Establishing a Women's Mentorship Network in a STEM Learning Community

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For the science and technology workforce to remain globally competitive "The U.S. research enterprise needs all the talent, skills, and brainpower that it can get" (p. 109)[1]. While addressing the President's Council of Advisors on Science and Technology (PCAST), Linda Rosen, CEO of Change the Equation, stated "generally, with the recession, looking at three years of (national) data there were three point six people for every open job, but STEM is almost the reverse. There are nearly two jobs for every qualified individual"[2]. Similar local data showed one point four jobs for every person in science, technology, engineering, or mathematics (STEM) and four point one unemployed individuals for every one non-STEM job[3].

Reducing barriers for women and other underrepresented minorities in the STEM workforce is imperative. "Universities must continue to be central…" (p. 109)[1] in efforts to reduce barriers and identify viable solutions for retaining underrepresented populations. Florida, at 7.7%, is below the average of the percent of STEM college degrees awarded nationally. Only a small percentage of the STEM degrees awarded in Florida, were earned by women and this percent has dropped over the last decade[3].

Industry, government, and education leaders continue to increase accountability in institutions of higher education[4-7]. Sustained reductions in the number of students interested in STEM forces institutions of higher education to devise cost effective and outcome-rich strategies to recruit, retain, and graduate more students in the STEM disciplines[8-9]. Researchers continue to look for best practices, or a combination of best practices, leading to greater student persistence. Leaders support faculty and student service staff in the creation of appropriate campus programming, such as learning communities and mentoring programs, to promote student success, increase retention, and deepen student learning[10-15].

Learning communities "represent an intentional restructuring of students' time, credit, and learning experiences to build community, enhance learning, and foster connections among students, faculty, and disciplines" (p. 20) [16]. The goal of the living-learning community (LLC) under review, EXCEL, is to increase the number of U.S. citizens and, where possible, increase the number of underrepresented students obtaining a B.S. degree in STEM. To achieve this goal, the EXCEL faculty and staff designed a learning community around a carefully thought out set of educational interventions. Because the first two years in college were found to be the most critical for a student's success in a STEM discipline, the EXCEL activities focused on this time frame. Though successful in the goal of retention to graduation for both men and women, the participating women were retained at a lower rate than their male counterparts. To address the issue, EXCEL, in conjunction with industry partners, created a two-phased approach to mentoring young women in the STEM disciplines.

After only two years, data show the program obtained positive results in the gender gap reduction in first-year STEM retention. This paper will aid practitioners in identifying steps to establish and assess a mentorship network, by providing details of the mentoring components, and describing the LLC-industry partnership as a vehicle for student success.

Literature Review

As mentioned in the introduction, the EXCEL program relies on a number of educational interventions to increase the retention rate of its female cohort in STEM disciplines including mentoring. One of the authors of this paper, Ramlakhan[17], created a good list of references from the literature that support this educational intervention, provided a full analysis of the peer-to-peer mentoring program design, and investigated the effect of the intervention on student retention. A lot of the material presented in this section, has relied on the literature review included in [17].

The United States relies heavily on the STEM workforce to drive its economy. The annual growth rate of the STEM workforce in the U.S. is almost six percent[18], compared to the average non-STEM workforce growth rate of one point two percent[19]. Women have edged out men as the dominate gender in the national workforce at 59%[19], but are underrepresented in the STEM workforce, comprising only 26%[18]. This gender gap in the workforce begins in our nation's colleges and universities. While women have gained in the number of bachelor's degrees earned in the physical, natural, and social sciences, men still heavily dominate in the number of bachelor's degrees earned in engineering, computer sciences, and mathematics[18]. Furthermore, in the last ten years, the proportion of STEM bachelor's degrees awarded to women has remained stagnant overall and even declined in mathematics, engineering, and computer sciences[18]. These data have led many researchers to try to identify the barriers for women entering STEM, the reasons why women do not persistent in STEM, and how to better attract and retain females in STEM disciplines. From these investigations, researchers found that women were retained at a higher rate when involved in activities reinforcing social and academic integration into the university[20]. These activities were most beneficial to women when they included, but were not limited to, providing psychological support and role modeling[21], reinforcing self-confidence[22], and assisting in social adjustment[23].

