This study focused on the transfer and academic performance of applied associate degree recipients in Missouri. The author collected data on two-year college graduates who transferred to a Missouri public four-year college between fall 1996 and summer 1997 and graduated by spring 2000. The study sought to determine if there were any statistically significant differences in the baccalaureate degree completion rate and baccalaureate degree exit grade point average (GPA) of those who received the associate of arts (AA) degree and those who received the associate of science (AS) or the associate of applied science (AAS). The authors found that, in 1995-1996, more than 6,100 people received an associate degree from a Missouri public two-year college, with more than 51% receiving an AA degree and almost 49% receiving other types of degrees. Almost 26% of the associate degree holders transferred during the next academic year—83% of those who transferred had an AA and more than 17% had an AS or AAS degree. The authors found a statistically significant difference in baccalaureate degree completion rate between the two groups: those with an AA were more likely to complete the bachelor's than those with an AS or AAS. Almost 63% (822) of the AA students graduated, compared with 54% (150) of the AS/AAS students. However, no significant difference was found in GPA. (Contains 19 references.) (EMH)
Transfer Where You Least Expect It:
The Transfer of “Terminal” Applied Associate Degree Students

Barbara K. Townsend
University of Missouri-Columbia
Townsendb@missouri.edu

As the two-year college began to develop, its leaders and supporters envisioned it as routing students in two directions: upward to further education, i.e., the baccalaureate, after completing lower-level courses at the two-year college, or outward to immediate employment after completing some general education or a vocational program. What was not envisioned was the transfer of students in “terminal” programs, those designed to prepare people for the “semiprofessions” (Koos, 1925/1970, pp.19-20) or employment fields that only required junior college preparation. Yet almost from the two year college’s beginning, students in terminal programs have transferred and earned a baccalaureate degree. These students represent a perfect example of “transfer where you least expect it.”

To assist in understanding this phenomenon, I will briefly describe what is known about this transfer pattern, including national and state-level statistics about its extent, and then illustrate the extent of this transfer in the state of Missouri.

What We Know About the Transfer of Terminal Students

The transfer of terminal students is not a new phenomenon. In his study of the development of the public junior college from 1900 to 1940, Frye (1992) found that many students in terminal programs transferred to four-year colleges during this time period. As he notes, “[s]tudents were uninterested in distinctions among transfer, terminal, and vocational” (p. 111) and used two-year colleges as needed in their drive toward higher education. In the early 1940s Eells (1943) documented the successful baccalaureate performance of over 2,000 terminal degree recipients who had transferred to four-year colleges. More recently, Kinzter (1983) identified “the vocational transfer student” (pp. 1-2) as one type of student transferring to four-year colleges, and Carroll (1990) also included them in his discussion of types of community college transfer students.

The development of national data bases tracking college students’ attendance patterns enables some insight into this phenomenon nationally. One insight is that a number of


2 Leaders’ belief in “terminal education” programs stemmed partly from their view that the junior college was part of secondary education rather than higher education (Frye, 1992).
students in applied associate degree majors know upon entry to the two-year school that they want to transfer to a senior institution. Using data from the 1995-96 Beginning Postsecondary Students Longitudinal Study, Berkner, Horn, and Clune (2000) found that almost 32% of students in associate degree programs with majors in applied fields enrolled intending to transfer to a four-year college, as compared to over 52% of those in transfer associate degree programs or undecided students.

At the single-institution or multi-institution level, nuggets of information about the transfer expectations of applied degree students can be gleaned from available literature and reports. For example, Widlak (1997) found that 20% of A.A.S. recipients in FY94 and FY95 at a large midwestern community college had planned upon entry to transfer. In other words, these students did not see themselves ending their formal education after completing their “terminal” or applied associate degree. In a multi-institution study, A.A.S. graduates of several New York State community colleges were asked in 1991 to indicate when they had decided to pursue a four-year degree. Over 40% indicated they had decided during their first semester at the community college (State University of New York, 1991).

Another insight involves the extent to which applied associate degree recipients transfer. Examining three national data bases (the National Longitudinal Study of the Class of 1972 and the Class of 1980 and the High School and Beyond Study), Grubb (1991) found that over 23% of those with vocational associate degrees in the Class of 1980 transferred to a four-year institution as compared to 48.9% of those with academic associate degrees.

