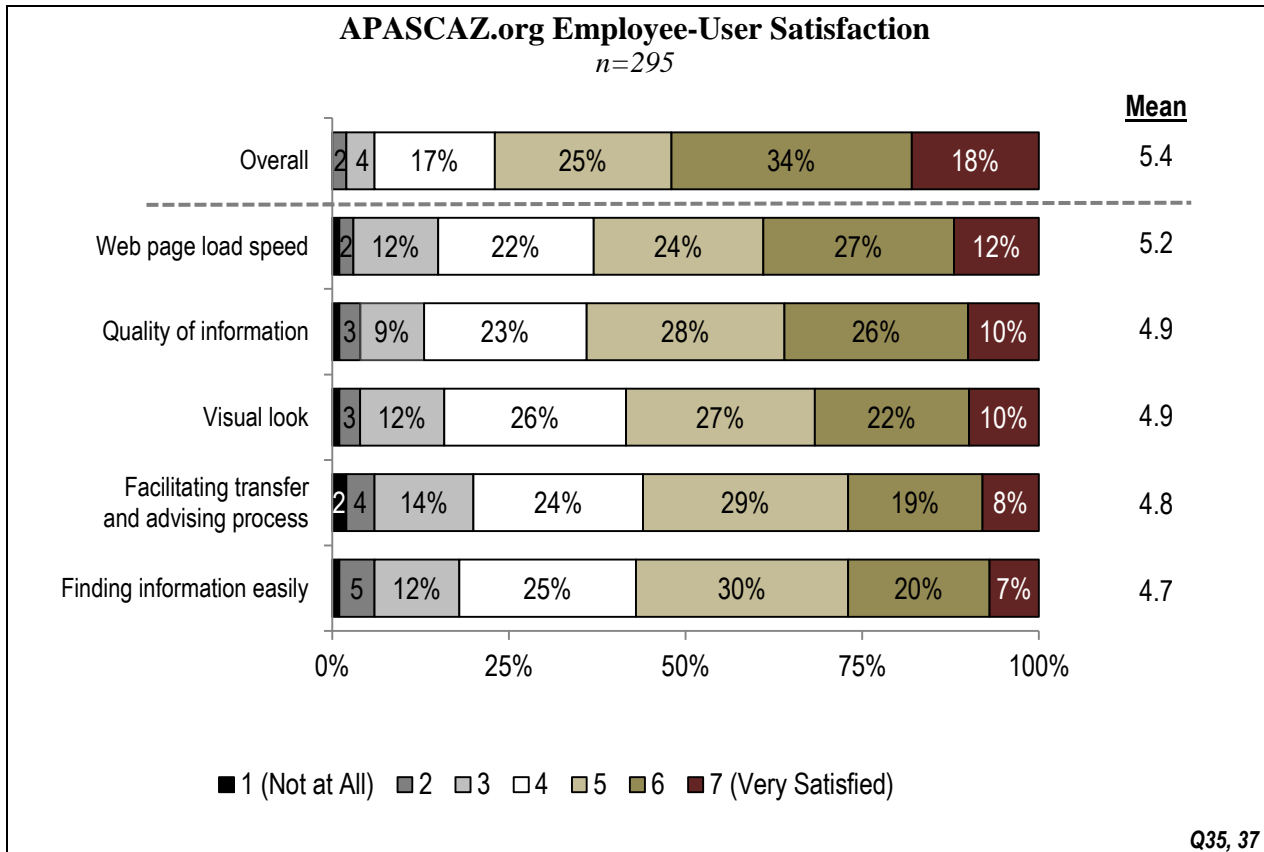
Figure 61. Employee satisfaction with APASCAZ.org. Those who indicated they did not use the website were not included.

Website Content
The information most accessed by employees was all related to courses: course equivalency information, course transfer information, and Common Course information (Figure 62). Employees were also asked about information they needed but could not find on AZTransfer.com. One-third of responding employees reported difficulty in locating information on recent changes, which may contribute to their perceptions that they were not notified of changes to the system. Major guides, planning guides, and degree pathway information were also cited, but to a lesser extent.

Employee Use of AZTransfer.com Content

	Information Accessed Most Often (n=367)	Information Cannot Find (n=210)
Course equivalency information	46%	5%
Course transfer information	20%	5%
Common Course Matrices information	13%	7%
Degree pathway information	6%	11%
AGEC information	4%	8%
Student advising information	3%	12%
Recent changes	3%	35%
Major guides	2%	16%
Planning guides	1%	14%
Exam equivalency information	1%	9%
Other	1%	8%

Q42, 43

Figure 62. Information accessed most often (single response allowed) or which users could not find (multiple responses allowed) on AZTransfer.com. Those who indicated they did not use the website were not included.

Suggestions for other informational resources not found on AZTransfer.com most commonly related to course transfer information. Quickly mapping course equivalency in multiple directions (university-to-community college; community college-to-community college) was the most common suggestion. One respondent also suggested providing "all transfer information for a single course for all the AZ colleges and universities" on one page to eliminate the need to navigate to several pages to obtain this information.

AZTransfer staff clarified that the university-community college functionality exists on the website, but acknowledge the information may be difficult to locate. Community college-to-

community college information alignment does not exist at this time, and creating the informational crosswalk would likely require institutional agreements and formal AZTransfer authorization.

Like the employees, students most commonly indicated accessing course information, specifically course equivalency and course transfer information using AZTransfer.com. Similarly, in 2007 the majority of students indicated course equivalency guides as their purpose for using AZTransfer.com. See Figure 63 for a summary of student responses from the 2013 survey.

When asked what information they need but could not find, students again concurred with the employees that they were unable to locate major guides, planning guides, and recent changes. This agreement among stakeholders suggested that this information was not as easy to locate as it likely needs to be. While a substantial percentage of students indicated they access university information and degree pathway information most often on the site, there were higher percentages of students who indicated they needed that information but could not find it. There were a number of students who selected "Other" information they needed but could not find, but most responses indicated they had no issues finding information or there was nothing they could not find.

Student Use of AZTransfer.com Content

	Information Accessed Most Often (n=371)	Information Cannot Find (n=371)
Course equivalency information	38%	9%
Course transfer information	18%	10%
University information about ASU NAU and/or UA	11%	12%
Degree pathway information	10%	17%
Major guides	8%	19%
AGEC information	6%	7%
Planning guides	3%	18%
Student advising information	3%	14%
Common Course Matrices information	2%	5%
Exam equivalency information	1%	13%
Other	1%	13%
Recent changes	1%	18%

Q18, 19

Figure 63. Information accessed most often (single response allowed) or which users could not find (multiple response allowed) on AZTransfer.com. Those who indicated they did not use the website were not included.

APASCAZ.org web content reactions ran parallel to the reactions to AZTransfer.com (see Figure 64), as employees reported most commonly using APASCAZ.org to access course information, such as equivalency information, Common Course Matrices, and course transfer information. A large majority of responding employees reported difficulty in locating information on recent changes on APASCAZ.org. Planning guides, degree pathway information, and major guides were also cited, but to a lesser extent followed by exam equivalency and student advising information.

Employee Use of APASCAZ.org Content

Category	Information Accessed Most Often (n=293)	Information Cannot Find (n=149)
Course equivalency information	38%	11%
Common Course Matrices information	18%	5%
Course transfer information	16%	7%
Degree pathway information	8%	14%
Major guides	6%	14%
Student advising information	3%	10%
Recent changes	3%	40%
Exam equivalency information	2%	11%
Planning guides	1%	17%
Other	5%	9%

Q38,39

Figure 64. Information accessed most often (single response allowed) or which users could not find (multiple responses allowed) on AZTransfer.com. Those who indicated they did not use the website were not included.

Suggestions for other informational resources not found on APASCAZ.org were limited, and came primarily from community college respondents. The most common response was related to specific items that respondents either thought would be beneficial or had difficulty finding on the site, including AGEC policies, historical documents, and relevant legislation from other states.

Website Improvements
Of the potential improvements to strengthen the websites, responses were fairly evenly distributed among the provided options (see Figure 65), though increasing student awareness of AZTransfer.com was the most common suggestion. Several users expressed experiencing navigation issues on both sites, specifically not being able to locate information they had accessed in the past. Other suggested improvements for AZTransfer.com included providing a more robust search function, which could potentially help users who "get lost in the website."