Evidence suggests women and minorities respond best in more collaborative learning experiences which include working with mentors[24]. Mentoring programs and living-learning communities (LLC) are research-supported retention strategies within undergraduate degree programs, as they foster higher sense-of-community and provide academic support[25, 26]. Though sparse research on effects of STEM-centered LLC with mentoring components is available, effective uses of mentoring and LLC's as separate interventions leading to increased retention and academic success abound[13, 27, 28, 29, 30, 31, 32, 33]. Many learning communities do more than co-register students around a topic. They change the manner in which students experience the curriculum and the way they are taught[34]. Mentoring programs offer direct career assistance and provide information and social-emotional support, thereby assisting first-year students in their transition from high school[17, 35].

Researchers have addressed mentoring as a means of promoting student success, increased grade point average and positive decisions to persist in college[25, 36, 37, 38, 39, 40]. Within higher education, mentees achieve better academic performance[25] and social integration[41], and mentors benefit from personal relationships with students[42] and the satisfaction associated with being a mentor[43]. Universities profit from increased student retention through tuition dollars[25]. One of the stronger cases on the positive impact of mentoring on student performance was presented by Rodger &

Tremblay[44]. Researchers found students who participated in the mentoring program and remained engaged in the intervention over a two-year period had significantly higher grades than those students who received no active intervention (non-mentored students)[17].

Background

The National Science Foundation funded a STEP project at the University of Central Florida (UCF) titled "UCF-STEP Pathways to STEM: From Promise to Prominence". The NSF STEP program seeks to increase the number of students (U.S. citizens or permanent residents) receiving associate or baccalaureate degrees in established or emerging fields within science, technology, engineering, and mathematics (STEM). The STEP project at UCF, called the **EXCEL** program, was a 5-year program funded in 2006 which has since been institutionalized. **UCF** is a growing metropolitan university in Orlando, FL and the 2nd largest university in the nation, serving a student population with high percentages of STEM underrepresented groups. Of UCF's undergraduate STEM majors, 29% are underrepresented minorities and 36% are females (2012 UCF data).

EXCEL the living-learning community (LLC) under review, which serves as the backbone to the mentoring network, has two objectives: one, to recruit STEM participants into the program and two, the most critical, to increase the number of students remaining in STEM majors. The latter would be accomplished by increasing retention rates resulting in additional STEM degrees. Through the recruitment process an increase in the percentages of women and minorities graduating with STEM degrees was expected[45, 46]. EXCEL designed a number of educational interventions to alleviate some of the reasons students leave the STEM disciplines (see [47]). These interventions included common housing, cohort math and seminar courses taught by EXCEL faculty, targeted advising, math assistance through tutoring and monitoring, and undergraduate research experiences[45]. EXCEL placed students in a cohort around a particular academic interest, STEM[45, 46, 47]. This type of learning community is important due to the negative effects of STEM disciplines on persistence in the major and timely graduation[50, 51] and the known positive influence on retention peer groups forming around a common purpose[52, 53] (see [46]).

EXCEL has shown a consistent 42% increase in STEM retention of LLC participants over non-LLC participants. Even more impressive were the increases in STEM retention of underrepresented minority EXCEL participants over non-EXCEL participants, with a 47% increase for Hispanics and a 58% increase for African-Americans. Though successful in the goal of retention to graduation for both men and women, including underrepresented minorities, the participating women were retained at a lower rate than their male counterparts. The gap must be closed in order to equalize the number of degrees awarded to women and men in the STEM disciplines and ultimately lead to fulfilling the national need.

Relative to their male counterparts, young women are more likely to pursue and excel in science careers when they have a supportive network of people and scientific extra-curricular activities[54]. Mentoring programs, more so than other types of interventions, meet both of these needs and are seen as a way of increasing female participation in the sciences. There is extensive evidence in the literature that student mentorship works in improving student learning[55]. Despite the absence of a comprehensive theory of what mentorship is, there are four major domains or latent variables comprising the mentoring concept, as identified by Nora and Crisp[56]. The four latent constructs include: (1) *psychological and emotional support*, (2) *support for setting goals and choosing a career path*, (3) *academic subject knowledge support aimed at advancing a student's knowledge relevant to their chosen field,* and (4) *specification of a role model*. One approach to addressing these variables, and potentially closing the gender retention gap, was to create a network of mentors where each participant in the women's mentorship network would receive a number of mentors at various stages of their college experience including two structured mentoring opportunities which occur in the freshman and sophomore years. Figure 1 details the relationship to EXCEL as well as the management plans and structure of the mentoring network. Haring[57, 58] refered to this type of mentoring model as a networking mentorship model, and considered it as more inclusive and egalitarian.

