Retaining High-Performing Students

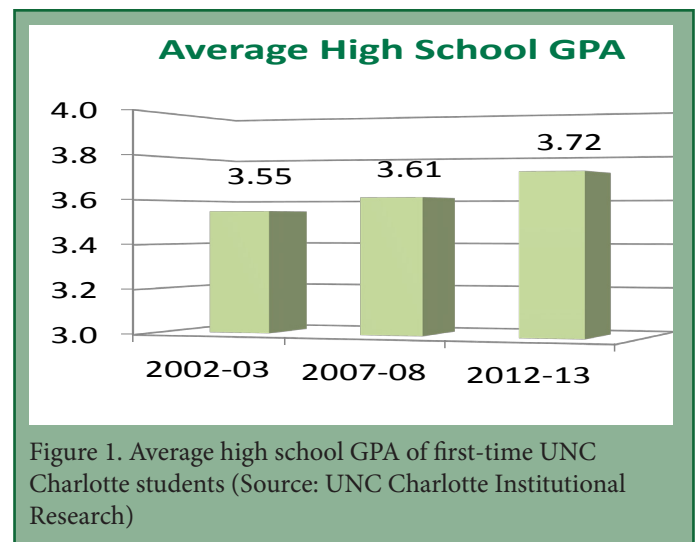Tamara M. Johnson, Ph.D., Office of Academic Affairs

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Over the years, UNC Charlotte has raised its profile as North Carolina's urban research institution, demonstrating its commitment to rigorous, cutting edge research, community engagement, academic integrity, and teaching excellence. Every year, the University attracts an increasingly talented and diverse pool of undergraduate students. While the University has implemented numerous support programs designed to assist students who struggle with the transition from high school to college, faculty and staff are also committed to supporting the success of high-performing students and ensuring that they graduate on time.

The Student Success Working Group (SSWG) emphasizes that efforts to retain high-performing students must begin in their first year on campus. The first year is an excellent time to introduce students to programs and opportunities available to those achieving academic excellence. Students who are aware of these opportunities early, can be competitively positioned to take advantage of programs that are open to them later in their UNC Charlotte careers. What follows is a review of current and suggested programs designed to recruit and retain high-performing students at UNC Charlotte. This report explores merit-based Tuition Assistance Grants (TAGs); increased exposure to undergraduate research, honors, and professional development experiences; and various recognition initiatives that serve as incentives to entice high-performing students to remain at the University through graduation.

Data Regarding Retention of High-Performing Students at UNC Charlotte

UNC Charlotte enrolls an increasingly accomplished cohort of undergraduates each year. In Fall 2012, the average Grade Point Average (GPA) of entering first-time, full-time, first year students was 3.71, up .5 points from the 2011-2012 academic year (see Figure 1). Every year, however, students withdraw from the University, including many who transfer to other colleges and universities. Of 3,541 new first year students who enrolled in Fall 2012, approximately 20% of them did not return to the University the following Fall. These numbers represent an attrition rate that declined in 2013 after remaining relatively stable over the previous six years (see Figures 2 and 3). UNC

Average High School GPA

	2002-03	2007-08	2012-13
GPA	3.55	3.61	3.72

Figure 1. Average high school GPA of first-time UNC Charlotte students (Source: UNC Charlotte Institutional Research)
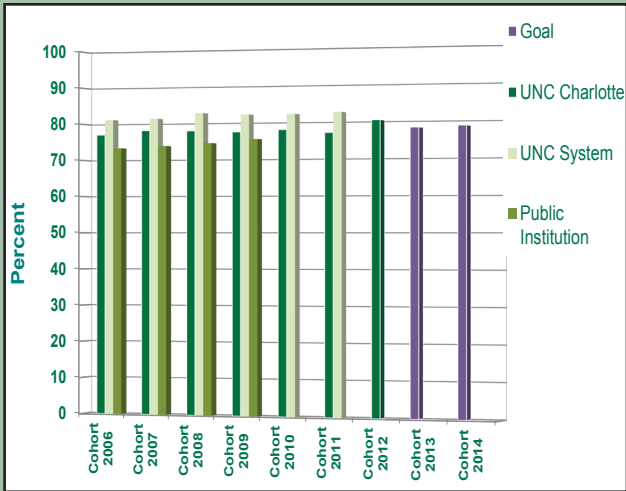
Figure 2. First year retention rates for UNC Charlotte students in context
Source: The University of North Carolina Institutional Research
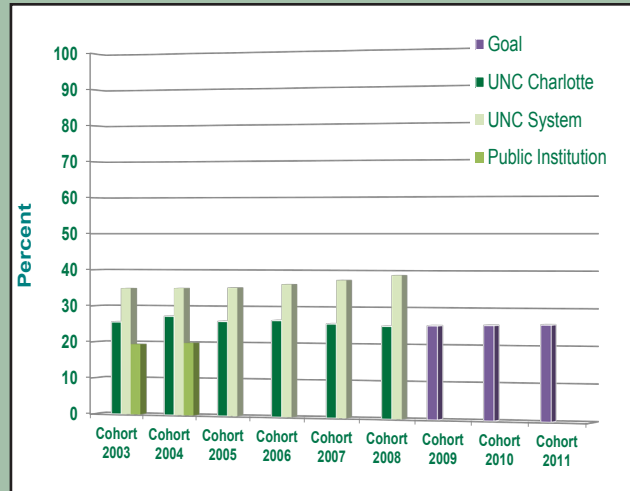

Figure 3. Four-year graduation rates for UNC Charlotte students in context
Source: The University of North Carolina Institutional Research

Charlotte has higher retention rates for students earning middle-range GPAs. According to Institutional Research data, 91.01% of first-year students entering in Fall 2012 who earned GPAs between 2.26 and 3.10 returned in Fall 2013. This retention rate is almost 5% higher than the rate for students earning a 3.11 GPA or above (see Figures 4 and 5). It is important to note that the first-time, full-time freshmen class entering in Fall 2013 has the highest average high school GPA and SAT scores in UNC Charlotte's history. Therefore, as the University enrolls students with increasing impressive high school qualifications, it is under growing pressure to retain and ensure the success of these high-performers.
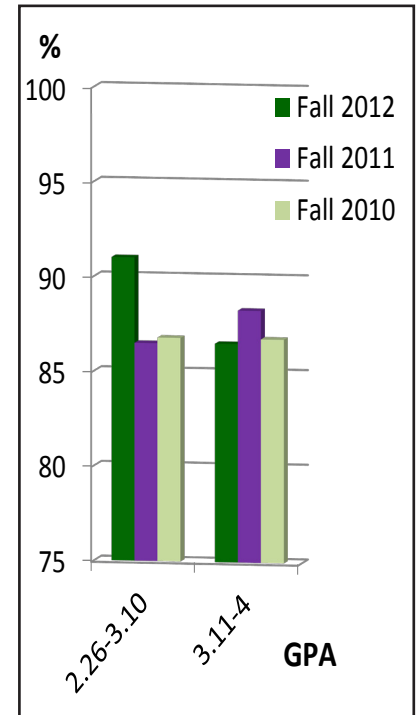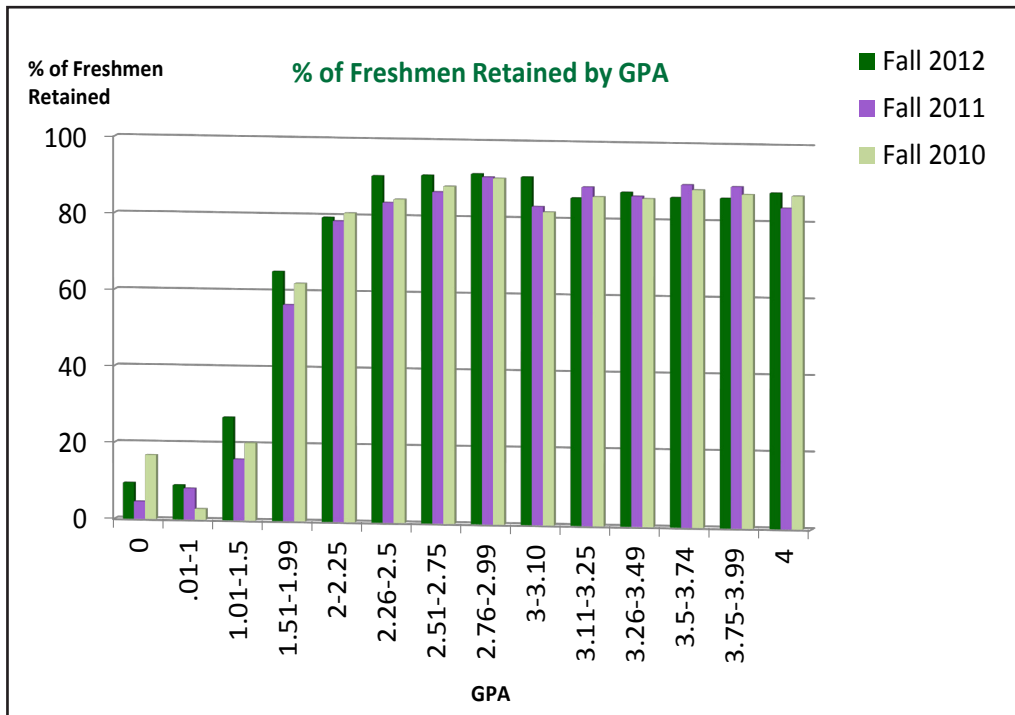
Figures 4 and 5 Percentage of entering freshmen retained at UNC Charlotte for one year by GPA
Source: UNC Charlotte Office of Institutional Research