Employee Suggestions for Website Improvement Preferences

Increase student awareness * — AZTransfer.com: 30%

Orientation/training for faculty/staff — AZTransfer.com: 24%, APASCAZ.org: 33%

Simplified navigation — AZTransfer.com: 23%, APASCAZ.org: 34%

Notification system for recent changes — AZTransfer.com: 21%, APASCAZ.org: 29%

Other — AZTransfer.com: 2%, APASCAZ.org: 2%

(Axis: 0%, 25%, 50%, 75%, 100%)

■ AZTransfer.com (n=332)   □ APASCAZ.org (n=252)

Increase student awareness only applicable to AZTransfer.com

Q40, 44

Figure 65. Employee suggestions for improving Arizona's transfer websites. Multiple responses were allowed. Those who indicated they did not use the website were not included.

More than half of students suggested increasing student awareness for improvement to AZTransfer.com. The remaining response option percentages were evenly distributed. A summary of student responses can be found in Figure 66. While only 5% of students selected "Other" some of those responses echoed the information they could not find, suggesting better course equivalency information and transferable courses: "Overall pretty good, I only need to know which classes would transfer."

Student Suggestions for Website Improvement Preferences
n = 371

Increase student awareness: 51%

Orientation/training for faculty/staff: 26%

Up to date information: 28%

Simplified navigation: 26%

Notification system for recent changes: 25%

Other: 5%

(Axis: 0%, 25%, 50%, 75%, 100%)

Q21
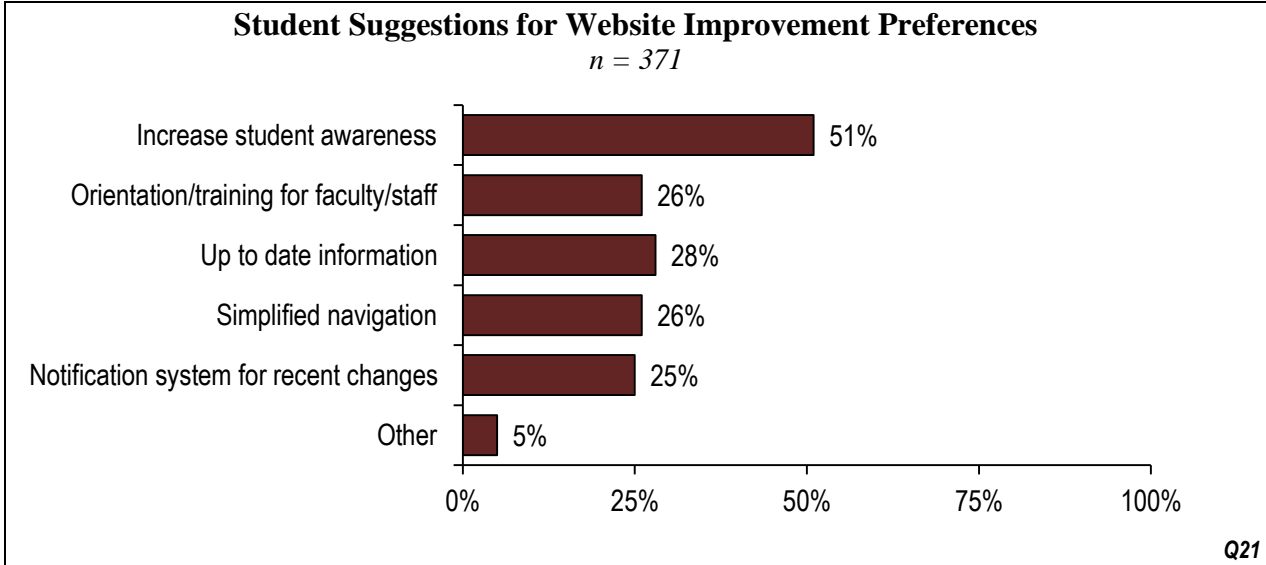
Figure 66. Student suggestions for improving Arizona's transfer website. Multiple responses were allowed. Those who indicated they did not use the website were not included.

Employees' responses for improvement to AZTransfer.com were fairly evenly distributed, but the most common suggestion was increasing student awareness. More than half of students suggested increasing student awareness, indicating that all stakeholders feel this is a necessary task.

As a part of the evaluation inquiry, the Hezel Associates team also explored the APASC website, and found the layout clean with straightforward navigation, but encountered places where content was difficult to locate. APASC staff, for example, referred the evaluation team to a reference list of example transcripts at www.apascaz.org/resources/transcripts.html. The web list included 10 sample transcripts, and two issues emerged.

First, the site map was not matched to the existing website navigation. The "Transcripts" landing page, for example, was not easily located as there was no direct link from the "Resources" page. A comparison of the APASCAZ.org site map and the associated web page revealed some content pages did not have web links on the "Resources" page, specifically (a) AZ Liaison Guidelines, (b) International Transfer Student Admissions, and (c) Language Proficiency.

Second, resource documents presented some challenges for reviewers. A review of the sample transcripts revealed each institution's transcript had a different transcript layout and some designated the AGEC more obviously than others. None of the samples had layout guides to orient users to the various document layouts.

APASCAZ.org did include a search function, but the query box was located in the footer, which assumes users will scroll to the bottom of a page to locate the search widget. AZTransfer.com does not have a similar search function, but employees indicated it may be useful.

It is worth noting that the APASCAZ.org website has since been replaced by steeringcommittee.aztransfer.com. This new website was not reviewed for this evaluation.

CONCLUSIONS

Overall, Arizona's transfer system initiatives, including Getting AHEAD, have been successful in achieving its goals. Compared to five years ago, greater percentages of transfer students are completing their bachelor's degrees and they are completing them within four years and with fewer credits. These facts represent key successes of the transfer system, as the educational process for transfer students is both more successful and more efficient.

Employees and students involved in Arizona's transfer system have favorable opinions of the system as a whole, and of its individual components. All stakeholders reported high familiarity, satisfaction, and usefulness for AGEC, transfer pathways, and Common Courses, suggesting that the efforts have been successful in increasing awareness and quality of the transfer system. Stakeholders agree, however, that despite these positive views students still do not know enough about their transfer options.

As was indicated in the 2007 Report, community college and university employees continue to have very different perceptions when it comes to the collaborative relationship between the different institutions, the transfer process in general, and transfer students specifically. Community college employees generally are more pessimistic about the collaboration with universities, and more optimistic about the transfer process and their students' readiness for university coursework than their university counterparts.

Substantial progress has been made in terms of transfer processes in Arizona, particularly in terms of documentation. All community colleges clearly document students' AGEC attainment status on transcripts. Processes between institutions, however, continue to be inconsistent, for example in terms of where the notation is made on the transcript and whether certifications in-progress are documented. These inconsistencies can make it challenging for those unfamiliar with a particular transcript format to efficiently translate its contents.

The majority of community college students who transfer to a university do so with few problems, a testament to the effectiveness of the transfer system. Problems still persist, however, with availability of advising resources and students' community college coursework not transferring to their university program. The transfer process does not end when students leave the community colleges, as students continue to require support during and after their university transfer to ensure they have the information and support they need for a smooth transition.

Despite the multitude of transfer resources available to students and employees in a variety of formats, one-on-one communication continues to be the most effective method for communicating information about the transfer process and supporting transfer students. Availability of transfer-informed advising remains a lynchpin in the transfer students' success. Misinformed or limited numbers of qualified advisors can cause difficulties for even motivated students.

The Getting AHEAD program and other interventions related to the transfer system have provided invaluable resources and opportunities for college students in Arizona. Maintaining and expanding the transfer resources already available becomes the next challenge for the AZTransfer Steering Committee.

RECOMMENDATIONS

As overall the transfer system in Arizona has been successful in achieving its goals, Hezel Associates does not recommend any widespread changes to the system. As with any such system, however, minor adjustments and continued attention will be needed moving forward in order to sustain the existing system, monitor the system's functioning, and make revisions to meet the evolving needs of the stakeholders in Arizona. Hezel Associates makes the following recommendations to help the AZTransfer Steering Committee maintain and expand the transfer system to reduce or eliminate the barriers to transfer that students continue to experience and promote continued and even increase success in the future.

Maintain the existing transfer system components as they are effective in promoting degree completion among transfer students. AGEC, transfer pathways, and Common Courses are recognized and appreciated by employees and students in Arizona's institutions. It is imperative, therefore, that these systems continue to operate and even expand as community colleges and universities are dynamic organizations. Continued dedication of time and resources will be necessary to ensure the transfer system and its individual components continue to be effective in meeting the needs of students and employees.

