Factors that contribute and inhibit successful transfer for two-year college students: Implications on strengthening the geoscience student transfer pathway

Benjamin A. Wolfe
University of Kansas Edwards Campus

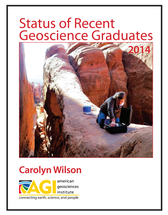
Kaatje van der Hoeven Kraft
Whatcom Community College

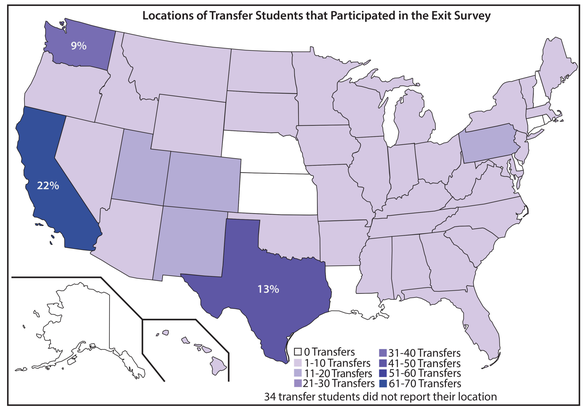
Carolyn Wilson
American Geosciences Institute

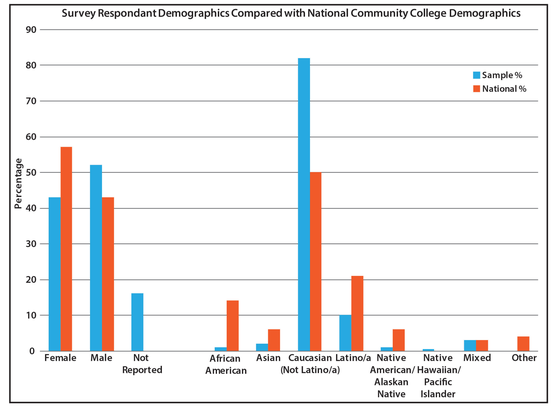
Abstract:
http://serc.carleton.edu/earth_rendezvous/2015/program_table/abstracts/100942.html

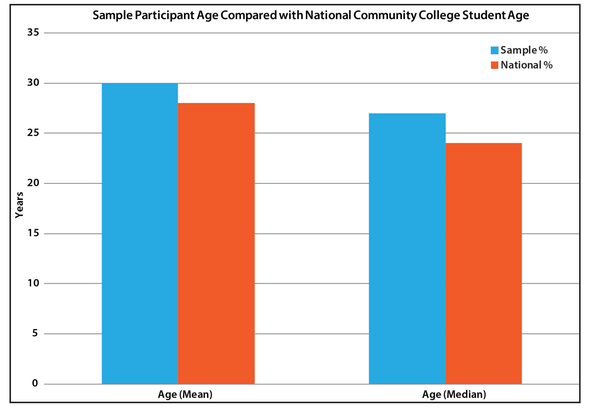
Overview:

In the spring of 2014 & 2015, American Geosciences Institute (AGI, 2015) administered a student exit survey for graduating geoscience majors across the country. Twenty-seven percent of participants who completed the survey had either attended or taken at least one course at a two-year college along the way to completing their degree (N = 1252; 2014 n = 596, 2015 n = 656).









Conceptual Framework:

Based on four concepts from the literature:

1. Organizational culture of the institution (Laanan, 2004) including the concept of transfer shock (Cejda, 1997; Hills, 1965; Townsend & Wilson, 2006).
2. Capital theory including academic (Cabrera et al., 2012; Hagedorn & DuBray, 2010; Winkle-Wagner, 2010), cultural (Bourdieu, 1977, 1986; Walpole, 2003) and transfer student capital (Laanan, et al., 2010).
3. Affective factors including motivation (Laanan, 2007; Wang, 2012; Martin et al., 2014).
4. *Student Engagement (Kuh 2009; Kuh et al., 2007) which is grounded in student involvement theory (Astin, 1999), and is closely related to integration theory (Tinto 1993).

Transfer receptivity

The geology department required Summer field camp but they didn't offer the course. Not only that but they wait until you are officially a [University] student to tell you about summer camp and it costs a lot of money.

I am a returning student and a veteran with a spouse and children. I also work part time and I am in the Navy Reserves. The greatest obstacle was trying to balance school and the rest of my "grown up" life while maintaining high academic performance. [University] has excellent resources for students such as myself which made these challenges easier to manage.

Organizational Culture

I transferred in, and a lot of my courses didn't count towards a geoscience major so it took me longer to graduate.

Transfer shock

My community college is nicknamed "the revolving door," which is quite true. The advisors there were awful. I didn't know Earth Science was even an option. It should be advertised more. There also needs to be more people attending the job fairs here.