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Table 1. Fall New Freshmen Not Returning in the Subsequent Fall (2009-2011 average)							
	NC Community College	UNC Campus	NC Private 4-year College	2-year College	Out-of-State Public 4-year College	Out-of-State Private 4-year College	Left, Did Not Transfer	Total
0- no credits	91	4	1	8	1	3	88	196
0.01-1.74	385	7	3	34	6	8	300	743
1.76-1.99	68	3	1	12	3	2	55	144
2.00-2.24	56	8	3	13	5	8	35	128
2.25-2.74	82	44	4	18	12	6	59	225
2.75-3.24	70	104	2	18	31	18	51	294
3.25 +	63	157	9	22	65	18	40	374
TOTAL	820	327	23	122	124	63	629	2113

National Student Clearinghouse [i] data show that of students who entered UNC Charlotte as freshmen between 2009 and 2011 and who did not enroll again the following Fall semester, an average of 17.7% earned a 3.25 GPA or higher. Of the high-performing students not returning to UNC Charlotte after one year, the highest proportion of these students (42%) transferred to another institution in the UNC system. In contrast, 57.3% of students in the same cohort but earning below a 2.25 GPA did not return to the University for the following Fall semester. In interpreting this data, it is important to remember that only the GPAs of students leaving UNC Charlotte and enrolling at another institution were matched in the Clearinghouse (see Table 1).

These figures tell a similar story to the one told by a more expansive set of data collected on the Fall 2008 cohort. According to the Office of Institutional Research, of the 3,086 students who enrolled at UNC Charlotte as first-time freshmen in Fall 2008, 481 transferred to another institution before Fall 2009. Just over half of the students (n=255 or 53%) enrolled at one of North Carolina's community colleges, while 23.5% (n=113) transferred to other UNC system campuses. Students transferring to other UNC campuses had an average Fall 2008 GPA of 3.04, compared with 1.61 for the students entering the state's community colleges (see Figure 4). Of high-performing students earning GPAs of 3.50 and above in their first semester, 37 transferred to other UNC system campuses, 11 enrolled in North Carolina community colleges, and 18 transferred to out-of-state four-year public institutions. Within the UNC system, Appalachian State University and North Carolina State University[ii] received the highest numbers of high-performing UNC Charlotte transfers in Fall 2009. Forty-one students in UNC Charlotte's 2008 freshman cohort transferred to Appalachian State and 23 transferred to N.C. State, both groups of students had an average Fall 2008 GPA

of 3.2. Of the *total* population of undergraduates enrolled at UNC Charlotte in Fall 2008, more than 100 students with Fall 2008 GPAs above 3.0 transferred to community colleges, including 50 students with GPAs of 3.50 or better. Fifteen new freshmen transferred to UNC Chapel Hill with an average GPA of 3.39, making UNC Chapel Hill the institution that received students with the highest average Fall 2008 GPA, followed by North Carolina State University (receiving 50 students with an average GPA of 3.01), and Appalachian State University (receiving 62 students with an average GPA of 3.00).

According to 2008 data, residency status may play a role in the decision to continue remain at UNC Charlotte, as students whose permanent addresses are located in Mecklenburg County[iii] have higher retention rates than students whose permanent addresses are located outside the county, although more research is needed to determine causation. In Fall 2008, only 69% of 335 total new freshmen enrolled at UNC Charlotte with out-of-state residency returned for Fall 2009, while 24% enrolled elsewhere. The 69% retention rate of out-of-state first year students compares to an 80% retention rate for their Mecklenburg County counterparts, and with a 77.9% first-year retention rate for all new first-time full-time UNC Charlotte students (see Figure 5). An over-whelming percentage (87.8%) of out-of-state students who transferred after one year at UNC Charlotte, transferred to institutions outside of North Carolina. The opposite is true of Mecklenburg County residents; of the 68 students who transferred, 83.8% of them enrolled in another institution within the state. Proximity to home appears to be a strong factor for most of these early transfers from UNC Charlotte. Out-of-state students at UNC Charlotte have a higher attrition rate than in-state students, and they disproportionately transfer to out-of-state schools. The University does not currently have data

Why students withdraw: ACADEMIC reasons

2011-- N= 104 (8.38% response rate)
2012-- N=113 (11.21% response rate)

