A First Attempt at Improving Student Engagement by Understanding Student Perceptions and Barriers to IT Career Development

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Abstract

A student survey was conducted as a first attempt in improving student engagement in CIS courses. This survey asked CIS majors questions in the hopes of better understanding their perceptions and barriers to IT career development. The thinking was that if CIS majors were more prepared for IT careers, their engagement and interest in CIS courses would increase. The results confirmed many of the speculations by CIS faculty in terms of the lack of understanding of IT careers by students but also showed positive information about student interest in these same areas.

Keywords: student engagement, perceptions, barriers, IT careers, IT jobs, IT companies

1. INTRODUCTION

The CIS faculty have seen CIS majors struggle for many years with not being aware of the career paths available to graduates and the necessary technical skills required for Information Technology (IT) positions. In addition, CIS faculty have also seen reduced engagement in courses and attendance at IT career events on campus. The thinking is that if students had a better understanding of the IT workforce and were more prepared for these high-paying/entry-level positions, then they would be more engaged in their courses and be more likely to attend events. Therefore, the purpose of

this research project is to better prepare CIS majors for the IT workforce by understanding their perceptions of career development and technical skills.

In terms of the career paths, a CIS Program prepares students for a variety of IT-related positions. This includes the main areas of software programming, computer support, networking, database administration, and systems analysis.   Many programs also include courses on security, user interface design, and web design.   Each of these courses ultimately fall into the two main categories of software development and technical support. Software development includes programming, testing, systems analysis and in many cases database administration. Technical support includes computer specialists, help desk technicians, systems administrators and network engineers.   One department focuses on development while another area handles daily support issues.   In fact, many companies organize their IT departments in this fashion (ATKearney, 2011). There is also movement in developing new organizational models that are more flexible, emphasizing business skills and innovation (Ross, Woerner, Scantlebury & Beath, 2010). Regardless of the structure, IT departments still need employees with skills in both programming and technical support.

While both programming and technical support require a strong computer background, the jobs themselves are very different. Not all computer geeks want to be programmers.   In fact, the most recent curriculum guidelines for IS programs eliminated programming as one of the seven core courses (Topi, Valacich, Wright, Kaiser, Nunamaker, Sipior, & de Vreede, 2010). There are many other career options available. U.S. News and World Report lists seven non-management, computer-related positions in their list of the 100 Best Jobs of 2016 (Best Jobs, 2016). This includes the titles Computer Systems Analyst, Software Developer, Web Developer, Information

Security Analyst, Database Administrator, Computer Support Specialist, and Computer Systems Administrator. About half of these are directly related to software development and the other half to technical support.

There are many job titles in the IT industry and different types of companies. A basic search on the technical career job site, Dice, showed almost 300 available positions in May of 2016 within 30 miles of Providence, RI. The job titles include words like admin, developer, analyst, architect, engineer, and technician (Dice, 2016). There are significant differences among these jobs not to mention the variety of the hiring companies. Large, medium, and small companies can be very different in the way they operate and the function of their IT jobs. In addition to job sites, there are other initiatives directed at the IT industry. Tech Hire, a non-profit organization, promotes networking among tech employers and potential employees. They aim to fill the high-paying, empty jobs in this field with skilled workers (Tech Hire, 2016). All of this and many other projects are creating many lucrative opportunities for students but it can also create confusion during the college years.

Along with the variety of IT job titles and career paths comes the issue of the required technical skills needed for entry-level positions. CIS programs must attempt to prepare students for the varied environment within a limited set of courses and time. Most programs include a strict list of required courses but also the flexibility of electives. Not every student may be exposed to every facet of the IT industry depending on their choices. These choices are also complicated with course scheduling of electives, which may be erratic. If planned properly from the beginning, students could use electives to develop concentrations in certain areas. This requires foresight and also very careful advising from the beginning. In addition, the required material within each course may or may not lend itself to hands-on exercises

that develop necessary technical skills. This also requires additional time and computer lab facilities. Certain IT jobs require a very specific set of skills, like network engineers. In some cases, a list of required knowledge in technical topics may be necessary to apply for a position (Morris, Fustos, & Haga, 2011). In many cases, students have commented on the need for additional "training" focused on technical skills and hands-on skills. Students have mentioned the need for software skills in programs like VM Ware, Microsoft Windows Server, and PHP in our annual CIS Program Assessment Survey. This survey is sent to all graduating CIS majors each December and May. It assessing the CIS Program Goals as well as providing a comment section for students to elaborate as they wish on the program as a whole. Along with very specific software items, students have also mentioned the need for advanced courses, more CIS/less business courses, and real world project opportunities. This suggests more technical skills are desired by students.