Continue efforts to increase student awareness of the various components of the transfer system to ensure all students have the information necessary to ensure a smooth transfer process. All community college students, regardless of their initial intention to transfer to a university, should be aware of the resources available to them to aid their transfer process. As students' plans are rarely firmly determined upon their entry to a community college, it is imperative that all students receive accurate information about the transfer system such that they can make informed decisions about their community college coursework and, ultimately, whether and when to transfer to a university to continue their education.

Enhance training opportunities for transfer-relevant employees to increase awareness of all components of the transfer system and the requirements of degree paths to ensure all students receive appropriate guidance. Standardized training should be provided to all employees involved in the transfer system. All students should have knowledge of and access to transfer resources at their institution, including an informed academic advisor as well as electronic and print resources to aid them in their progression through the transfer process. Providing standard training regarding the transfer system and the individual components to relevant employees is an essential first step in ultimately providing accurate information to students.

Expand opportunities for communication between community college and university personnel to increase message consistency across institutions. Cross-institutional communication is essential to an effective transfer system. Facilitating communication between community college and university employees is necessary for ensuring consistent curricula and policies exist among the institutions, as well as encouraging mutual respect between faculty and staff at all institutions. In order to be effective, regular, purposeful communication must occur frequently and at all levels, both within and among institutions, and between all employees from institutional administrators to administrative staff.

Standardize administrative processes to ensure appropriate and consistent identification of student progress and certifications on community college transcripts to ease student transitions to universities. Consistent transcript notations, including location, wording, and all relevant certification details, will eliminate confusion and ease students' transition to the university. While substantial progress has been made with respect to community college transcript notation, additional consistency would further improve the transfer system.

Expand transfer resources available to students at the universities to enhance the post-transfer experiences for students. Transfer resources, which include transfer-knowledgeable advisors as well as electronic and text-based transfer information, should be readily available and accessible at all universities. Transfer students require continued support after they arrive at the university, particularly with respect to identifying required courses for their selected major and receiving appropriate credit for their community college coursework. Increased communication by universities of existing resources for transfer students will provide much-needed post-transfer supports to all students.

Utilize former transfer students as resources for current and future transfer students. Word-of-mouth is a powerful communication tool that can be harnessed for the purpose of providing additional formal and informal advising resources for transfer students. Students who have successfully transferred from a community college to a university are an invaluable resource as they have first-hand information about the ins-and-outs of the transfer system. Providing formal training for these former transfer students to serve as student advisors at their respective community colleges could provide increased awareness and additional access to transfer information for those looking to transfer in the future.

REFERENCES

Bellini, J., Bolton, B., & Neath, J. (1996). Diagnostic determinants of rehabilitation counselor eligibility decisions. *Journal of Rehabilitation Administration, 20*(2), 93-106.

Hezel Associates, LLC. (2007). *Evaluation of Arizona's transfer articulation system*. Syracuse, New York: Hezel Associates.

Leech, N. L., Barrett, K. C., Morgan, G. A. (2008). SPSS for intermediate statistics: Use and interpretation (3rd ed.). New York: Psychology Press.

Mueller, J., Wood, W., Willoughby, T., Ross, C., & Specht, J. (2008). Identifying discriminating variables between teachers who fully integrate computers and teachers with limited integration. *Computers & Education, 51*, 1523-1537.

APPENDIX: INSTRUMENTS

Employee Survey

INTRODUCTION:
The Arizona Board of Regents on behalf of APASC and Getting AHEAD engaged Hezel Associates to survey university and community college employees.

Your input will help strengthen and improve APASC and AZTransfer.

We expect the survey will take approximately 10-15 minutes. Please be assured, your individual responses are confidential, and will be reported as part of group feedback.

If you have any questions regarding this survey, please contact Erica Winters at Erica@hezel.com.

Do you agree to participate in this survey?
1.   Yes
2.   No

1.   Where are you currently employed?
        1.   Arizona State University
        2.   Arizona Western College
        3.   Central Arizona College
        4.   Chandler-Gilbert Community College
        5.   Cochise College
        6.   Coconino Community College
        7.   Dine College
        8.   Eastern Arizona College
        9.   Estrella Mountain Community College
        10.   GateWay Community College
        11.   Glendale Community College
        12.   Maricopa County Community College
        13.   Mesa Community College
        14.   Mohave Community College
        15.   Northern Arizona University
        16.   Northland Pioneer College
        17.   Paradise Valley Community College
        18.   Phoenix College
        19.   Pima Community College
        20.   Rio Salado Community College
        21.   Scottsdale Community College
        22.   South Mountain Community College
        23.   Tohono O'odham Community College
        24.   University of Arizona
        25.   Yavapai College
        26.   Other

2.   Which department do you work for?
        1.   _____

3.   How long have you been employed…?
        (If less than 1 year, please enter 0)
        1.   __ # years in your current position
        2.   __ # years in higher education in Arizona

4.   Which of the follow best describes your current role?
        1.   Academic Advisor
        2.   Admissions Office staff member
        3.   Chief Academic Officer (CAO)
        4.   Faculty member
        5.   Institutional Articulation Facilitator (IAF)
        6.   Registrar's Office staff member
        7.   Other

5.   Using a 7-point scale, where 7 = Very and 1 = Not at All…

In general, how satisfied are you with …

Not at all   Very Satisfied
1   2   3   4   5   6   7

a.   APASC (Academic Program Articulation Steering Committee)
b.   AZTransfer

6.   To what extent do you agree with the following statements?

Strongly Disagree   Strongly Agree
1   2   3   4   5   6   7

a.   Transfer students are well prepared for university study
b.   APSAC is strengthening education attainment statewide
c.   AZTransfer is strengthening education attainment statewide
d.   Most students know about transfer opportunities

7.   Thinking about Arizona's statewide transfer system as a whole….
        (APASC and AZTransfer)

What is the system's greatest STRENGTH?
1.   Available information resources
2.   Creates university-community college consistency/standardization
3.   Credits transfer as a block
4.   Easy to transfer
5.   Easy to use
6.   Facilitates university-community college collaboration
7.   Fosters curriculum growth/innovation
8.   Fosters quality of teaching/instruction
9.   Guaranteed course transfer
10.   Maximizes student tuition dollars
11.   Prepares students for university study
12.   Satisfies general education requirements
13.   Saves administrative costs
14.   Student record sharing
15.   Useful framework for academic planning
16.   Variety of courses
17.   Other_____

8.   What is the system's greatest WEAKNESS?
   1.   Impedes curriculum growth/innovation
   2.   Impedes quality course delivery
   3.   Inability to share electronic student records
   4.   Inconsistent academic rigor between community colleges and universities
   5.   Inflexible for certain majors
   6.   Infrequency of updates when changes are made
   7.   Lack of communication
   8.   Lack of advisor familiarity
   9.   Lack of faculty familiarity
   10.   Lack of student familiarity
   11.   Lack of university-community college consistency/standardization
   12.   School specific requirements not met/extra courses needed
   13.   Students are not prepared for university studies
   14.   Students do not use the Transfer System
   15.   System is difficult to use
   16.   Transfer System is confusing
   17.   Unnecessary courses are included
   18.   Other＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

9.   What would IMPROVE Arizona's statewide transfer system?
   (select all that apply)
   1.   Ability to share electronic student records (e.g., electronic transcripts)
   2.   Engage community colleges further
   3.   Engage K12 education system
   4.   Expand and include more courses and majors
   5.   Increase communication between community colleges and universities
   6.   Increase community colleges involvement
   7.   Increase consistency across all higher education institutions
   8.   Increase consistency between community colleges and universities
   9.   Make the transfer system more user-friendly
   10.   Provide better information for students
   11.   Provide better training and tools for faculty/staff
   12.   Publicize the transfer system to students
   13.   Rename the Arizona statewide transfer system to be more memorable
   14.   Simplify the transfer process
   15.   Standardize the transfer process
   16.   Other＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿

10.   For each of the following components of the Arizona's statewide transfer system,

        How FAMILIAR are you with….?