- 49.56% — Academic factors did not contribute
- 26.55% — Low academic performance
- 16.81% — I did not enjoy my courses
- 14.16% — Other academic reasons
- 11.50% — Not satisfied with academic major
- 7.08% — Lacked academic skills
- 7.08% — Academic support was not available
- 3.54% — Was not academically challenged
- 2.65% — Was not accepted into desired major
- 1.77% — I accomplished my academic goals
- 1.77% — My degree program was not offered.
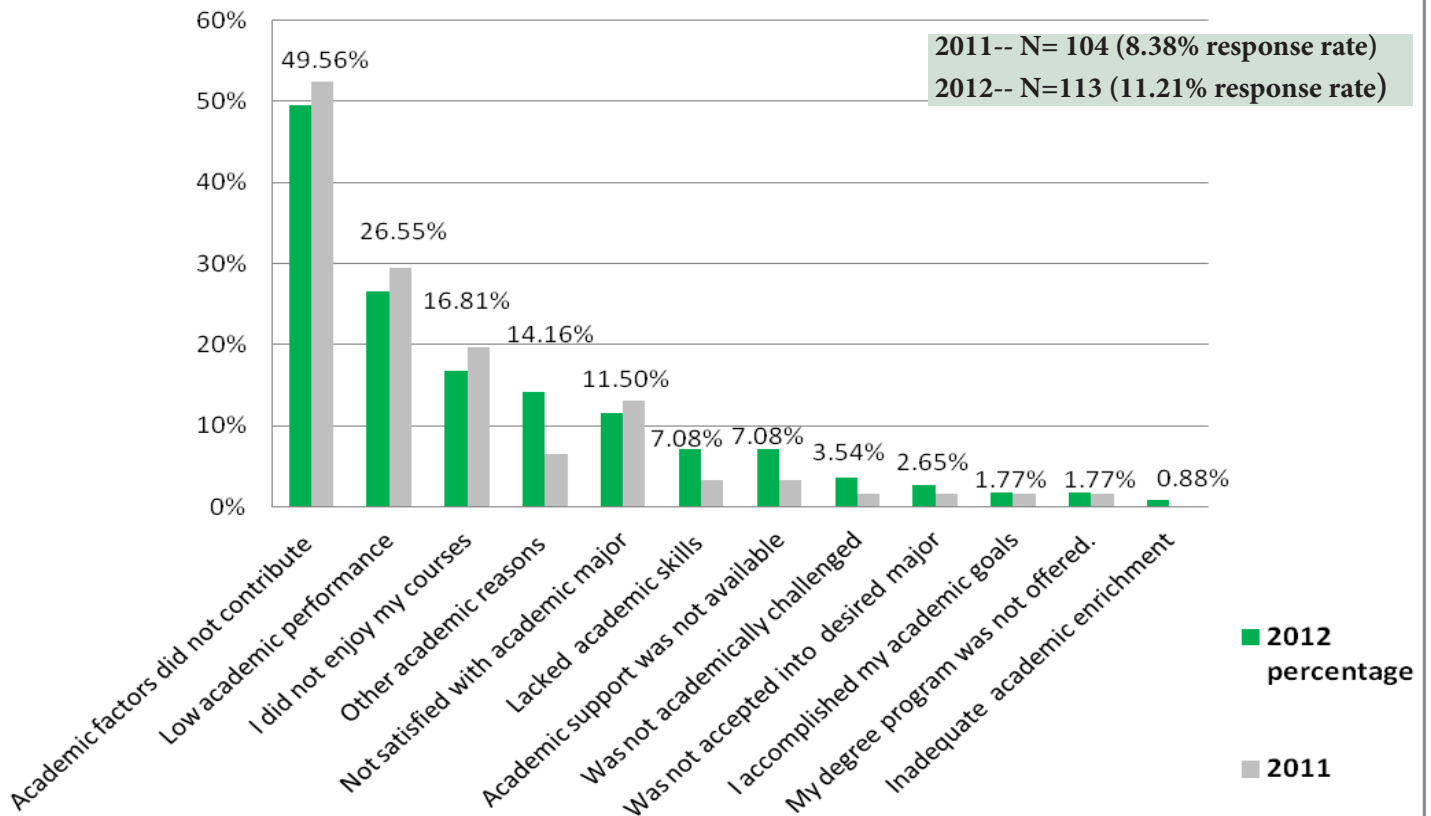- 0.88% — Inadequate academic enrichment

■ 2012 percentage
■ 2011

Figure 6. Results of 2011 and 2012 University College surveys of ALL students who withdrew from the University.
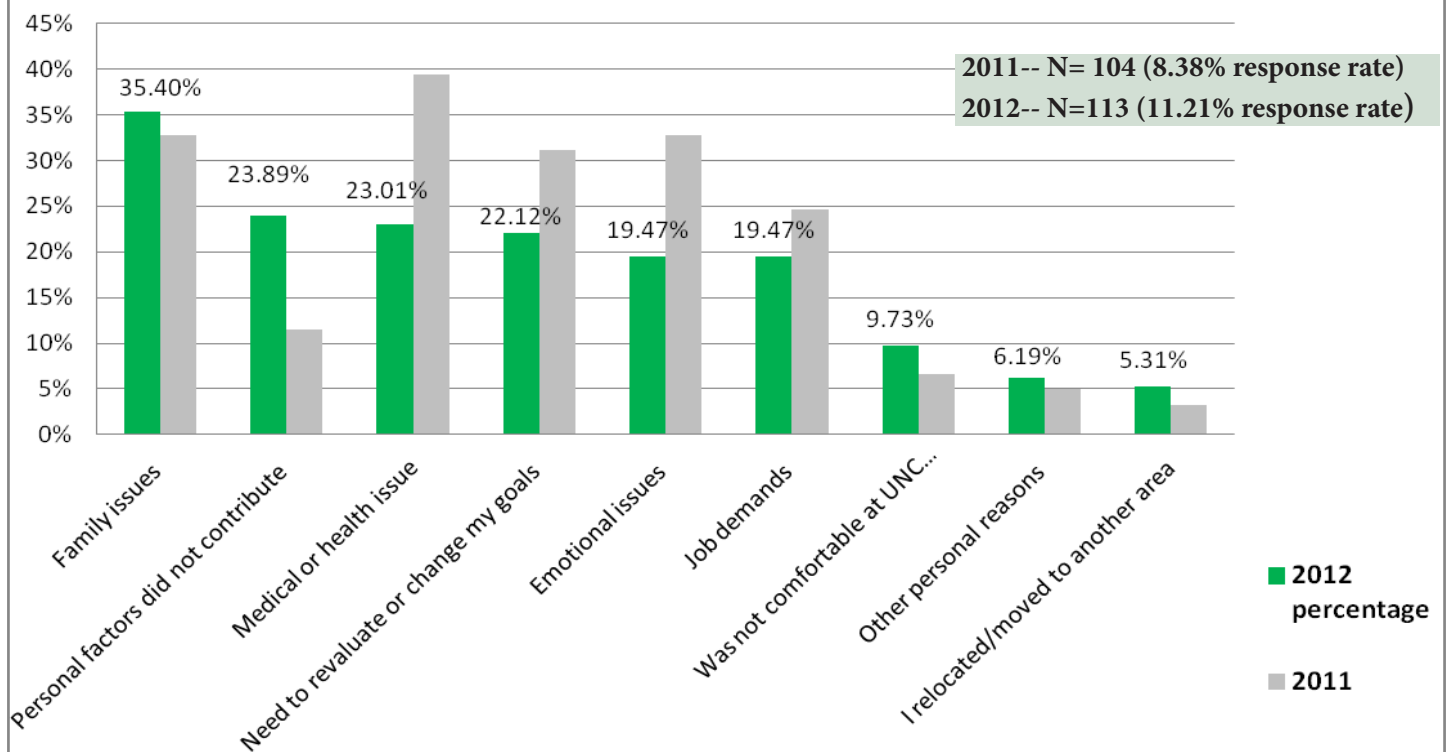
Why students withdraw: PERSONAL reasons