Network of Mentors

Researchers planned for a two-pronged mentoring approach to successfully closing the retention gap. A key characteristic of a strong mentoring relationship is similarity, particularly for groups typically underrepresented in STEM. In each phase of the two year mentoring network, students were individually matched with mentors based on like characteristics (i.e., gender, math ability, discipline, career interests). The mentoring network provided for peer mentors in the freshman year and industry mentors in the sophomore year. The peer-to-peer model, entitled Girls EXCELling in Math and Science (GEMS), addressed Nora and Crisp's[56] first and third constructs by providing personal support early in the student's transition to the university and academic support in the chosen field. The industry professional-to-student model, entitled Women in Science and Engineering (WISE) Mentoring @ UCF, also supported construct one of emotional support, but more importantly addressed construct two, setting goals and choosing a career path, and construct four by performing as a role model for the mentees.

The networking mentorship model needed both human and capital resources to be effective. Local industry partners answered the call by providing financial support as well as individuals interested in the success and progress of women in STEM fields. Based on the fact that a successful initiative would increase the number of women entering the STEM workforce, the local workforce board (Workforce Central Florida) joined the initiative with a two-year financial commitment for the peer-to-peer program. Furthermore, the board allocated staff assistance in necessary areas of the project, including development. Identifying the need for women STEM professionals to be involved in the process, SAIC, an international Fortune 500 Corporation, joined the initiative. This industry commitment provided initial financial support for the professional-to-student program, complimentary access and participation in a national mentoring program, and connections to industry women throughout the local area. These partnerships were critical to the establishment of the mentorship network.

Peer-to-Peer Mentoring

GEMS was the first phase of the mentoring network. In Fall 2010, the retention rate for the 2009 EXCEL male students was 85% compared to a 70% retention rate for the 2009 EXCEL female students. A relationship between gender and retention in a STEM major at the end of the first year of college existed ($\chi^2 = 5.4$, $df = 1$, $p = 0.020$). Considering that 75% of the women in EXCEL belonged to Engineering and Computer Science disciplines, the peer-to-peer program would be fulfilling the national need to equalize the degrees awarded to men and women in these disciplines by reducing the STEM retention gap between the EXCEL men and women. A successful female peer-to-peer program has the potential of being disseminated nationally since it focuses on increasing the STEM degrees awarded in the US by tapping into the underserved STEM group of women in Engineering and Computer Sciences.