        Not at all   Very Familiar
        1   2   3   4   5   6   7

        a.   Arizona General Education Curriculum (AGEC)
        b.   Transfer pathway degrees (AA, AS, ABus)
        c.   Common Courses
        d.   High school dual enrollment courses
        e.   Exams to earn college credit (AP, CLEP, IB)
        f.   SUN System

11.   How USEFUL is …. ?

        Not at all   Very Useful   No Opinion
        1   2   3   4   5   6   7   8

        a.   Arizona General Education Curriculum (AGEC)
        b.   Transfer pathway degrees (AA, AS, ABus)
        c.   Common Courses
        d.   High school dual enrollment courses
        e.   Exams to earn college credit (AP, CLEP, IB)
        f.   SUN System

12.   How SATISFIED are you with …. ?

        Not at all   Very Useful   No Opinion
        1   2   3   4   5   6   7   8

        a.   Arizona General Education Curriculum (AGEC)
        b.   Transfer pathway degrees (AA, AS, ABus)
        c.   Common Courses
        d.   High school dual enrollment courses
        e.   Exams to earn college credit (AP, CLEP, IB)
        f.   SUN System

13. These next questions focus on the ARIZONA GENERAL EDUCATION CURRICULUM (AGEC).

   AGEC is comprised of 35-37 credit hours of course work that upon completion, will transfer to the three Arizona state universities and meet lower division, general education requirements. It allows students attending any Arizona tribal or public community college with the opportunity to build a general education curriculum that is transferable upon completion to another Arizona tribal or public community college or university.

   Thinking about AGEC as a mechanism to facilitate transfer…

   To what extent do you agree with the following statements?

   Strongly Disagree   Strongly Agree
   1   2   3   4   5   6   7

   a.   AGEC facilitates student progress toward meeting baccalaureate degree requirements
   b.   AGEC reduces barriers students experience when transferring from a community college to a university
   c.   Each community college consistently identifies AGECs on their student transcripts
   d.   AGEC students are well prepared for university study
   e.   AGEC requirements are clearly defined

14. Thinking about AGEC with respect to the transfer system…

   What is AGEC's greatest STRENGTH?
   1.   Available information resources
   2.   Creates university-community college consistency/standardization
   3.   Credits transfer as a block
   4.   Easy to transfer
   5.   Easy to use
   6.   Facilitates university-community college collaboration
   7.   Fosters curriculum growth/innovation
   8.   Fosters quality of teaching/instruction
   9.   Guaranteed course transfer
   10.   Maximizes student tuition dollars
   11.   Prepares students for university study
   12.   Satisfies general education requirements
   13.   Saves administrative costs
   14.   Student record sharing
   15.   Useful framework for academic planning
   16.   Variety of courses
   17.   Other_____

15. What is AGEC's greatest WEAKNESS?
    1. Impedes curriculum growth/innovation
    2. Impedes quality course delivery
    3. Inability to share electronic student records
    4. Inconsistent academic rigor between community colleges and universities
    5. Inflexible for certain majors
    6. Infrequency of updates when changes are made to the AGEC
    7. Lack of communication
    8. Lack of advisor familiarity
    9. Lack of faculty familiarity
    10. Lack of student familiarity
    11. Lack of university-community college consistency/standardization
    12. School specific requirements not met/extra courses needed
    13. Students are not prepared for university studies
    14. Students do not use AGEC
    15. System is difficult to use
    16. AGEC is confusing
    17. Unnecessary courses are included
    18. Other

16. What would IMPROVE AGEC?
    (select all that apply)
    1. Ability to share electronic student records (e.g., electronic transcripts)
    2. Engage community colleges further
    3. Engage K12 education system
    4. Expand and include more courses and majors
    5. Increase communication between community colleges and universities
    6. Increase community colleges involvement
    7. Increase consistency across all higher education institutions
    8. Increase consistency between community colleges and universities
    9. Make the transfer system more user-friendly
    10. Provide better information for students
    11. Provide better training and tools for faculty/staff
    12. Publicize AGEC to students
    13. Rename AGEC to a more memorable name
    14. Simplify the transfer process
    15. Standardize the transfer process
    16. Other

17. Thinking about TRANSFER PATHWAY DEGREES,
    such as Associate of Arts (AA), Associate of Science (AS), and
    Associate of Business (ABus)…

    To what extent do you agree with the following statements?

    Strongly Disagree   Strongly Agree
    1   2   3   4   5   6   7

    a.   Transfer pathway degrees have remained stable over time
    b.   Transfer pathway degrees are clearly defined
    c.   Transfer pathway degrees support curricular planning
    d.   Transfer pathway degrees support course instruction/delivery
    e.   Transfer pathway degree students are well prepared for university studies

18. Thinking about transfer pathway degrees with respect to the transfer system…

    What is the transfer pathway degrees' greatest STRENGTH?
    1.   Available information resources
    2.   Creates university-community college consistency/standardization
    3.   Credits transfer as a block
    4.   Easy to transfer
    5.   Easy to use
    6.   Facilitates university-community college collaboration
    7.   Fosters curriculum growth/innovation
    8.   Fosters quality of teaching/instruction
    9.   Guaranteed course transfer
    10.   Maximizes student tuition dollars
    11.   Prepares students for university study
    12.   Satisfies general education requirements
    13.   Saves administrative costs
    14.   Student record sharing
    15.   Useful framework for academic planning
    16.   Variety of courses
    17.   Other_____

19. What is the transfer pathway degrees' greatest WEAKNESS?
    1. Impedes curriculum growth/innovation
    2. Impedes quality course delivery
    3. Inability to share electronic student records
    4. Inconsistent academic rigor between community colleges and universities
    5. Inflexible for certain majors
    6. Infrequency of updates when changes are made to degrees
    7. Lack of communication
    8. Lack of advisor familiarity
    9. Lack of faculty familiarity
    10. Lack of student familiarity
    11. Lack of university-community college consistency/standardization
    12. School specific requirements not met/extra courses needed
    13. Students are not prepared for university studies
    14. Students do not use the transfer pathway degrees
    15. System is difficult to use
    16. Transfer pathway degrees are confusing
    17. Unnecessary courses are included
    18. Other_____

20. What would IMPROVE transfer pathway degrees?
    (select all that apply)
    1. Ability to share electronic student records (e.g., electronic transcripts)
    2. Engage community colleges further
    3. Engage K12 education system
    4. Expand and include more courses and majors
    5. Increase communication between community colleges and universities
    6. Increase community colleges involvement
    7. Increase consistency across all higher education institutions
    8. Increase consistency between community colleges and universities
    9. Make the transfer system more user-friendly
    10. Provide better information for students
    11. Provide better training and tools for faculty/staff
    12. Publicize transfer pathways to students
    13. Rename transfer pathways to be more memorable
    14. Simplify the transfer process
    15. Standardize the transfer process
    16. Other_____

21.   With regard to COMMON COURSE MATRICES and the transfer system…

To what extent do you agree with the following statements?

Strongly Disagree   Strongly Agree
1   2   3   4   5   6   7

a.   Common Course Matrices are effective in helping students plan for transferring from a community college to a university
b.   Common Course Matrices are stable enough to support curriculum planning
c.   Common Course Matrices are flexible and allow adequate room for curriculum change and growth
d.   Common Course Matrices are clearly defined

22.   Thinking about COMMON COURSES with respect to the transfer system…

What is the Common Courses' greatest STRENGTH?
1.   Available information resources
2.   Creates university-community college consistency/standardization
3.   Credits transfer as a block
4.   Easy to transfer
5.   Easy to use
6.   Facilitates university-community college collaboration
7.   Fosters curriculum growth/innovation
8.   Fosters quality of teaching/instruction
9.   Guaranteed course transfer
10.   Maximizes student tuition dollars
11.   Prepares students for university study
12.   Satisfies general education requirements
13.   Saves administrative costs
14.   Student record sharing
15.   Useful framework for academic planning
16.   Variety of courses
17.   Other_____

23. What is the Common Courses' greatest WEAKNESS?
    1. Impedes curriculum growth/innovation
    2. Impedes quality course delivery
    3. Inability to share electronic student records
    4. Inconsistent academic rigor between community colleges and universities
    5. Inflexible for certain majors
    6. Infrequency of updates when changes are made to matrices
    7. Lack of communication
    8. Lack of advisor familiarity
    9. Lack of faculty familiarity
    10. Lack of student familiarity
    11. Lack of university-community college consistency/standardization
    12. School specific requirements not met/extra courses needed
    13. Students are not prepared for university studies
    14. Students do not use common course matrices
    15. System is difficult to use
    16. Common Course Matrices are confusing
    17. Unnecessary courses are included
    18. Other_____