Ascertaining the extent of transfer of applied associate degree recipients within individual states is problematic for several reasons. Most state-level studies of transfer patterns either do not differentiate between type of associate degree held by the transfer student or only include students with the state’s transfer associate degree, as in the recent Oregon University System study (2000). Also, most states focus only on the transfer of students in the public sector, thus undercounting transfer of students with either kind of associate degree. Finally, state studies of transfer patterns are not usually available to researchers through such readily accessible outlets as the Internet or the ERIC Clearinghouse.

Transfer data are readily available for a few states. The transfer rates of A.A. recipients in Florida has been studied by Windham (2001), who examined these rates between 1994-95 and 1998-99. She found that the percentage of A.A. transfers from the public Florida Community College System to the State University System varied from a high of 62.9% in 1994-95 to a low of 57.5% in 1997-98. In 1998-99 it was 58.1%. In an earlier study, Windham (1997) found that among the first-time college students who entered a Florida community college in fall 1991 and received an A.A. degree, there was a transfer rate of 26%. Another study (Florida Community College System, 1998) found that 3% of students who transferred to the State University System with an associate degree received from a Florida community college had the A.S. degree (258 students out of 8,759 transfers).

In Illinois one study examined the transfer of students from Illinois community colleges to 12 Illinois public universities, 14 private Illinois institutions, and 43 public and private out-of-state institutions between fall 1990 and spring 1995. Over 10% (1,296) of “entering students in occupational curriculum” (Illinois Community College System, 1998, p. 26) transferred to public Illinois universities. When transfer to all the four-year colleges in the study was examined, the rate increased to 12.1% (1,538 students). More than 80% of these transfers were in seven program areas: Business Management and Administrative Services,
Protective Services, Health Professions and Related Services, Engineering Related Technologies, Home and Institutional Services, Precision Production, and Marketing (p. 27). Whether or not the students transferred with an associate degree was not indicated.

In Oregon 54% of the people who earned the Associate of Arts/Oregon Transfer degree the previous academic year (1999) transferred to an institution within the Oregon University System (Students Who Transfer, 2000).

Texas has tracked the transfer of several community and technical college cohorts to Texas public colleges and universities. In the 1994-95 cohort of two-year college graduates, over 16% with academic associate degrees transferred after graduation as compared to 4.5% of technical degree recipients (Texas Higher Education Coordinating Board, 1997). Among students who attended a Texas public two-year college during fall 1998 and graduated by summer 1999, over 36% of those in academic programs transferred to a university. Almost 6% of technical program graduates transferred (Texas Higher Education Coordinating Board, 2000).

While data about the percentage of transfers by type of degree are not available for North Carolina, the University of North Carolina System has compiled data about five cohort groups of community college transfers into selected University of North Carolina institutions. The percentage of technical degree transfer students in each cohort group ranged from 31% to 35%. The number of these students in each cohort group ranged from a low of 707 in the 1990-92 cohort group to a high of 1110 in the 1993-95 cohort group (Retention, Graduation, and Persistence Rates, 1998). In a similar study focusing on transfer students in the University of North Carolina system, Fredrickson (1998) found that 70% of the transfers enrolling in fall 1993 were classified as college transfer students when at the community college, and 30% were classified as technical program students.

Occasionally a state system of public colleges will examine the persistence and baccalaureate graduation rate of two-year college transfers. In the University of North Carolina System study referenced above, the persistence of these cohorts to graduation was also traced. The graduation rates varied by cohort and type of associate degree, but for three of the four cohort groups, a higher percentage of people with the college transfer degree graduated than did those with the technical degree. For example, 73% of those with the college transfer degree in the 1992-94 cohort graduated after five years as compared to 65% of those with the technical degree group (Retention, Graduation, and Persistence Rates, 1998).

Illinois has also compared the degree completion rate of community college transfers in transfer programs versus those with the Associate of Applied Science (A.A.S.) degree. The Illinois Community College Board found that for those students who transferred from Illinois community colleges to Illinois public four-year institutions in fall 1979, almost 54% of those in transfer programs achieved the baccalaureate as compared to over 48% of those with the A.A.S. (Illinois Community College Board, as cited in Bender, 1991).