Availability of evening classes as I work full time and most programs do not accommodate the non traditional student.

My advisor was very hands-off, making it difficult to nail down deadlines with him.

Poor academic advising at the community college level combined with being a first-generation college student, I didn't understand that I should have completed lower division degree requirements/prereqs (such as calculus, chemistry, and physics) at community college.

I re-entered college with a sever (sic) math deficiency, and have had to start at pre-algebra and work my way up.

I am the first in my family to graduate from high school and now from college. Lack of support from family made school difficult. Also dealing with a disability created challenges.

Difficulty of coursework, including chemistry and physics.

I am not proficient in any mathematics beyond college algebra and statistics and this made a few courses I took very challenging.

The rigor of the classes at [University] was much more than those at community college.

The mathematics involved. Four of the courses I took while pursuing my degree were either second or third attempts at one of the calculus courses or the course I eventually took in place of calculus 2 when I wasn't allowed to take it again.

Cultural Capital

Academic Transfer

Institutional Barriers 21%

- Course scheduling conflicts
- Advising issues/poor advising
- Faculty/administrator issues
- Pre-requisite/degree requirements
- Transfer conflicts/loss of credits upon transfer

Self-Regulation 9.5%

- Motivation
- Unclear goals/maintaining focus
- Emotions (panic attacks, test anxiety, etc.)
- Lacking self-confidence
- Educationally unprepared (e.g. lack of study skills)
- Stereotype threat

Academic Challenges 23%

- Mathematics courses and pre-requisites
- Chemistry and/or physics
- Specific geoscience courses
- Thesis
- Academic rigor of courses
- Writing

Personal Challenges 46.5%

- Financial/money issues
- Time management
- Family obligations
- Working while attending school
- Life-changing event

Being a non-traditional student I had many other demands on my time such as raising children and working. Also, it had been almost 30 years since I had been in school. Math was my greatest difficulty and discouragement.

Motivation

Deciding to stick with it. Once I found the aspect of geography that I liked (physical), it became easier and a lot more interesting.

Affective Factors

It was hard to shift mentally from being a social science to a natural science major, and I didn't have confidence in my abilities.

Emotions

It was very tough and time consuming. I feel like I am not as smart as other students so I had to work twice as hard to keep up.

Developing study habits for difficult courses, never had to study in High School or Community College.

Remaining driven to finish my degree even when I required a fifth year.

I struggled early on finding focus or direction.

The greatest obstacle was staying motivated and living on a tight budget.

Personal life. I am a nontraditional student in my 30's. Having a family, a household, and a job often make it more difficult.

Time management. I was committed to a theater program and on the track team in addition to being a geology major.

Academic

Student Engagement*

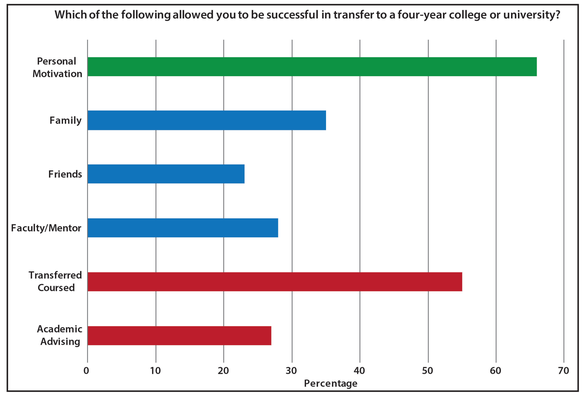
Personal reasons, such as the passing of my mom, derailed my graduation date.

Money. I am a working poor individual. I made only enough money to scrape by, and I was always worried about paying rent. It made it difficult to focus on academics, and often times I had to trade in school in favour of working to pay the bills.

Social

I am a single mother. Having a young child while attending school is extremely difficult.

Working is pretty difficult while studying, because while you're at school you worry about money and while you're working you're worrying about your studying deficit. Also, my father died while I was at the community college, so that was difficult.



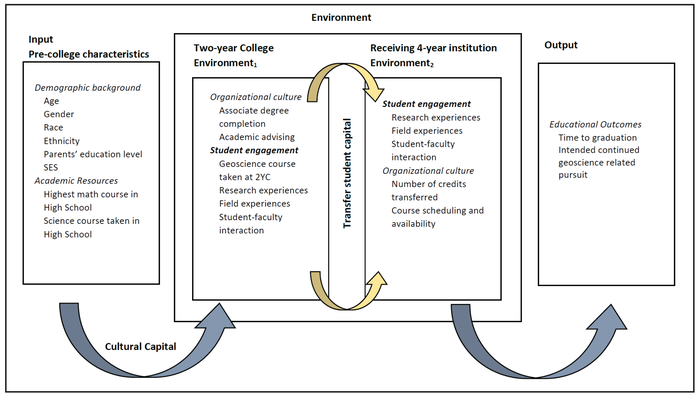
Most commonly identified:

Personal motivation and transferred courses (Self Regulation & Organizational Culture)
Less commonly identified: friends and academic advisors (Student Engagement & Organizational Culture)
Many of these factors are true for non-transfer students, but may not be as acute (Wilson, 2014)

Working Conceptual Model:

Utilizes Astin's (1999) input-environment-outcomes (I-E-O) model:

Input: Cultural and academic capital students bring
Environment$_1$: Engagement at the 2YC and transfer student capital acquired
Environment$_2$: Engagement at the 4YC and transfer receptivity
Output: Time to baccalaureate degree completion, intended continued geoscience related pursuits



Next Steps:

Many of these identified factors are challenges for students beyond those who attended a 2YC, however, they are more acute for those transferring. From this work we propose the following next steps in order to determine the best course of action for supporting geoscience students to be successful:

1) Continue to survey graduating geoscience students about their experiences.
2) Develop a larger survey instrument targeted at geoscience graduates who attended a 2YC to identify both facilitators and/or barriers in their transfer experience.
3) Identify those factors that are common for all student transfers and those that may be unique to just the geosciences.
4) Develop policy recommendations between 2YC and 4YC geoscience programs to build stronger partnerships and strengthen the 2YC transfer experience.

References:

Astin, A. W. (1999). Student involvement: A developmental theory for higher education. *Journal of College Student Development, 40*(5), 518-529.

Bourdieu, P. (1977). Cultural reproduction and social reproduction. In J. Karabel & A. H. Halsey (Eds.), *Power and ideology in education* (pp. 487–511). New York: Oxford University Press.

Bourdieu, P. (1986). The forms of capital. In, J.G. Richardson (Ed.), *Handbook of Theory and Research for the Sociology of Education*, (pp. 241-258). New York: Greenwood Press.

Cabrera, A.F., Burkum, K.R., La Nasa, S.M., & Bibo, E.W. (2012). Pathways to a four-year degree: Determinants of degree completion among socioeconomically disadvantaged students. In Seidman, A. (Ed.), *College Student Retention: Formula for student success* (p. 167-210). Lanham, MD: Rowman &Littlefield Publishers, Inc.

Cejda, B. D. (1997). An examination of transfer shock in academic disciplines. *Community College Journal of Research and Practice, 21*(3), 279-288.

Hagedorn, L.S., & DuBray, D. (2010). Math and science success and nonsuccess: Journeys within the community college. Journal of Women and Minorities in Science and Engineering, 16(1), 33-50.

Hills, J. R. (1965). Transfer shock: The academic performance of the junior college transfer. *The Journal of Experimental Education, 33*(3), 201-215.

Kuh, G. D. (2009). The national survey of student engagement: Conceptual and empirical foundations. *New Directions for Institutional Research, 2009*(141), 5-20.

Kuh, G.D., Kinzie, J., & Buckley, J.A. (2007). Piecing Together the Student Success Puzzle: Research, Propositions, and Recommendations. *ASHE Higher Education Report, 32*(5), 7-21.

Laanan, F. S. (2004). Studying transfer students: Part I: Instrument design and implications. *Community College Journal of Research and Practice, 28*, 331-351.

Laanan, F. S. (2007). Studying transfer students: Part II: Dimensions of transfer students' adjustment. *Community College Journal of Research and Practice, 31*(1), 37-59.

Laanan, F. S., Starobin, S.S., & Eggleston, L.E. (2010). Adjustment of community college students at a four-year university: Role and relevance of transfer student capital for student retention. *Journal of College Student Retention, 12*(2), 175-209.

Martin, K., Galentino, R., & Townsend, L. (2014). Community College Student Success: The Role of Motivation and Self-Empowerment. *Community College Review, 42*(3), 221-241.

Tinto, V. (1993). Theories of student departure revisted. In J. Smart (Ed.), *Higher education: Handbook of theory and research*. New York: Agathon Press.

Townsend, B. K. & Wilson, K. B. (2006). "A hand hold for a little bit": Factors facilitating the success of community college transfer students to a large research university. *Journal of College Student Development, 47*(4), 439-456.

Walpole, M. (2003). Socioeconomic status and college: How SES affects college experience and outcomes. *The Review of Higher Education, 27*(1), 45-73.

Wang, X. (2012). Academic performance of community college transfers: Psychological, sociodemographic, and educational correlates. *Community College Journal of Research and Practice, 36*, 872-883.

Wilson, C. (2014). *Status of recent geoscience graduates 2014*. Alexandria, VA : American Geosciences Institute.

Winkle-Wagner, R. (2010). *Cultural Capital: The Promises and Pitfalls in Educational Research*. New York, NY: Jossey-Bass, 2010.