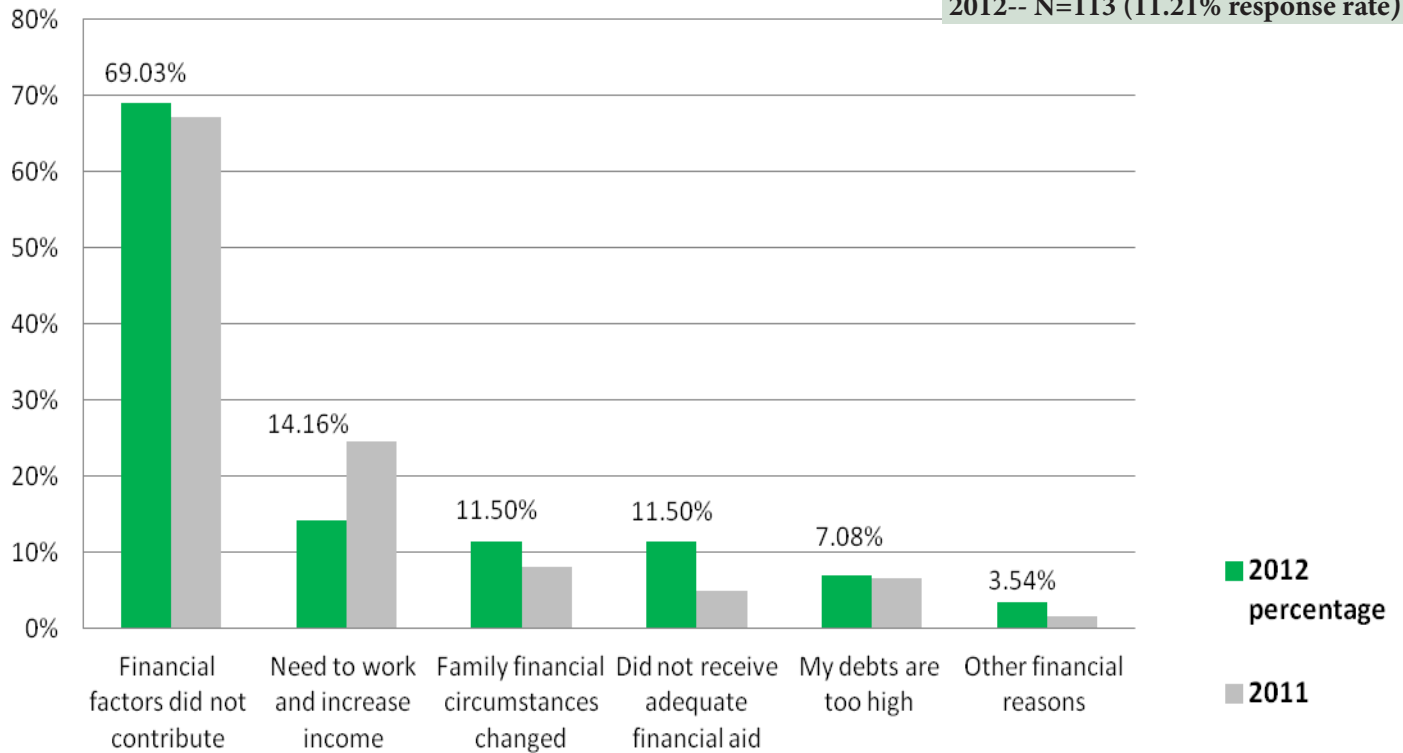2011-- N= 104 (8.38% response rate)
2012-- N=113 (11.21% response rate)

- 35.40% — Family issues
- 23.89% — Personal factors did not contribute
- 23.01% — Medical or health issue
- 22.12% — Need to revaluate or change my goals
- 19.47% — Emotional issues
- 19.47% — Job demands
- 9.73% — Was not comfortable at UNC…
- 6.19% — Other personal reasons
- 5.31% — I relocated/moved to another area

■ 2012 percentage
■ 2011

Figure 7. Results of 2011 and 2012 University College surveys of ALL students who withdrew from the University.

Figure 8. Results of 2011 and 2012 University College surveys of ALL students who withdrew from the University.
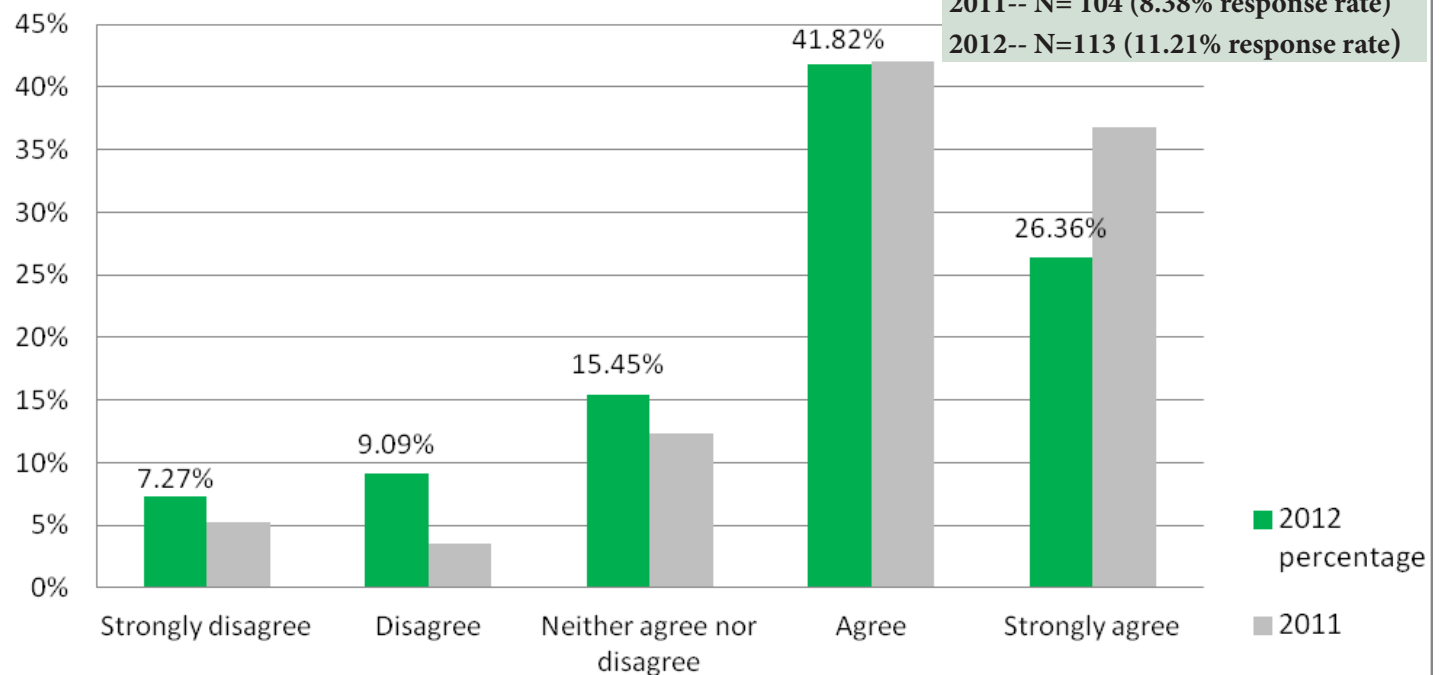

Figure 9. Results of 2011 and 2012 University College surveys of ALL students who withdrew from the University.

to explain whether academic, financial, or personal factors contribute to higher attrition and transfer rates among high-performing out-of-state students, but the numbers suggest that we should reach out early to students who are the furthest from home.

Why do high-performing students leave UNC Charlotte?

In 2011 and 2012, the University College administered two surveys of all students who withdrew from UNC Charlotte. In 2011, 8.38% of 1,180 students polled responded. In the 2012 survey, 1,008 former students were contacted via email with an 11.21% response rate. Of the small number of respondents, almost half of the students in 2012 indicated that academic reasons did not contribute to their decision to leave, a slight decrease from 2011 (see Figures 6-9). In fact, 68.2% of students surveyed in 2012 agreed or strongly agreed that they were satisfied with the learning process at UNC Charlotte. Of the 50.44 % of students for whom academics at UNC Charlotte was a reason for leaving, over a quarter cited their own low academic performance as a primary reason for withdraw.

Making this survey a standard and mandatory part of the withdrawal process would provide valuable insight into the factors contributing to the University's attrition rate. Further assessment is needed to track the numbers of students who return to UNC Charlotte after withdrawing for a period of time.