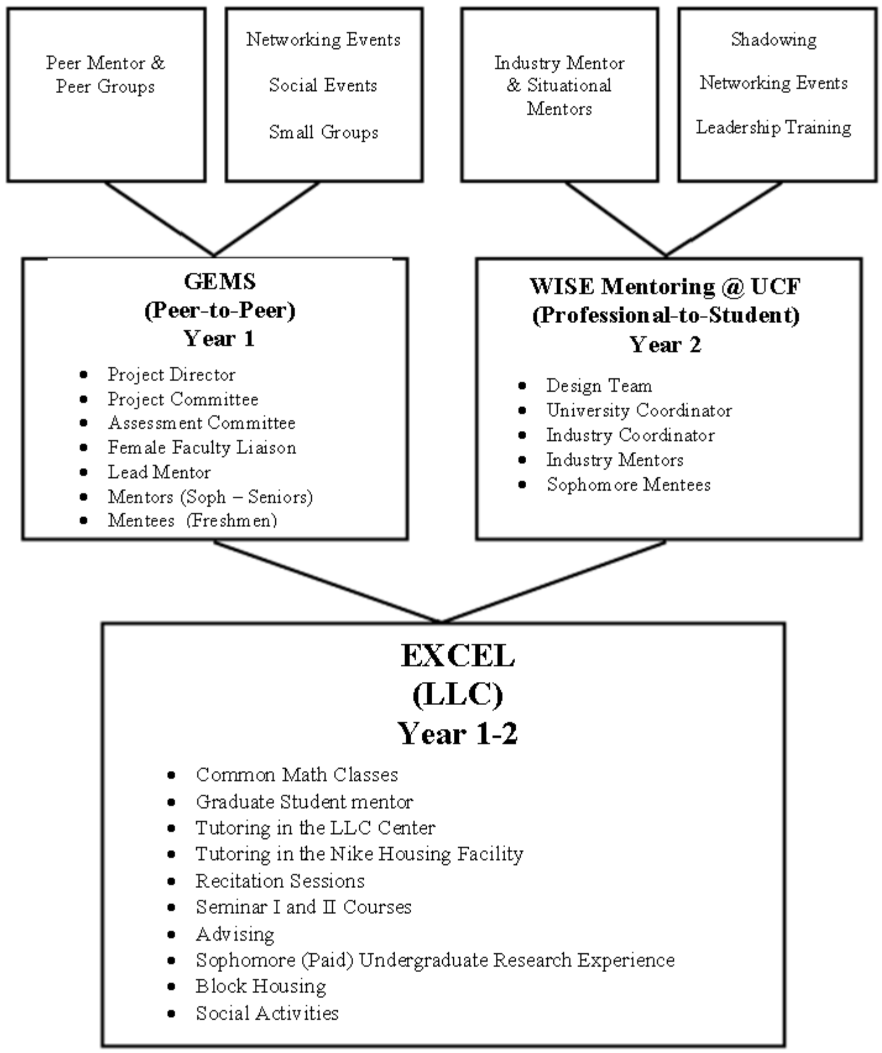

Figure 1. Relationship of the LLC and Mentoring Network including program components and management structure.

Structure: GEMS' inaugural year was Fall 2010. A project committee consisting of the EXCEL principal investigator (PI), the EXCEL coordinator, a workforce board representative (program manager), and university assessment professionals was formed in early Summer 2010. This group determined the management structure of the GEMS program would be a project committee, an assessment committee, a program coordinator, and fifteen (15) female upperclassmen who served as peer mentors. In Fall 2010, the project committee met bi-weekly followed by the assessment committee meeting. By Spring 2011, only the project committee met bi-weekly, since the work of the assessment committee was completed by the end of Fall 2010. Informal interaction between the project PI and other project members was frequent. The Project PI met with the Program Manager bi-weekly to discuss the progress of the project.

Peer mentors were recruited from EXCEL then hired and trained over Summer 2010. Mentees consisted of the entire EXCEL freshman female class and were assigned to mentors based on two factors: major and living arrangements. Whenever possible, mentees were paired with a mentor of the same major. This did not always work as mentors represented only two majors in the College of Sciences and some students were listed as undecided sciences or engineering. There was an attempt to pair students together based on living arrangements, including at least two to three on- or off-campus residents in each group. Mentors were instructed to contact their mentees prior to the first week of classes. A sample message and a list of mentees were sent to each mentor. The message included a reminder for the GEMS Kick-Off social as well as the EXCEL Welcome Party.

A coordinator would be needed to manage the program and supervise the new mentors. The Project Committee determined a 20 hour a week graduate student position would be sufficient to fill this role with support, when necessary, from the project committee staff. A coordinator job posting, approved by the project and assessment committees, was sent to over 300 graduate students to solicit applications. Applicants were contacted and individual interviews conducted by a representative from Workforce Central Florida and the EXCEL program. The coordinator needed to possess excellent skills in project management including time management, organization, written and oral communication, and assessment. To address this, each interview consisted of the same twenty standard questions focused on these skills and abilities.

Since the inception of the GEMS program the timeline changed dramatically, but the fundamental components remained the same. For years two and three of the peer-to-peer program, mentors were recruited during the spring term for the following academic year. The target population for mentors remained the EXCEL upperclass females and the number of mentors grew from only 15 to 17. This increase in mentors allowed for mentee groups to remain consistent at approximately four to six students. The graduate coordinator was replaced by an undergraduate lead mentor to coordinate the program and serve on the project committee. A senior who formerly served as a successful mentor in the GEMS program and possessed the knowledge of how the program worked from all levels, along with a background in STEM, made this individual a stronger coordinator.