24. What would IMPROVE the Common Course Matrices?
    (select all that apply)
    1. Ability to share electronic student records (e.g., electronic transcripts)
    2. Engage community colleges further
    3. Engage K12 education system
    4. Expand and include more courses and majors
    5. Increase communication between community colleges and universities
    6. Increase community colleges involvement
    7. Increase consistency across all higher education institutions
    8. Increase consistency between community colleges and universities
    9. Make the transfer system more user-friendly
    10. Provide better information for students
    11. Provide better training and tools for faculty/staff
    12. Publicize the common course matrices to students
    13. Rename Common Course Matrices to be more memorable
    14. Simplify the transfer process
    15. Standardize the transfer process
    16. Other_____

25. For these next questions, we'd like about your institution's transfer practices. How does your community college promote transfer options to students?
    (select all that apply)
    1. Course to assist/prepare student for transfer
    2. Email blasts promoting transfer options to all registered students
    3. Orientation session for interested students
    4. One-on-one academic advising
    5. Social media
    6. Transfer fairs/events
    7. Web site information
    8. Printed material
    9. Other_____

26. How EFFECTIVE are these promotion efforts?

Not at all					Very Effective		No Opinion
1	2	3	4	5	6	7	8

    a. Course to assist/prepare student for transfer
    b. Email blasts promoting transfer options to all registered students
    c. Orientation session for interested students
    d. One-on-one academic advising
    e. Social media
    f. Transfer fairs/events
    g. Web site information
    h. Printed material

27. Do you have ideas of other approaches that your college should consider?
    1. _____
    2. No

28. How do community college students apply for the AGEC?
    1. Through their academic advisor
    2. Through the registrar's office
    3. The AGEC is certified automatically
    4. Other_____
    5. Don't know

29. When is the earliest a student is able to apply for their AGEC?
    1. Upon completion of all AGEC requirements
    2. Semester prior to graduation (i.e. Fall 2012 for Spring 2013 graduation)
    3. Semester of graduation
    4. Other_____
    5. Don't know

30. How does your community college record AGEC on a student transcript?
    1. As an award
    2. As a certificate
    3. Printed at the end of the transcript
    4. AGEC courses are followed by the appropriate letter (A, B, or S)
    5. Other_____
    6. Don't know

31. How is an "AGEC in progress" recorded on a student transcript?
    1. Recorded as "General Education Award/Certificate in progress"
    2. Recorded on a separate document which accompanies transcript
    3. Not recorded on transcript
    4. Other_____
    5. Don't know

32. Thinking about your university's admissions process…

    What admissions procedure do you use for students with "AGEC in progress?"
    1. Standard admissions procedure
    2. Requirements waived for AGEC in-progress
    3. Other_____
    4. Don't know

33. How is a student's AGEC status communicated to the department in which they will be enrolled?
    1. Internal database
    2. Software program
    3. Recorded on student transcript
    4. Other_____

34. To what extent do you agree with the following statements?

    Not at All   Very Satisfied
    1   2   3   4   5   6   7
    a. A student who otherwise would not be admitted, but has completed the AGEC would still be granted admission to the University
    b. A student who otherwise would not be admitted, but has completed an Associate degree from an Arizona community college would still be granted admission to the University

35. For the next set of questions, we will be asking about the two websites that support transfer in Arizona …
APASCAZ.com *which is intended for staff use*
AZTransfer.com *which is intended for advisors, students, and public use*

Generally, how SATISFIED are you with…

Not at All   Very Satisfied   No Opinion
1   2   3   4   5   6   7   8

   a.   AZTransfer.com
   b.   APASCAZ.com

36. How often do you utilize...

   a.   AZTransfer.com
          1.   Daily
          2.   Weekly
          3.   Monthly
          4.   Quarterly
          5.   Once every 6 months
          6.   Once a year
          7.   Never

   b.   APASCAZ.com
          1.   Daily
          2.   Weekly
          3.   Monthly
          4.   Quarterly
          5.   Once every 6 months
          6.   Once a year
          7.   Never

37. Thinking about the APASCAZ.com website…

   How SATISFIED are you with APASCAZ.COM in terms of…

Not at All   Very Satisfied
1   2   3   4   5   6   7

   1.   Finding information easily
   2.   Facilitating the transfer and advising process
   3.   Web (PAGE) load speed
   4.   Quality of information
   5.   Visual look

38. What APASCAZ.com information do you access most often?
    1. Common course matrices information
    2. Course equivalency information
    3. Course transfer information
    4. Degree pathway information
    5. Exam equivalency information
    6. Major guides
    7. Planning guides
    8. Recent changes
    9. Student advising information
    10. Other_____

39. Is there any information you need, but cannot find on APASCAZ.com?
    (select all that apply)
    1. Common course matrices information
    2. Course equivalency information
    3. Course transfer information
    4. Degree pathway information
    5. Exam equivalency information
    6. Major guides
    7. Planning guides
    8. Recent changes
    9. Student advising information
    10. Other_____

40. What would IMPROVE APASCAZ.com?
    (select all that apply)
    1. Notification system for recent changes
    2. Simplified navigation
    3. Increase student awareness
    4. Orientation/training for faculty/staff
    5. Other_____

41. Thinking about the AZTransfer.com website…

    How SATISFIED are you with AZTransfer.com in terms of…

Not at All					Very Satisfied	
1	2	3	4	5	6	7

    1. Finding information easily
    2. Facilitating the transfer and advising process
    3. Web (PAGE) load speed
    4. Quality of information
    5. Visual look

42. What AZTransfer.com information do you access most often?
    1. AGEC information
    2. Common course matrices information
    3. Course equivalency information
    4. Course transfer information
    5. Degree pathway information
    6. Exam equivalency information
    7. Major guides
    8. Planning guides
    9. Recent changes
    10. Student advising information
    11. Other

43. Is there any information you need, but cannot find on AZTransfer.com?
    (select all that apply)
    1. AGEC information
    2. Common course matrices information
    3. Course equivalency information
    4. Course transfer information
    5. Degree pathway information
    6. Exam equivalency information
    7. Major guides
    8. Planning guides
    9. Recent changes
    10. Student advising information
    11. Other

44. What would IMPROVE AZTransfer.com?
    (select all that apply)
    1. Notification system for recent changes
    2. Simplified navigation
    3. Increase student awareness
    4. Orientation/training for faculty/staff
    5. Other

45. For these next questions, we'd like to know about your role in the transfer process.

As a staff member involved with the transfer system, what is your primary job function?
(select up to two job functions)
1. Admissions Administrator (Director, Associate or Assistant Director)
2. Admissions counselor
3. Chief Academic Officer
4. Data Entry
5. Encoder
6. Graduation Services
7. Institutional Articulation Facilitator (IAF)
8. Records managements
9. Recruiter
10. Registrar administrator (Registrar, Associate or Assistant Registrar)
11. Transcript evaluator
12. Other_____

46. Please provide us with the following information about your role and experience as a faculty member.

Which Articulation Task Force (ATF) you are a member of:
(select all that apply)
1. Discipline Specific Articulation Task Force (ATF)
2. General Education Articulation Task Force (GEATF)
3. Admissions & Records Articulation Task Force (A&RATF)
4. None of the above

47. How long have you been an ATF member?
(If less than 1 year, please enter 0)
__ years

48. We'd like to know more about your student advising experience.

Which of the following best describes your ADVISING role?
1. Full-time academic advisor
2. Part-time academic advisor
3. Faculty member with advising responsibilities
4. Administrator/staff member with advising responsibilities
5. No student advising

49. Are you an AZTransfer Liaison?
1. Yes
2. No

50.   To what extent do you agree with the following statements?

Strongly Disagree   Strongly Agree
1   2   3   4   5   6   7

1.   Students have access to sufficient information concerning transferring
2.   Students have adequate opportunities to discuss course articulation issues during pre-enrollment visits and orientation sessions
3.   I receive notifications of transfer system changes in a timely manner
4.   I am aware of all components of the Arizona transfer system

51.   During AY2011-12, how many students did you advise through the transfer process (i.e. students who attempted to transfer at some point during the year, whether successful or unsuccessful)?
1.   ____# students
2.   Don't know

52.   Of all the students you advised, what percent would you classify as having had the following types of transfer experiences?
1.   ___% Transferred with no difficulties
        ___% Transferred but with some difficulties
        ___% Transferred but with many difficulties
        ___% Unable to transfer/did not transfer
        TOTAL = 100%
2.   Don't know

53.   What are the two most common barriers students encountered during the transfer process?
        (select two)
1.   Courses taken at community college do not apply to program
2.   Confusion regarding program completion time
3.   Confusion regarding required courses
4.   Advising availability issues
5.   Students do not know enough about the transfer process
6.   AGEC transcript issues
7.   Acclimation to University
8.   Lack of university-community college consistency/standardization
9.   Course availability
10.   Student hasn't chosen major
11.   Student didn't choose major in time
12.   Student didn't change major in time
13.   Students are not prepared for university studies
14.   Other_____

Student Survey

INTRODUCTION

Academic Program Articulation Steering Committee (APASC), the organization that supports college transfer, has engaged Hezel Associates to survey students about the Arizona Transfer system. We would appreciate a few minutes of your time to complete this survey.