Financial Incentives and Merit-Based Awards

UNC Charlotte is in the process of exploring the role of financial need[iv] in retaining high-performing students. The Student Success Working Group explored the possibility of retaining high-performing students by reallocating TAG funding for students earning 3.0 or higher GPA. This move to increase merit-based funding is in line with national financial aid trends. Although the majority of college grants allocated by institutions are need-based, exclusively merit-based grants are becoming an increasing percentage of student financial aid packages nation-wide (Curs and Harper 2012; Cornwell et al. 2002). According to the National Association of State Student Grant and Aid Programs, "exclusively need-based aid constituted 48% of all aid to undergraduates, exclusively merit-based aid accounted for 19%, with the rest, 33%, accounted for by other programs and by programs with both need and merit components" (Curs and Harper 2012, 628).

Research on the effects of merit-based aid on student performance and retention are mixed. On the one hand,
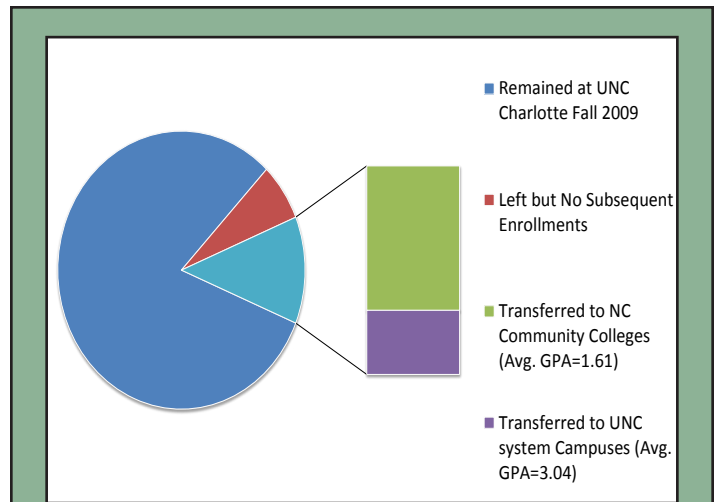

Figure 4. National Clearinghouse data for UNC Charlotte first-time students entering in Fall 2008. Source: Institutional Research
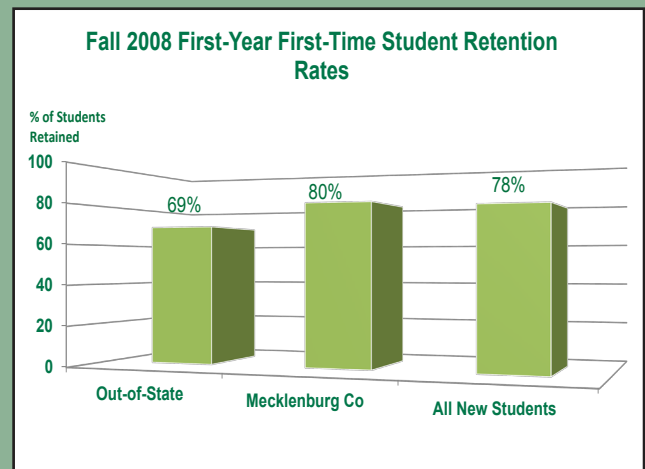

Figure 5. Fall 2008 F-Y, F-T Student Retention Rate Source: Institutional Research

students receiving merit-based aid are likely to persist relative to their peers, perhaps because such aid may inspire an emotional connection or sense of allegiance toward the institution (Kuh et al. 2008) or perhaps because merit-aid recipients have already demonstrated the determination and academic success necessary to be awarded the grant in the first place (Hossler et al., 2008). Under-represented students (economically disadvantaged and ethnic minority students) receiving grants are more likely to persist than those receiving loans (Swail 2004), although increasing emphasis on merit-based rather than need-based aid may adversely affect enrollment and retention rates for under-represented students, intensifying existing race and class disparities caused by a history of social and economic marginalization and unequal access to resources and social capital (Swail 2004; Kuh, et al. 2008).

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The most well-known merit-based financial aid program is the HOPE (Helping Outstanding Pupils Educationally) program. In 2003, the state of Georgia implemented the HOPE scholarship to encourage qualified students to enroll in state universities and colleges, and to improve college graduation rates by providing financial aid to students. Funded by the state lottery, the HOPE program covers tuition, fees, and books at any accredited public institution in the state for any Georgia resident graduating from high school with above a 3.0 GPA. To retain the scholarship, students must maintain a 3.0 GPA in college (Rubenstein 2003). While originally based on both merit and need, the HOPE scholarship became entirely merit-based in 1995. In response to the popularity of Georgia's HOPE program, approximately 15 states have since established similar merit-based financial aid programs (Cornwell et al. 2002).

While its popularity is undisputed, the HOPE program has attracted criticism for its unintended consequences. Research on the HOPE scholarship suggests that, in order to maintain eligibility, students enroll in fewer courses per semester, avoid majors with difficult introductory courses, and withdraw from challenging courses mid-semester, thereby increasing time to graduation (Cornwell et al. 2002). According to the Cornwell study, this behavior is particularly prevalent for students with GPAs near the 3.0 cut-off. Another study found that HOPE recipients are "only slightly more likely to persist at four-year colleges" than non-recipients (Rubenstein 2003). Of course, not all students who were eligible for HOPE scholarships as high school graduates were able to maintain their scholarships for all four years of their college careers. Of the 1995 cohort, almost 60% of students "were unable to maintain eligibility for four years, and the majority of those students lost their scholarship after the first year" (Rubenstein 2003).

UNC Charlotte is in the process of restructuring Tuition Assistance Grant (TAG) funding to more effectively retain high performing students with high financial need.

In addition to monetary incentives to offset the financial burden for high-performing students, UNC Charlotte will offer career development opportunities to improve student retention rates. In Fall 2013, the University will launch a new "University Professional Internships" initiative for students. Qualified students will be offered paid internships in offices and departments on campus that match their majors and career objectives. The internship program is designed help students develop valuable resume-building skills and career competencies while off-setting some tuition costs. While this program does not necessarily target high-performing students alone, the University anticipates that motivated and successful students will

benefit from skills developed through the program.

Undergraduate Research

The SSWG proposes increasing the number of unique research and professional development opportunities to engage high-performing students. The Council on Undergraduate Research defines undergraduate research as "inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline."[v] Institutions of higher learning in the United States began to take an earnest look at undergraduate research programs after 1995 when the Boyer Commission (originally the Carnegie Foundation for the Advancement of Teaching initiated the National Commission on Educating Undergraduates in the Research University) recommended that the undergraduate experience "focus on learning through discovery-based methods that progress toward forms of independent inquiry" (Berkes 2008, 2). Such research is typically separate from lecture coursework and is supervised by a faculty mentor. According to Toufic M. Hakim, President of the Council on Undergraduate Research, active undergraduate research programs can heighten a University's reputation as well as attract and retain academically accomplished students (2000).

Numerous studies explore the benefits of undergraduate research. For example, an examination of the Undergraduate Biological Sciences Education Program at Texas Tech University found that increased confidence and motivation to overcome barriers in the sciences were significant outcomes of the program for female participants (Campbell 2002). A review of 53 scientific research apprenticeship experiences for secondary students, undergraduates, and teachers revealed that such experiences have positive effects on participant career aspirations, understandings of scientific content, confidence for conducting scientific research, and intellectual development (Sadler, et al 2010). Studies also indicate that students engaging in undergraduate research are more competitive for graduate programs and on the job market (Webb 2007) and are more likely to pursue terminal degrees (Russell et al., 2007).

In a 2009 report for the United Kingdom-based Higher Education Academy, Healey and Jenkins propose four main avenues for engaging undergraduates in research and inquiry: research-led approaches in which students learn about current research in the discipline; research-oriented development where students learn research skills and techniques; research-based learning in which student conduct research; and research-tutored engagement where students participate in research discussions. All four approaches to undergraduate research are interdependent

and can be incorporated into curricula. The initiatives discussed in this working paper reflect these four avenues for undergraduate inquiry.