Program components: Mentors were assigned four to six women in one’s field, or an associated field, of study. The mentee “pod” was determined to be a good approach for students in the same or similar disciplines to get to know one another from the initial arrival on campus. Within these groups, mentees formed friendships, met study partners, and learned more about specific majors from one another. Mentors facilitated a connection to oneself and the other mentees through consistent contact and relationship building. The mentor met with the mentee pods on a biweekly basis. During the biweekly meetings the mentor and mentee discussed issues about school, academics, college life, and the upcoming mentoring events. The purpose of these meetings was to ensure that the mentor and mentees interacted on a regular basis so as to build the bonds amongst the group. One bi-weekly meeting was a social gathering, such as attending the movies or gathering for dinner, agreed upon by the mentor and all mentees. In weeks when not meeting face-to-face with the mentees, the mentor contacted each mentee via phone call or text. The project committee provided each mentor with a timeline for the semester which included all of the EXCEL and GEMS mentoring events. A set of talking points for each week of the fall term were also provided. The talking points addressed upcoming events, probing questions for academic monitoring, and other basic conversational assistance. The purpose of the talking points was to aid the mentor in overcoming the initial discomfort of “making conversation” in building the relationship and to ensure the program agenda was addressed.

The lead mentor held regular biweekly meetings for the mentors to provide additional support. The lead mentor conducted the business of the program (collecting assessments, time sheets) and provided supporting materials needed by the mentors. Materials consisted of a full listing of on-campus resources for both social and academic activities as well as information regarding each of the STEM disciplines. Mentors reported on individual mentees who were encountering issues and the lead mentor conveyed these to the project committee for follow-up. The meetings allowed mentors the opportunity to share what was occurring within the mentee groups and work together to address problem areas. Returning mentors provided new mentors with solutions that worked in past experiences and new mentors contributed fresh, new ideas to the returning mentors. Further, the meetings worked as a type of focus group for the project committee in determining activities that worked, or did not, and why.

Program wide socials were organized in both fall and spring semesters. The purpose was to encourage mentor/mentee groups to interact with other individual groups and to socialize together as a large group. In 2010-2011, socials were kept to members of the GEMS program. The fall social was well attended while the spring one was not. Students’ acclimation to the institution and no longer needing assistance with social matters was assumed to contribute to the lack of success in the spring. In 2011-2012, the fall social attendance was fair with less than half of the members in attendance. The spring social was opened to the entire EXCEL population and held at the university’s Challenge Course. The course allowed for team building, required a RSVP, and was limited to 50 participants. Twenty-five mentees, mentors, and other EXCEL students participated. A debriefing of the day’s activities by the facilitators and lunch were provided as part of the program. Students who attended were very pleased with the activity and encouraged the program staff to include this in future activities with the suggestion of scheduling it in fall when more students would take advantage.

STEM female faculty role models shared life stories (personal and professional) and experiences on the path to success at the mentoring Networking events. In 2010-2011, three Networking events were held in both the Fall and Spring semesters. The purpose of these events was to give mentors and mentees an opportunity to talk with professors outside the classroom atmosphere on career and major related topics and seek professional advice. Professors from chemistry, mathematics, biomedical sciences, and environmental engineering presented. One event each term was focused on advising or shared experiences by EXCEL graduate teaching assistants. In 2011-2012, the networking events were expanded to five per term to accommodate adding STEM industry speakers from each of fields represented in the mentee population. In Fall 2011, professors from chemistry, mathematics, biomedical sciences, and industrial presented and the advising event continued. Three industry professional role models presented in Spring 2012. The additional events allowed for mentors and mentees to network with industry professionals and learn how majors could be applied in real world careers. The speakers were from locally based, nationally known companies. Two were from the theme park industry, but served different functional areas, electrical engineering and biology, while the third represented a defense company with a background in simulation and training.