Your input will help strengthen and improve Arizona's community college to university transfer program.

As a thank you for completing the survey, you will be entered in a drawing to win one of ten $100 cash prizes.

We expect the survey will take approximately 10-15 minutes. Please be assured, your individual responses are confidential, and will be reported as part of group feedback.

If you have any questions regarding this survey, please contact Caitlin Griffin at Caitlin_G@hezel.com.

Do you agree to participate in this survey?
1.   Yes
2.   No

1. To get started, we'd first like to know what colleges you attend(ed).

Institution	Starting Semester	Year	Ending Semester	Year
Community College **a.**_____	**b.**_____	**c.**____	**d.**_____	**e.**____
University **f.**_____	**g.**_____	**h.**____	**i.**_____	**j.**____

a. Community College [Q1]
   (if you attended more than one community college, please select the last community college you attended before transferring)
   1. Arizona Western College
   2. Central Arizona College
   3. Chandler-Gilbert Community College
   4. Cochise College
   5. Coconino Community College
   6. Dine College
   7. Eastern Arizona College
   8. Estrella Mountain Community College
   9. GateWay Community College
   10. Glendale Community College
   11. Mesa Community College
   12. Mohave Community College
   13. Northland Pioneer College
   14. Paradise Valley Community College
   15. Phoenix College
   16. Pima Community College
   17. Rio Salado Community College
   18. Scottsdale Community College
   19. South Mountain Community College
   20. Tohono O'odham Community College
   21. Yavapai College
   22. Other
   23. None – I did not attend community college

b. Semester Started
   1. Fall
   2. Spring
   3. Summer
   4. Don't know
   5. Prefer not to say

     c.   Year Started
- 1. 2006 or before
- 2. 2007
- 3. 2008
- 4. 2009
- 5. 2010
- 6. 2011
- 7. 2012
- 8. 2013
- 9. Don't know
- 10. Prefer not to say

     d.   Semester Completed
(if you haven't completed, please enter expected completion date)
- 1. Fall
- 2. Spring
- 3. Summer
- 4. Don't know
- 5. Prefer not to say

     e.   Year Completed
- 1. 2006 or before
- 2. 2007
- 3. 2008
- 4. 2009
- 5. 2010
- 6. 2011
- 7. 2012
- 8. 2013
- 9. 2014
- 10. 2015
- 11. 2016
- 12. 2018
- 13. 2019
- 14. 2020
- 15. Don't know
- 16. Prefer not to say

f. University [Q1]
   (*Please select the university you did/will transfer to*)
1. Arizona State University
2. Northern Arizona University
3. University of Arizona
4. Other_____
5. Undecided
6. None – I did/will not transfer to a University

g. Semester Started
1. Fall
2. Spring
3. Summer
4. Don't know
5. Prefer not to say

h. Year Started
1. 2006 or before
2. 2007
3. 2008
4. 2009
5. 2010
6. 2011
7. 2012
8. 2013
9. 2014
10. 2015
11. 2016
12. 2018
13. 2019
14. 2020
15. Don't know
16. Prefer not to say

i. Semester Completed
1. Fall
2. Spring
3. Summer
4. Don't know
5. Prefer not to say

j. Year completed
1. 2006 or before
2. 2007
3. 2008
4. 2009
5. 2010
6. 2011
7. 2012
8. 2013
9. 2014
10. 2015
11. 2016
12. 2018
13. 2019
14. 2020
15. Don't know, but I intend to graduate
16. I do not intend to graduate
17. Prefer not to say

2. What is the primary reason you did not choose an Arizona public university for your post-community college education?
1. I am attending another 4-year college or university
2. I am attending another technical school
3. I am taking time off from my studies
4. I have decided to discontinue my studies
5. I haven't decided where I will attend university
6. Other_____

3. Which best describes your current student status?
1. Enrolled at community college, and am UNDECIDED about university study
2. Enrolled at community college, DO NOT plan to transfer to university
3. Enrolled at community college, and WILL transfer to university
4. Dual enrolled at a community college and university
5. Transferred from community college, and enrolled at a university
6. Transferred from community college, and graduated from university
7. None of the above

4. Using a 7-point scale, where 7 = Very and 1 = Not at All…
   How LIKELY are you to enroll at the following university in the future?

   Not at all   Very Likely
   1   2   3   4   5   6   7

   a. Arizona State University (ASU)
   b. Northern Arizona University (NAU)
   c. University of Arizona (UA)
   d. Another university (not ASU, NAU or UA)

5. Did/will you take a break from academic study between community college and university?
   1. Yes
   2. No

6. Why did/will you take a break?
   1. _____

7. We'd like to know about your educational goals.

   When you started community college, what was the highest degree you wanted to earn?
   1. Courses only, no degree
   2. Certificate
   3. Arizona General Education Curriculum (AGEC)
   4. Associate (2-year) degree
   5. Bachelor (4-year) degree
   6. Master's degree
   7. Professional graduate degree (e.g., MD, JD)
   8. Doctoral degree
   9. Don't know

8. What is the highest level of education you have CURRENTLY completed?
   1. Courses only, no degree
   2. Certificate
   3. Arizona General Education Curriculum (AGEC)
   4. Associate (2-year) degree
   5. Bachelor (4-year) degree
   6. Master's degree
   7. Professional graduate degree (e.g., MD, JD)
   8. Doctoral degree
   9. Prefer not to say

9. Using a 7-point scale, where 7 = Very and 1 = Not at All…
   In general, how satisfied are you with your college transfer experience in Arizona? [Q5]

Not at all					Very Satisfied	
1	2	3	4	5	6	7

10. To what extent do you agree with the following statements?

Strongly Disagree					Strongly Agree		No Opinion
1	2	3	4	5	6	7	8

    a. Transfer students are well prepared for university study[Q6a]
    b. AZTransfer helped me earn a degree[Q6c]
    c. Most students know about transfer opportunities[Q6d]
    d. Students have access to sufficient information concerning transferring[Q50a]
    e. Students have adequate opportunities to discuss transfer issues during pre-enrollment visits and orientation sessions[Q50b]
    f. I receive notifications of transfer system changes in a timely manner[Q50c]
    g. I am aware of all components of the Arizona transfer system[Q50d]
    h. My credits transferred to university without difficulty
    i. My expectations related to transferring were fully met

11. Thinking about Arizona's statewide transfer system as a whole….

    What is the system's greatest STRENGTH? [Q7]
    1. Academic advising
    2. Available information resources
    3. Completing necessary steps electronically
    4. Easy to transfer
    5. Getting help from my community college
    6. Guaranteed course transfer
    7. Maximizes student tuition dollars
    8. Prepares students for university study
    9. Registering/enrolling
    10. Satisfies general education requirements
    11. University-community college consistency/standardization
    12. Useful framework for academic planning
    13. Variety of courses
    14. Other_____

12. What is the system's greatest WEAKNESS? [Q8]
    1. Course options are too limited
    2. Credit transferability issues
    3. Inability to share electronic student records between community college and university
    4. Inaccurate information
    5. Inconsistent course difficulty between community colleges and university
    6. Inconsistent course titles between community colleges and universities
    7. Inflexible for certain majors
    8. Lack of advisor and/or faculty familiarity
    9. Lack of student familiarity
    10. Lack of university-community college consistency/standardization
    11. Students are not prepared for university studies
    12. System is difficult to use
    13. Transfer System is confusing
    14. Other_____

13. What would IMPROVE Arizona's statewide transfer system? [Q9]
    (select all that apply)
    1. Expand and include more courses and majors
    2. Increase communication between community colleges and universities
    3. Increase consistency between community colleges and universities
    4. Inform high school students of community college–university transfer options
    5. Make the transfer system more user-friendly
    6. Provide better information for students
    7. Provide better training and tools for faculty/staff
    8. Publicize the transfer system to students
    9. Simplify the transfer process
    10. Standardize the transfer process
    11. Other_____