Florida has examined the performance of community college transfers into the State University System in terms of their mean cumulative grade point average (GPA) and percent graduated during 1994-95. The mean cumulative GPA of those who transferred with the A.A. degree was 2.9 as compared to 3.1 for those who transferred with the A.S. degree. Almost

\[\text{3 The following cohorts were tracked: 1990-92, 1991-93, 1992-94, 1993-95, and 1994-96.}\]
25% of those who transferred with the A.A. graduated as compared to almost 21% of those with the A.S.

The Transfer of Applied Degree Recipients in Missouri

To provide information about the transfer and academic performance of applied associate degree recipients in Missouri, I and a colleague, Terry Barnes, examined data on all those individuals who graduated from a Missouri public two-year college with an associate degree during 1995-96. Focusing on associate degree recipients who transferred to a Missouri public four-year college between fall 1996 and summer 1997 and graduated by spring 2000, we sought to determine if there were any statistically significant differences in the baccalaureate degree completion rate and baccalaureate degree exit grade point average (GPA) of those who received the A.A. degree and those who received other associate degrees (A.S. and A.A.S.).

We found that in 1995-96, over 6,100 people received an associate degree from a Missouri public two-year college, with over 51% receiving the A.A. degree and almost 49% receiving the other types of degrees. Almost 26% of the associate degree holders transferred during the next academic year: 41% of the A.A. recipients (1,309 students) and 9% (276) of those receiving either the A.S. or A.A.S. Almost 83% of those who transferred had the A.A. and over 17% had either the A.S. or the A.A.S.

When we compared the baccalaureate degree completion rate by the end of spring 2000, we found a statistically significant difference in baccalaureate degree completion rate. Those with the A.A. degree were more likely to complete the bachelor's (χ²=6.859, df=1, p < 0.009) than were those with the other types of associate degrees. Almost 63% or 822 students with the A.A. graduated as compared to over 54% or 150 of those with the A.S. or A.A.S.

When we compared the exit baccalaureate degree GPA, we found no statistically significant difference although those with the A.S. or A.A.S. had an average GPA of 3.18 as compared to 3.12 for those with the A.A. degree.

Discussion and Implications

What this study has shown is that among those who received an associate degree from a Missouri two-year college during 1995-96, some transfer of "terminal" students occurred. Those terminal students who did transfer did well in their baccalaureate program, although they were less apt to graduate than those who transferred with the transfer degree.

How do these findings compare with those in other states? The percentage of A.A. transfer students in 1996-97 (41%) is higher than the percentage of A.A. transfer students in Texas in 1999-2000 (36%) and lower than in Oregon in 2000 (54%) and in Florida between the academic years 1994-95 and 1998-99 (between 57.5% and 62.9%).

In Missouri the percentage of applied degree students among those who transferred was over 17%. In comparison, the percentage of technical degree transfer students in the University of North Carolina system ranged from 31% to 35%, depending on the cohort group (Retention, Graduation, and Persistence Rates, 1998).

The finding that in Missouri applied associate degree recipients were less apt to graduate with a baccalaureate than were transfer degree recipients is consistent with findings.
from a Florida study (Florida Community College System, 1998), an Illinois study (Illinois Community College Board, as cited in Bender, 1991), and a North Carolina study (Retention, Graduation, and Persistence Rates, 1998). However, Missouri’s applied associate degree recipients did have a higher GPA upon graduation than did those with transfer degrees, just as in a Florida study (Florida Community College System, 1998).

To have any sense of the reliability of these findings for Missouri two-year college transfer students, additional cohort groups need to be studied, both those receiving an associate degree prior to 1995-96 and those receiving a degree after 1995-96. To learn if the findings for Missouri are typical or atypical, this study needs to be replicated in other states over several years’ time. Repeated studies conducted in several states nationwide will give a clearer picture of the extent of transfer and baccalaureate attainment for applied or terminal associate degree recipients. Over time their transfer may no longer be viewed as unexpected but rather as counted upon as one more way for students to attain the baccalaureate.

References


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Signature: Barbara K. Townsend

Printed Name/Position/Title: Barbara K. Townsend, Professor of HF

Organizational Affiliation: University of Missouri

211 Hill Hall

Columbia, MO 65211

Telephone: 573-882-1040 FAX 573-884-5967

E-mail: BarbaraTownsend@missouri.edu

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