Working one-on-one with a professor to conduct original research as an undergraduate student is a unique experience. Conducting research engages students in the process of knowledge production early in their careers, and allows them to make a valuable contribution to a field of study. This process builds confidence and character; students who participate in research projects tend to do better in their majors and are well prepared to advance in their careers. The following section highlights opportunities for undergraduate research at UNC Charlotte, and discusses how these opportunities can be used to recruit and retain high-performing students. The following programs foster and expand undergraduate research on campus.

Campus-Based Undergraduate Research Conferences/Symposia

UNC Charlotte launched the first annual Charlotte Research Scholars (CRS) program in the summer of 2012. The CRS program funded 50 UNC Charlotte undergraduates to work with faculty on projects in the STEM disciplines (science, technology, engineering, mathematics), the social sciences, psychology, history of science, and K12 math education. More than 125 faculty members expressed interest in mentoring undergraduate scholars, and 170 undergraduates applied for the 50 available fellowships. Scholars accepted into this competitive eight-week summer program received a $4,000 stipend to support their research experiences. The CRS program not only allows undergraduates to gain valuable research experience; a vital part of the program was professional development training to prepare students for future research careers. The training included sessions on conducting research ethically, writing research reports, preparing and presenting research posters, creating an academic résumé, preparing for and applying to graduate school, and applying for research funding and fellowships. The CRS program also sponsored several social events designed to build an intellectual community among the participants through social activity. Interacting and sharing ideas with students from other majors can allow them to begin making intellectual connections across a broad range of topics. This kind of cooperation drives innovation.

At the end of the eight-week program, CRS participants joined students in three other UNC Charlotte undergraduate research programs to present their work at a research symposium held in the Student Union. In total, 87 students exhibited posters and answered questions from UNC Charlotte faculty, staff, and students as well as community members during the symposium. Awards were presented for the top posters in three broad categories: social sciences, psychology and math education; natural sciences; and engineering, technology and computer science. In its second year, CRS expanded to include students from the humanities and from the arts and architecture. Approximately 100 students presented their research at the 2013 Summer Research Symposium. While the Summer Research Symposium marks the conclusion of the first CRS project, it is the goal of program administrators to maintain contact with the scholars throughout the academic year.

Since 2006, the College of Computing and Informatics has operated a National Science Foundation Research Experiences for Undergraduates (REU) program that engages rising sophomores and juniors in full-time, lab-based research during an eight- to ten-week summer experience. Each summer cohort participates in one of four research teams associated with a different research lab: the Charlotte Visualization Center, the Future Computing Lab, the Games + Learning Lab, and the Networking Research Lab. The program employs a collaborative and tiered mentoring approach to research, ensuring that all students participate as a "legitimate member of a community of practice."[vi] Results from an assessment of the first two years of the REU program suggest that this approach strengthens students' capacity and desire to conduct research and enhances participants' sense of "fit" in computing. The REU is able to include more students in the program with additional funding from the Computing Research Association's Distributed Mentoring Project (CRA-DMP), and other sources.

The Undergraduate Research Conference is an annual university-wide showcase of research projects completed by undergraduate students from all colleges and departments and a wide variety of methodological backgrounds. Student poster and oral presentations are judged by a team of UNC Charlotte faculty members during the conference and general prizes are awarded by discipline. In 2012, over 60 undergraduate students participated in the Undergraduate Research Conference hosted by Atkins Library. In Spring 2013, the number of student participants grew to 104; 43 participated in oral presentations and 61 presented posters. Conference organizers and judges commended all participants for the high quality research represented in the conference.

These programs and symposia not only give motivated students an opportunity to be mentored by faculty and to conduct original research, but also to communicate their research findings to a community of fellow scholars. In order to create a culture of undergraduate research on campus, research opportunities and success stories must

be visible. For example, the College of Liberal Arts and Sciences is building a web presence around undergraduate research that will highlight ongoing projects and encourage faculty to post ideas for student research projects. Students must recognize that undergraduate research is not only a valuable intellectual experience and resume-building opportunity, but they must also understand that engagement in undergraduate research is accessible.

Atkins Library is instrumental in the development of an undergraduate research culture on campus. As Anthony Stamatoplos, Assistant Professor and Associate Librarian at Indiana University, argues, librarians play an important and often over-looked role in undergraduate research programs. Information literacy, he argues, tends to be "either assumed or ignored."[vii] Compared to standard course-related assignments in which students examine and communicate existing knowledge, Stampatoplos suggests that undergraduate researchers "may have greater and more complex overall need for quality information and evaluative skills" making productive interaction with librarians an essential part of the research process. [viii] In addition to hosting the Undergraduate Research Conference, the Library conducts a number of seminars and workshops introducing students, faculty, and staff to using Geographic Information Systems (GIS) as a research tool, creating multimedia products, and conducting archival research in the library. Atkins Library staff have envisioned the possibility of developing a student-run research publication so that students gain the experience of submitting and publishing their research as well as compiling editing a scholarly publication.

Academic Programs for High-Performing Students

The UNC Charlotte Honors College

UNC Charlotte is committed to providing an education for all students that equips them with intellectual and professional skills, ethical principles, and an international perspective within a robust intellectual environment that values social and cultural diversity. The University provides a strong foundation in liberal arts and opportunities for experiential education to enhance students' personal and professional growth. The Honors College is committed to developing these elements more deeply and broadly in highly-motivated UNC Charlotte undergraduates who seek intellectual excitement and challenge. The Honors College focuses on cultivating creative, analytical, synthetic and reflective thinking practices through in-depth research and inquiry. This focus enables students to identify, define, understand and effectively articulate the inherent tensions
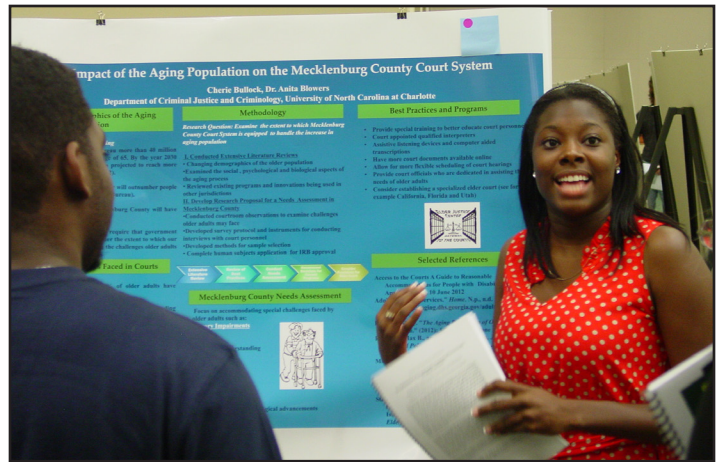

Fig. 6. A student presents at the 2012 Summer Research Symposium

of complex problems at home and abroad and learn how to contribute in meaningful ways toward progress.

The Honors College serves the University Honors Program (UHP), four College honors programs (Arts + Architecture, Business, Computing & Informatics, and Education) and 18 departmental honors programs (17 in Liberal Arts & Sciences; 1 in Health & Human Services). Each program has its own admission standards and requirements for graduation, although, in order to graduate with honors at UNC Charlotte, all students must complete a capstone project or thesis. Other key functions of the Honors College include coordinating events with the North Carolina Teaching Fellows and Levine Scholars, and administering pre-health advising to assist students and graduates of UNC Charlotte who are interested in health-related fields and graduate schools. In Fall 2012, 425 students (approximately 2% of the overall student body) were enrolled in UNC Charlotte honors courses offered by a department, college, or by the University Honors Program (UHP).