14. For the next set of questions, we will be asking about the AZTransfer website that supports transfer in Arizona …

    AZTransfer.com *is intended for advisors, students, and public use*

    Generally, how FAMILIAR are you with AZTransfer.com

    Not at All   Very Familiar
    1   2   3   4   5   6   7

15. How often do you utilize AZTransfer.com? *[Q36a]*
     1.   Daily
     2.   Weekly
     3.   Monthly
     4.   Quarterly
     5.   Once every 6 months
     6.   Once a year
     7.   Never

16. In GENERAL, how SATISFIED are you with AZTransfer.com *[Q35a]*

     Not at All   Very Satisfied
     1   2   3   4   5   6   7

     a.   Overall

17. How SATISFIED are you with AZTransfer.com in terms of… *[Q41]*

     Not at All   Very Satisfied
     1   2   3   4   5   6   7

     a.   Finding information easily
     b.   Facilitating the transfer and advising process
     c.   Web page load speed
     d.   Quality of information
     e.   Visual look

18. What AZTransfer.com information do you access most often? *[Q42]*
     1.   AGEC information
     2.   Common Course Matrices information
     3.   Course equivalency information
     4.   Course transfer information
     5.   Degree pathway information
     6.   Exam equivalency information
     7.   Major guides
     8.   Planning guides
     9.   Recent changes
     10. Student advising information
     11. University information about ASU, NAU, and/or UA
     12. Other_____

19. Is there any information you need, but cannot find on AZTransfer.com? [Q43]
   (select all that apply)
   1. AGEC information
   2. Common course matrices information
   3. Course equivalency information
   4. Course transfer information
   5. Degree pathway information
   6. Exam equivalency information
   7. Major guides
   8. Planning guides
   9. Recent changes
   10. Student advising information
   11. University information about ASU, NAU, and/or UA
   12. Other_____

20. If you cannot find information online, where do you go to get the information you need?
   1. _____

21. What would IMPROVE AZTransfer.com? [Q44]
   (select all that apply)
   1. Notification system for recent changes
   2. Simplified navigation
   3. Up to date information
   4. Increase student awareness of the website
   5. Orientation/training for students
   6. Other_____

22. We'd like to know more about your transfer experience as a student.

   How did you learn about transfer options? [Q25]
   (select all that apply)
   1. Course to assist/prepare student for transfer
   2. Email blasts promoting transfer options to all registered students
   3. From a faculty member
   4. Orientation session for interested students
   5. One-on-one academic advising
   6. Social media
   7. Transfer fairs/events
   8. Web site information
   9. Printed material
   10. Word of mouth
   11. Other_____

23. How EFFECTIVE are these promotion efforts? [Q26]

Not at all   Very Effective   No Opinion
1   2   3   4   5   6   7   8

     a.   Course to assist/prepare student for transfer
     b.   Email blasts promoting transfer options to all registered students
     c.   Orientation session for interested students
     d.   One-on-one academic advising
     e.   Social media
     f.   Transfer fairs/events
     g.   Web site information
     h.   Printed material
     i.   Word of mouth

24. Do you have other promotion ideas that your college should consider? [Q27]
     1.   _____
     2.   No

25. As a COMMUNITY COLLEGE STUDENT…

How often do/did you meet with an academic advisor at your community college?
     1.   Weekly
     2.   Monthly
     3.   Quarterly
     4.   Once every 6 months
     5.   Once a year
     6.   Never

26. What barriers did you encounter during the transfer process? [Q53]
(select all that apply)
     1.   Courses taken at community college do not apply to University program of study
     2.   Confusion regarding program completion time
     3.   Confusion regarding required courses
     4.   Advising availability issues
     5.   Didn't know enough about the transfer process
     6.   Transcript issues
     7.   Acclimation to University
     8.   Lack of university-community college consistency/standardization
     9.   Course availability
     10.   Requirements for declaring a major
     11.   University Admission problems/delays
     12.   Other_____

27.   For each of the following components of the Arizona's statewide transfer system,

How FAMILIAR are you with….? *[Q10]*

Not at all   Very Familiar
1   2   3   4   5   6   7

    a.   Arizona General Education Curriculum (AGEC)
    b.   Transfer pathway degrees (AA, AS, ABus, AAEE, AAS to BAS)
    c.   Common Courses
    d.   High school dual enrollment courses
    e.   Exams to earn college credit (AP, CLEP, IB)
    f.   SUN System

28.   How USEFUL is …. ? *[Q11]*

Not at all   Very Useful   No Opinion
1   2   3   4   5   6   7   8

    a.   Arizona General Education Curriculum (AGEC)
    b.   Transfer pathway degrees (AA, AS, ABus, AAEE, AAS to BAS)
    c.   Common Courses
    d.   High school dual enrollment courses
    e.   Exams to earn college credit (AP, CLEP, IB)
    f.   SUN System

29.   How SATISFIED are you with …. ? *[Q12]*

Not at all   Very Satisfied No Opinion
1   2   3   4   5   6   7   8

    a.   Arizona General Education Curriculum (AGEC)
    b.   Transfer pathway degrees (AA, AS, ABus, AAEE, AAS to BAS)
    c.   Common Courses
    d.   High school dual enrollment courses
    e.   Exams to earn college credit (AP, CLEP, IB)
    f.   SUN System

30.   These next questions focus on the ARIZONA GENERAL EDUCATION
       CURRICULUM (AGEC).

       *AGEC is comprised of 35-37 credit hours of course work that will transfer to the three
       Arizona state universities and meet lower division, general education requirements.*

       *It allows students attending any Arizona tribal or public community college with the
       opportunity to build a general education curriculum that is transferable upon completion
       to another Arizona tribal or public community college or university.*

       Thinking about AGEC as a mechanism to facilitate transfer…

       To what extent do you agree with the following statements?

       Strongly Disagree   Strongly Agree
       1   2   3   4   5   6   7

       a.   AGEC facilitates student progress toward meeting bachelor's degree
              requirements[Q13a]
       b.   AGEC reduces barriers when transferring from community college to
              university[Q13b]
       c.   Students who completed an AGEC are well prepared for university study [Q13d]
       d.   AGEC requirements are clearly defined[Q13e]

31.   Thinking about the process of having your AGEC transfer to the university, to what
       extent do you agree with the following statements?

       Strongly Disagree   Strongly Agree   No Opinion
       1   2   3   4   5   6   7   8

       a.   I know all the steps that are required to transfer my AGEC
       b.   It is very easy to find information on how AGEC transfers to university
       c.   The AGEC transfer process is very easy to follow

32.   Which AGEC have/will you complete during your studies at community college?
       1.   AGEC-A *(liberal arts, fine arts, humanities, social sciences requirements)*
       2.   AGEC-B *(business oriented requirements)*
       3.   AGEC-S *(math, science oriented requirements)*
       4.   Undecided – will complete the AGEC, but not sure which one
       5.   Undecided – not sure I will do AGEC
       6.   None - I didn't/won't complete an AGEC

33. What was your primary motivation for completing an AGEC?
   1. Academic advisor recommendation
   2. Complete general education/core requirements
   3. Credits easily transfer to a university
   4. Fit my career goals
   5. Fit my 4-year degree requirements
   6. Improve chances for university admission
   7. Personal satisfaction/feeling of accomplishment
   8. Save money
   9. Save time
   10. Simplified my academic planning
   11. Not sure
   12. Other_____

34. Thinking about AGEC with respect to college transfer…

   What is AGEC's greatest STRENGTH? [Q14]
   1. Academic advising
   2. Available information resources
   3. Easy to transfer
   4. Guaranteed course transfer
   5. Maximizes student tuition dollars
   6. Prepares students for university study
   7. Quality of courses
   8. Quality of teaching/instruction
   9. Satisfies general education requirements
   10. Student record sharing
   11. University-community college consistency/standardization
   12. Useful framework for academic planning
   13. Variety of courses
   14. Other_____

35. What is AGEC's greatest WEAKNESS? [Q15]
    1. Course options are too limited
    2. Credit transferability issues
    3. Inaccurate information
    4. Inconsistent course difficulty between community colleges and university
    5. Inconsistent course titles between community colleges and universities
    6. Inflexible for certain majors
    7. Lack of advisor and/or faculty familiarity
    8. Lack of student familiarity
    9. Lack of university-community college consistency/standardization
    10. Students are not prepared for university studies
    11. University specific requirements not met
    12. Unnecessary courses are included
    13. AGEC is confusing
    14. Other_____