Successes: The EXCEL 2010 cohort consisted of 203 students of which 131 were male and 72 were female. In Fall 2011, the retention rates of the 2010 EXCEL male and female student cohorts were compared. The retention rate of the 2010 EXCEL male cohort was, in Fall 2011, equal to 83.33%. Furthermore, the retention rate of the 2010 EXCEL female cohort was, in Fall 2011, equal to 74.65%. Therefore, in the first year of existence, the GEMS peer-to-peer mentoring program improved the male/female retention gap of the EXCEL students by almost 6% (the 2009 cohort retention gap of 15% was reduced to a 2010 cohort retention gap of 8.68%). A chi-square test of association determined there was no relationship between gender and retention in a STEM major at the end of the first year of college ($\chi^2 = 1.597$, $df = 1$, $p = 0.206$), a change from 2009. This retention advantage continued through the students' second year with the female retention gap remaining consistent at 8.38% in Fall 2012.

The EXCEL 2011 cohort consisted of 197 students of which 121 were male and 76 were female. In Fall 2012, the retention rates of the 2011 EXCEL male and female student cohorts were compared. The retention rate of the 2011 EXCEL male cohort was, in Fall 2012, equal to 81.8%. Furthermore, the retention rate of the 2011 EXCEL female cohort was, in Fall 2012, equal to 77.6%. Therefore, in the second year of existence, the peer-to-peer mentoring program improved the male/female retention gap of the EXCEL students by another 4% (the 2010 cohort retention gap of 8.68% was reduced to a 2011 cohort retention gap of 4.2%). A chi-square test of association determined there was no relationship between gender and retention in a STEM major at the end of the first year of college ($\chi^2 = 0.515$, $df = 1$, $p = 0.473$).

These data indicate that participation in the peer-to-peer mentoring program reduced the retention gap between the genders to a point of statistical non-significance. Furthermore, a chi-square goodness of fit test was conducted using the male retention frequency as the expected value for 2010 and 2011, the years with the peer-to-peer mentoring program. The results showed no difference in the observed retention rate of females compared to the expected rate for these years ($\chi^2 = 0.745$, $df = 1$, $p = 0.05$).

Professional-to-Student Mentoring

WISE Mentoring @ UCF, the professional-to-student program, was the second phase of the mentoring network. The EXCEL project committee noted that since the program's inception the female sophomore to junior retention rate (second year) was consistently 8-10% lower than that of the EXCEL males. In Fall 2010, the second year retention rate for the 2008 EXCEL male students was 67% compared to a 59% retention rate for the 2008 EXCEL female students. Additional intervention was necessary to fill the STEM retention gap between the EXCEL men and women.

SAIC, a local industry partner interested in encouraging female growth in the STEM workforce, learned of the need for women's programming and joined with the university to collaborate on the mentoring initiative. A proponent of mentoring within the company, SAIC offered in-kind the services of a professional mentoring organization, The Mentoring Connection, Inc., who immediately agreed to the endeavor.

Structure: The professional-to-student program's inaugural year was Fall 2011. A design team consisting of the EXCEL principal investigator (PI) and Co-PI, the EXCEL coordinator, a lead from The Mentoring Connection, Inc., and a team of industry representatives was formed in mid-Summer 2011. This group determined the management structure of the program would be a design team and two program coordinators, one representing the university and the other appointed by the lead industry partner. The design team met bi-weekly to establish an action plan. By Fall 2011, the design team met approximately once a month via conference call to discuss pending issues. Informal interactions between the project members were based on the needs of the program.

The goal was to recruit 25 mentor/mentee pairs in the inaugural year. During September 2011, professional mentors, all female, were recruited from 10 different locally based companies. Mentees were recruited from the EXCEL sophomore class however, a few mentees were EXCEL juniors, not the target population of sophomores. All participants completed an online profile as part of the application process. The program commenced in Fall 2011 with 25 potential pairs.

Program Components: Mentor and mentee applicants were invited to participate in an orientation facilitated by The Mentoring Connection, Inc. Potential mentors and mentees were presented with an overview of the program, a list of activities for the six month period, and learned about the mentoring process, benefits, and how to select a mentor/mentee. Participants shared in four to five rounds of "speed mentoring" to learn more about one another. After the orientation, the potential pairs completed an online personality assessment and matching form which would be used by the design team in the matching process.