The Honors College coordinates the Crown Scholarship program in which scholars receive merit-based funding for their four years at UNC Charlotte. As a new initiative, the Honors College is working with the Levine Scholars program (mentioned in more detail below) and the Office of International Programs to groom prospective candidates for prestigious post-graduate national merit scholarships such as the Marshall Scholarship, the Harry S. Truman Scholarship, the Fulbright U.S. Student Program, and the Rhodes Scholarship. This program will also offer proposal development training for students and workshops for faculty on how to write effective letters of recommendation, as well as hands on advising for prospects.

In Fall 2012, 127 students were admitted into the University

Honors Program (UHP); of that number 18 were transfer students. When compared to honors-qualifiedix students with comparable Predicted-GPAs and SAT scores, students in UHP are more likely to return for their sophomore year, and are more likely to graduate in four and six years (see Figure 7 for four year graduation rates). This suggests the "honors experience" plays an important role in not only attracting high ability students to UNC Charlotte, but also in retaining and in graduating these students on time. Administrators of the Honors College speculate that higher retention rates honors students than for honors qualified students can be attributed to having a "home" (i.e. physical space for gathering) that creates an intellectually challenging and exciting environment, targeted programming, faculty and staff support, a community of peers. Further research is needed to substantiate this claim.
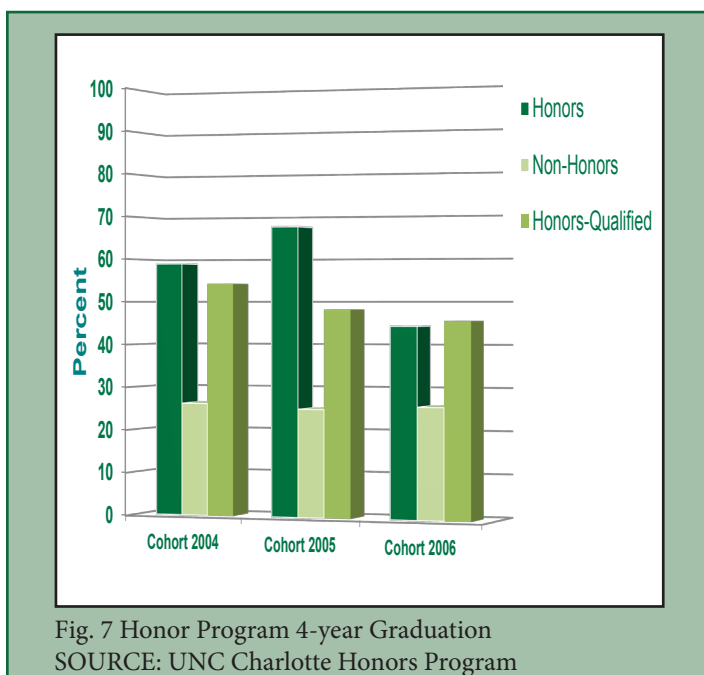

Fig. 7 Honor Program 4-year Graduation
SOURCE: UNC Charlotte Honors Program

Currently, all UNC Charlotte honors-qualified students have the option to apply to UHP and other four year honors programs. In order to recruit students into the UHP, the Honors College plans to increase its web presence and electronic communication to honors qualified, Dean's List, and Chancellor's List students to explain how they can enter various honors programs at different points during their academic career. Information about honors-related events and opportunities is delivered via listserv to any student involved in an honors program on campus.

In the spring of 2011, the Honors College sent a survey to 3000 randomly selected students with cumulative GPAs of 3.0 or higher to get a better sense of student experiences with and perspectives about honors programs on campus. Of the 3000 students, 474 students (16%) responded to the survey. Of the survey respondents, only 10% (51 students) had taken an honors course while at UNC Charlotte, 7.8% (37) of the responding students were currently enrolled in the University Honors program, and 8% (38) were enrolled in a departmental or college honors program. There is some overlap between these programs.

Of those who were not currently enrolled in the University Honors program, the following reasons were cited for not enrolling:

- Not aware of the University Honors Program--60.7%
- Did not have flexibility in schedule to add honors--18.2%
- Did not hear about program until it was too late--16.9%
- Considered honors programs to be too much work--8.1%
- Did not believe themselves eligible for the program--5.5%
- Other--15.7%

Of those who were not currently enrolled in a departmental/college honors program, the following reasons were cited for not enrolling:

- Unaware of department/college program 71.2%
- Not enough flexibility in schedule to add honors 14.4%
- Department/college does not have a program 7.9%
- Considered honors programs to be too much work 7.7%
- Did not believe themselves to be eligible 4.9%
- Other 10%

Students responded that the advantages of participating in an honors program include support from peers, improved job and networking opportunities, connections with faculty, early registration, challenging courses and smaller class sizes, community service opportunities, graduate school preparation. When asked about the biggest disadvantage of being a part of an honors program, student responses included the increased workload, a concern that an honors designation and impressive GPA are not necessary for employment, scheduling conflicts with work and free time, and increased stress levels. Generally, high-achieving students who were not active in any honors program were more concerned with time to degree than students enrolled in honors programs, and less interested in other potential benefits of honors programs.

Honors programs foster faculty-student interaction by offering small classes for honors students and by offering opportunities for faculty mentoring of students in research. The Honors College is currently working to develop faculty engagement in various honors programs, and to address issues of uneven faculty participation across colleges and departments. In the spring of 2011, the Honors College surveyed all 1,436 full-and part-time faculty at UNC

Charlotte about their experiences with the Honors program. With 237 faculty responding (a 16.5% response rate), most faculty commented that interacting with high performing students and the opportunity to expand course materials and teach smaller classes are advantages of teaching an honors course or chairing an honors thesis or project committee. On the other hand, when asked about the disadvantages of teaching an honors course or chairing an honors committee, several faculty commented on the preparation time required and the difficulty of fitting such responsibilities into their schedules. In particular, faculty on the tenure track are concerned about how teaching an honors course or chairing an honors committee fits in to the tenure and promotion process. As of Fall 2013, the Honors College is developing programs to strengthen relationships with tenured and tenure-track faculty members through the Popcorn and Professors Discussion Series, by issuing an open call in 2013 for faculty proposals to teach a course in the Honors College, and through team teaching the community service course in the UHP with the Charlotte Action Research Project (CHARP). These programs would focus on student-faculty interactions in an informal environment, and would build on existing community engagement partnerships.

Levine Scholars
The Levine Scholars Program, established in 2009 by benefactors Sandra and Leon Levine, is UNC Charlotte's prestigious merit scholarship program. The inaugural class of Levine Scholarships enrolled in Fall 2010, and 59 students are currently participating in the program. Levine scholarships are awarded each year to extraordinary high school seniors based on scholarship, ethical leadership, and civic engagement. Levine Scholarship provides recipients with a four-year scholarship that covers full tuition, room and board, a grant to implement a service project of the Scholar's own design, and four summers of experiences

Fig. 7 UNC Charlotte Levine Scholars

that will develop leadership skills, social awareness, and an international perspective. While the program is relatively young, it has retained all but four high-performing students since the inaugural class.

Faculty and Peer Mentoring
Student Success Working Group members have suggested offering more professional development opportunities to high-performing students at UNC Charlotte as a way to improve retention. Scholars and administrators nationwide have long believed that intellectual interaction between faculty and undergraduates is a vital element of student success, development, and retention. Baker and Griffin (2010) suggest that faculty serve as "developers" to undergraduate students. In addition to providing the support of a traditional mentor relationship, developer relationships are collaborative and engage students in knowledge development and information sharing. A developer works with students to devise a plan that will help them achieve their academic and professional goals, and creates opportunities for students to build the necessary skills to succeed.