36. What would IMPROVE AGEC? [Q16]
    (select all that apply)
    1. Expand and include more courses and majors
    2. Increase communication between community colleges and universities
    3. Increase consistency between community colleges and universities
    4. Provide better information for students
    5. Provide better training and tools for faculty/staff
    6. Make the AGEC more user-friendly
    7. Publicize AGEC to students
    8. Rename AGEC to a more memorable name
    9. Other_____

37. What is the primary reason you did not complete an AGEC?
    1. It didn't align with my degree program
    2. I knew my university and degree, and followed the transfer guide
    3. Intend(ed) to transfer to university before graduating from community college
    4. Not aware of the option
    5. Not sure which university I want to attend
    6. Want(ed) to complete an Associate's degree
    7. Other_____

38. Thinking about TRANSFER PATHWAY DEGREES,
    such as Associate of Arts (AA), Associate of Science (AS), Associate of Business (ABus), Associate in Arts in Elementary Education (AAEE), and Associate in Applied Science to Bachelor of Applied Science (AAS to BAS) pathways

    To what extent do you agree with the following statements?

    Strongly Disagree   Strongly Agree
    1   2   3   4   5   6   7

    a. Transfer pathway degrees remained the same since I started at community college [Q17a]
    b. Transfer pathway degrees are clearly defined [Q17b]
    c. Transfer pathway degree students are well prepared for university study [Q17e]

39. Which transfer pathway degree did/will you complete?
    1. Associate of Arts (AA)
    2. Associate of Business (ABus)
    3. Associate of Science (AS)
    4. Associate in Arts in Elementary Education (AAEE)
    5. Associate in Applied Science to Bachelor of Applied Science (AAS to BAS)
    6. Undecided, but I intend to complete a transfer degree
    7. None - I didn't/won't complete a Transfer Degree

40. What was your primary motivation for completing a TRANSFER DEGREE?
    1. Academic advisor recommendation
    2. Complete the Associates degree
    3. Credits easily transfer to a university
    4. Fit my career goals
    5. Fit my 4-year degree requirements
    6. Improve chances for university admission
    7. Personal satisfaction/feeling of accomplishment
    8. Save money
    9. Save time
    10. Simplified my academic planning
    11. Not sure
    12. Other_____

41.   Thinking about transfer pathway degrees with respect to the transfer system…

What is the transfer pathway degrees' greatest STRENGTH?[Q18]
1.   Academic advising
2.   Available information resources
3.   Easy to transfer
4.   Guaranteed course transfer
5.   Maximizes student tuition dollars
6.   Prepares students for university study
7.   Quality of courses
8.   Quality of teaching/instruction
9.   Satisfies general education requirements
10.   Student record sharing
11.   University-community college consistency/standardization
12.   Useful framework for academic planning
13.   Variety of courses
14.   Other_____

42.   What is the transfer pathway degrees' greatest WEAKNESS?[Q19]
1.   Course options are too limited
2.   Credit transferability issues
3.   Inaccurate information
4.   Inconsistent course difficulty between community colleges and university
5.   Inconsistent course titles between community colleges and universities
6.   Inflexible for certain majors
7.   Lack of advisor and/or faculty familiarity
8.   Lack of student familiarity
9.   Lack of university-community college consistency/standardization
10.   Students are not prepared for university studies
11.   University specific requirements not met
12.   Unnecessary courses are included
13.   Transfer pathway degrees are confusing
14.   Other_____

43.   What would IMPROVE transfer pathway degrees?[Q20]
(select all that apply)
1.   Expand and include more courses and majors
2.   Increase communication between community colleges and universities
3.   Increase consistency between community colleges and universities
4.   Provide better information for students
5.   Provide better training and tools for faculty/staff
6.   Make the transfer degree pathways more user-friendly
7.   Publicize transfer degree pathways to students
8.   Rename transfer degree pathways to a more memorable name
9.   Other_____

44.   What is the primary reason you did not complete a TRANSFER PATHWAY DEGREE?
        1.   It didn't align with my degree program
        2.   I knew my university and degree, and followed the transfer guide
        3.   Intend(ed) to transfer to university before graduating from community college
        4.   Not aware of the option
        5.   Not sure which university I want to attend
        6.   Other_____

45.   These next questions focus on the COMMON COURSE MATRICES.

        To what extent do you agree with the following statements?

        Strongly Disagree   Strongly Agree   No Opinion
        1   2   3   4   5   6   7   8

        a.   Common course matrices help plan community college-university transfers[Q21a]
        b.   Common course matrices are clearly defined [Q21d]

46.   Have/will you complete any COMMON COURSES during your studies at community
        college?
            1. Yes
            2. No
            3. Don't know/Not sure

47.   What was your primary motivation for taking COMMON COURSE(S)?
        1.   Academic advisor recommendation
        2.   Complete the Associates degree
        3.   Credits easily transfer to a university
        4.   Fit my career goals
        5.   Fit my 4-year degree requirements
        6.   Improve chances for university admission
        7.   Personal satisfaction/feeling of accomplishment
        8.   Save money
        9.   Save time
        10.   Simplified my academic planning
        11.   Not sure
        12.   Other_____

48.   Thinking about COMMON COURSES with respect to the transfer system…

What is the Common Courses' greatest STRENGTH?[Q22]
1.   Academic advising
2.   Available information resources
3.   Easy to transfer
4.   Guaranteed course transfer
5.   Maximizes student tuition dollars
6.   Prepares students for university study
7.   Quality of courses
8.   Quality of teaching/instruction
9.   Satisfies general education requirements
10.   Student record sharing
11.   University-community college consistency/standardization
12.   Useful framework for academic planning
13.   Variety of courses
14.   Other_____

49.   What is the Common Courses' greatest WEAKNESS? [Q23]
1.   Course options are too limited
2.   Credit transferability issues
3.   Inaccurate information
4.   Inconsistent course difficulty between community colleges and university
5.   Inconsistent course titles between community colleges and universities
6.   Inflexible for certain majors
7.   Lack of advisor and/or faculty familiarity
8.   Lack of student familiarity
9.   Lack of university-community college consistency/standardization
10.   Students are not prepared for university studies
11.   University specific requirements not met
12.   Unnecessary courses are included
13.   Common Course Matrices are confusing
14.   Other_____

50.   What would IMPROVE the Common Course Matrices? [Q24]
        (select all that apply)
1.   Expand and include more courses and majors
2.   Increase communication between community colleges and universities
3.   Increase consistency between community colleges and universities
4.   Provide better information for students
5.   Provide better training and tools for faculty/staff
6.   Make the Common Course Matrices more user-friendly
7.   Publicize Common Courses to students
8.   Rename Common Courses to be more memorable
9.   Other_____

51. What is the primary reason you did not take a class identified as a COMMON COURSE?
    1. It didn't align with my degree program
    2. I knew my university and degree, and followed the transfer guide
    3. Intend(ed) to transfer to university before graduating from community college
    4. Not aware of the option
    5. Not sure which university I want to attend
    6. Want(ed) to complete an Associate's degree instead
    7. Other_____

52. Just a few final questions…

    Are you…
    1. Female
    2. Male
    3. Prefer not to say

53. Which of the following best describes you?
    1. American Indian or Alaskan Native
    2. Asian
    3. Black or African American
    4. Hispanic or Latino
    5. Native Hawaiian or Other Pacific Islander
    6. White
    7. Other_____
    8. Prefer not to say

54. What is your age?
    1. Under 18 years old
    2. 18-24
    3. 25-34
    4. 35-44
    5. 45-54
    6. 55 years or older
    7. Prefer not to say

55. What was the total income for your household in 2012?
    1. Less than $25,000
    2. $25,000-$49,999
    3. $50,000-$74,999
    4. $75,000-$99,999
    5. $100,000-$149,999
    6. $150,000-$199,999
    7. $200,000 or more
    8. Don't know
    9. Prefer not to say

56. Are you?
    1. Single
    2. Married
    3. Divorced
    4. Separated
    5. Widowed
    6. Prefer not to say

57. For how many children, if any, are you a primary caregiver?
    1. __ # children under the age of 5
       __ # children ages 5 to 18
    2. Prefer not to say