Though positive role models would benefit the mentees regardless of the field of interest, whenever possible, mentees were paired with a mentor in the same field/discipline. This did not always work as industry representation was heavy in engineering and computer science, but limited in the sciences. Mentors and mentees found more in common when paired in similar disciplines. Mentees, some of who gained internship or shadowing experience in a future career field, received more benefits by similar field pairings. In November, once matched, the mentoring pairs participated in a mentoring training. The matching process was discussed as well as the fleshing out of goals for the program. Mentors and mentees were provided with next steps to moving the relationship forward and asked to submit a mentoring agreement and action plan. From this point, the mentoring pairs were to develop the relationship as the pair saw fit. The group came together two more times throughout the program for a mid-term evaluation and an end-of-program celebration.

In Fall 2012 the timeline changed dramatically, but the fundamental components stayed the same. For year two the design team determined the program would begin earlier in the fall term. An earlier start date allowed the mentoring pairs to establish a stronger relationship before the winter holiday break. In turn, this required that recruitment be conducted over the summer months. An intentional effort was made to recruit more mentors from the scientific fields including medicine to better meet the needs of the mentee population. Nineteen pairs were recruited for Fall 2012. To complement the formal events, the design team added optional social activities for the mentoring pairs. Two such events where mentoring pairs met on campus were held, once for a women's volleyball game and the second for a campus sponsored festival of lights.

A comparison of the different interventions offered by program and by year-in-college is shown in Table 1.

Table 1.

Comparison of Interventions by Program

Intervention	LLC		Peer-to-Peer		Professional-to-Student	
	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2
Cohort in Math Courses	X		X		X	
Cohort in Applications of Math Courses	X		X		X	
Tutoring Lab	X	X	X	X	X	X
Academic Advising	X	X	X	X	X	X
Cohort in On-Campus Housing (optional)	X		X		X	
Faculty Networking Events	X		X		X	
Industry Networking Events			X		X	X
STEM Peer Mentoring			X		X	
STEM Professional Mentoring						X
Undergraduate Research Experience		X		X		X

Successes: Twenty-three (92%) of the mentor/mentee pairs completed the 2011-2012 program. The most convincing documentation of success came from the mentees directly. Mentees commented on increased networking, shadowing, and internship opportunities, a better understanding of and passion for a chosen field, and new insights into life after college.

> "WISE mentoring led me to finding an internship, which ultimately led me to finding a career area that's perfect for me and a job offer pending my graduation!"
>
> "The WISE mentoring program changed my life…Because of my mentor's guidance, I learned how to effectively talk to recruiters at job fairs and how to have a successful interview. I applied for 3 different internships and received offers from all 3!"
>
> "The main thing I got out of WISE was the chance to explore different career paths. I had closed myself to one track and didn't even think about other possibilities."

> "Because of my WISE mentor, my networking range has greatly increased. I now have contacts directly at the companies I would love to work for…"
>
> "I know where my intense coursework will take me, and that this is the right path for me."
>
> "Participating in WISE is one of the greatest decisions I have made for my college career. Because of my WISE mentor, I know exactly what to expect once I graduate and have a taste for what it means to be a successful woman in the STEM field."
>
> "I do feel more confident because my mentor was a success story. She has a math degree and started off wanting to be a teacher before she decided she liked working with software engineering."

Now in the second year, the WISE Mentoring @ UCF program hopes to yield student benefits similar to those in year one.

The Future

The university would like to expand participation in the mentoring network to students outside of the EXCEL program. The expansion would allow for the study of the effects of the mentoring experience external to the LLC in an attempt to isolate the truly influential factors. To do so requires additional resources both human and capital. Though fortunate to receive generous support during the creation and initial implementation of the mentoring network, future funding needs to be secured. A new office within the university, Initiatives in STEM (*iSTEM*), has teamed with the development officers of the sponsoring colleges to encourage future industry and other donor participation, as well as seeking grant funding opportunities.

Now in its third year, and with a strong foundation on which to build, the program will continue. Even with limited resources, the commitment from EXCEL, the university, and local industry partners ensure the success of the mentoring network well into the future.

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