Many departments and programs on campus currently offer professional development and faculty-student engagement opportunities. For example, the PRODUCE program (Producing Readiness of Diverse University Cohorts in Education) hosts a variety of programs encouraging interaction among faculty, staff, and students including a popular mixer at the beginning of each Fall semester, a faculty staff panel during SAFE Voyage, a peer mentoring program designed to help students successfully transition through their first year of college, and an Academic Bridge program for STEM students that invites faculty presenters. Continuing to foster opportunities for faculty-student interactions on campus, including hosting special lectures for high-performing students, or offering of faculty mentoring and undergraduate research opportunities at time of admission in lieu of a merit scholarship, can inspire students to remain at UNC Charlotte. During these interactions, faculty mentors should be encouraged to treat undergraduate mentees as future colleagues.

In addition to working with faculty to forge professional relationships and contacts, several departments on campus recruit outstanding students to become peer advisors or mentors. Psychology has existing programs to recruit good students as peer advisors and teaching assistants. Both programs offer academic credit to participating students. The Mathematics department offers employment to undergraduates who do well.

At Michigan Technological University, two mentoring programs, the Graduate/Undergraduate Initiative for Development and Enhancement (GUIDE) and Excelling the Student Experience of Learning (ExSEL), were established to increasing retention rates among first year engineering students (Monte, et al 2007). Program assessments reveal that not only do retention rates of the mentees improve, but retention rates of mentors, second year undergraduates in the program, have also improved through participation in the programs. According to the program's assessment study, the same practices that improve retention rates among mentees, also improve retention rates and strengthen academic success among mentors. These practices include forging professional and intellectual relationships with faculty, being award of financial assistance and academic support resources on campus, and participating academic advising sessions, career development opportunities, and campus community events. After five years, the GUIDE program at Michigan Tech has maintained a mentor retention rate of 97%.

Recognition Opportunities

Another way to retain students who are performing well academically is to formally recognize academic achievement. Informing students of various recognition events in the first semester on campus gives them a goal for which to strive early in their UNC Charlotte careers and incentive to remain on campus.

Incentives are commonly used in a variety of organizations and industries to enhance performance and retain productive members. For example, studies demonstrate that professional development opportunities and performance-related recognition are more influential than financial remuneration for retaining health care professionals in rural Malawi (Bradley and McAuliffe 2009); a survey of banking managers found that approximately 60% of respondents claim that lack of recognition would be the main factor prompting them to resign from a position (Rose 2011); and students receiving symbolic recognition certificates outperformed students in a control group not receiving work-related recognition by 12% (Kosfeld and Neckermann 2010).

There are currently a number of recognition efforts supported by various departments and academic units on campus. For example, the Division of University Advancement is partnering with Academic Affairs to send postcards to students congratulating them on making the Dean's and Chancellor's list.   The Office of the Registrar posts Dean's and Chancellor's Lists on the Registrar's website, and the lists are on display in the Atkins Library, and featured on the University website for three weeks of next semester. Additional existing practices on campus include a popular Learning Community Academic Recognition Reception attended by both students and parents, an awards dinner for students earning a 4.0 GPA and their faculty guests sponsored by Housing & Residence Life, recognition at a men's basketball game of all Student-Athletes earning a 4.0 GPA, and an Academic Recognition Reception sponsored by the BEST (Building Educational Strengths and Talents) program for which students can invite faculty and alumni.

Other suggestions for recognition include sending voice mail messages from deans via the Call Center to students on the Dean's list, placing a congratulatory "pop-up" message in Niner Advisor or 49erExpress, dedicating a special section of the University Magazine and the Parent and Family magazine to Dean's and Chancellor's list students, rewarding them with a special ticket and half-time recognition at a home basketball game, and encouraging chairs to congratulate outstanding students at the departmental level. The messages about Dean's and Chancellor's Lists should be centrally coordinated for uniformity and efficiency. Recognition and award opportunities should be distributed centrally to student during the first semester.

The SSWG stressed the importance of sharing the success stories of high achieving students. A series of student achievements across disciplines should be prominently displayed in the Student Union, Atkins Library, the UNC Charlotte homepage, and in University magazines and promotional publications. This campaign should highlight a broad range of student success stories, and should avoid over-representing one or two extraordinary students.

Future Directions

In order to improve the retention of high-performing students at UNC Charlotte, this report suggests the

University address the following areas:

Additional Research

To better understand how to retain high-performing students, the University must understand why high-performing students choose to leave. When a student withdraws from the University, part of the withdraw process should include a brief but mandatory online exit survey requiring the student to indicate the reasons why he or she is leaving UNC Charlotte. It is possible that, for a number of students, UNC Charlotte was not their first choice, and they intended to transfer to another institution at enrollment. University administrators should also conduct interviews or focus group sessions with current high-performing students to learn what academic programs, activities, or experiences they find most valuable, and to assess their level of engagement in the academic life on campus.

Increased Visibility

The University must continue to highlight the excellent programs, faculty mentoring, and talented students already on campus. These successes must be represented in University publications targeting alumni and the broader community, on posters, LCD screens and other visual media around campus for faculty and students, and in Admissions recruitment material designed to attract potential students who will view UNC Charlotte as an institution from which to graduate.

Likewise, efforts to increase visibility should invigorate faculty-student engagement in undergraduate research. Departments should increase the number of events dedicated to faculty and undergraduate research presentations including informal faculty-led after hours discussions in residence halls, brown bag lunches, and small undergraduate research seminars. By fostering a culture of undergraduate research and engagement at the departmental level, the University can encourage broader participation in campus-wide programs and events. If students are well aware of these opportunities at the time of admission, the likelihood increases that students will remain enrolled at UNC Charlotte in order to participate in these programs.

Notes

[i] http://www.studentclearinghouse.org Campuses report to the National Student Clearinghouse social security numbers as IDs for initial enrollment, along with other information such as names and birthdates. When subsequent enrollment tracking is performed, only names and birthdates are provided. The student must have been reported as enrolled (with SSN) at UNC Charlotte in order to match to subsequent enrollments at other institutions. Students missing SSNs and students subsequently attending institutions that do not participate in the National Student Clearinghouse will not be found in a search. (Coppola 2010)

[ii] Appalachian State University is a comprehensive, public, coeducational institution located in Boone, North Carolina, approximately 117 miles from Charlotte with an enrollment of 17,344 students. North Carolina State University is a public, coeducational, research university located in Raleigh, North Carolina, approximately 154 miles from Charlotte with an enrollment of 34,340 students.

[iii] Mecklenburg County is the most populous county in North Carolina and the home of UNC Charlotte. Approximately 31.4% of UNC Charlotte's student population enrolled in 2011-2012 are residents of Mecklenburg County.

[iv] Financial need is determined after the student has enrolled in a degree or certificate program at the University, and after he or she has completed the Free Application for Federal Financial Aid (FAFSA). UNC Charlotte offers a comprehensive program of student financial aid (scholarships, grants, loans, and part-time employment) to assist students in meeting educational expenses. Reasonable educational expenses include tuition and fees, room and board, books, supplies, transportation, miscellaneous personal expenses, and expenses related to maintenance of a student's dependents. The programs of student financial aid are administered according to a nationally accepted policy that the family is responsible for a student's educational expenses. Therefore, eligibility for financial aid will be determined by a comparison of a budget (educational expenses as defined above) for the period of attendance with what the student's family can reasonably be expected to contribute.

[v] http://www.cur.org/about_cur (assessed 1/4/2013)

[vi] (Dahlberg, Barnes, Rorrer, and Powell 2008, p467)

[vii] (Stamatoplos 2009, 239)

[viii] ibid.

[ix] Honors-Qualified Students include students who ranked in the top 12% of their graduating high school senior class and had a combined SAT score of 1100.

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