There is also the question of breadth versus depth. Is it better for students to be exposed to as many different topics at a high level? Or is it better for students to take several courses on the same topic in order to develop deeper skill sets? Breadth exposes students to more areas of the IT environment, which provides them a broader base from which to choose their career paths. It is definitely better for those students that are not sure what they want to do after college. Depth allows students to be more focused in a certain area, like programming or technical support. However, it is more challenging for smaller institutions to offer and fill these type of courses. If the IT industry were similar to say the nursing or teaching fields, there would be less challenges. Regardless of the location or hospital size, the main job title is "Registered Nurse". Schools hire teachers primarily and the job duties are pretty well known. Unfortunately, this is not the case for the computer-related careers. Companies may

want new employees to be able to code in a certain programming language or fix Dell computers running Windows 7. The skill sets are much more specific and varied. It is almost impossible for CIS programs to do not only teach all the available skills sets but keep up with the constant changes in the field. But how can these technical skills be applied to CIS program and would students value these skills?

A related topic to technical skills are the non-technical skills that employers prefer new employees possess. These are also called soft skills or interpersonal skills and include items like communication, teamwork, leadership, critical thinking, and problem solving. A recent report related specifically to the IT industry included self-motivation, customer interaction, understanding business needs and strategy, explaining complex technical concepts, and a big picture perspective (Enter IT RI, 2016). Therefore, these skills are also important to employers and the careers of CIS majors.

CIS faculty have also seen reduced engagement in courses and attendance at IS-related events on campus. There is a general sentiment among the CIS faculty that students are showing less engagement and interest in the CIS courses. This is primarily through observation of attendance and participation in class as well as scores on major assessments like exams. Specific items have not been measured and the basis for this is primarily empirical. However, there is evidence from a Microsoft study that shows evidence that our attention span has decreased from 12 to eight seconds since 2000 (McSpadden, 2015). There is also the issue of the changes in the way students learn and study. We know that technology is changing our brains and resulting in the habit of less reading and concentration on large blocks of text (Carr, 2011). Both of these could be impacting students in the classroom and must be considered by the faculty.

There has also been reduced attendance by students at IT-related events on campus over the past several years. The local student organization that focuses on the interests of CIS and CS majors hosts several events each semester. These events include social activities, guest speakers, employment sessions by local companies, networking opportunities, technical workshops and other various events. Even though these are held during the day at a time when classes are not scheduled, called the Free Period, attendance has been very low. In previous years, the incentive of free food helped to increase attendance but this no longer seems to work. The events are advertised in several ways including email, Facebook, flyers, Blackboard, and faculty announcements in class. Two of the events included large employers with multiple openings for entry-level positions. Both of which have hired CIS graduates from this institution. Anecdotal evidence shows this is not isolated to the CIS program but also occurring in other areas of the college. This is also a major concern for faculty.

Although not directly related, only three of the eight students that qualified for induction into the UPE Honor Society chose to join. This was the first time in six years that CIS majors did not take advantage of an opportunity to build their resume and potentially help their career.

Research projects tend to focus on the positives so this project feels somewhat like airing our dirty laundry. However, the CIS faculty feel strongly the need to do this in order to increase engagement in our students and hopefully help more of our graduates succeed. In addition, the faculty find the lack of student engagement frustrating. Employers are coming to us with many opportunities. Previous CIS graduates have proven themselves as hard working and capable, making their companies value our CIS program. Not being able to find interested students has the potential to end these relationships that have taken many years to build. To add to this dilemma is a new initiative by local state government to promote computer science in K-12. The goal of this initiative is to have computer science taught in every public school by December 2017 (CS4RI, 2016). This has the potential to increase the number of students majoring in CS-related programs and the need to continue events. However, strong attendance is a must for outside parties to agree to come to our campus. The thinking is that if CIS students had a better understanding of the IT workforce and were more prepared for these high-paying/entry-level positions, then they would be more engaged in their courses and be more likely to attend events.

Of course other approaches to increasing student engagement exist. There are a variety of proven techniques that instructors use in the classroom. Active Learning Modules (ALMs) have improved retention and reduced both withdrawals and low grades in courses (Pollacia, Heinz, Kakish, & Dekhane, 2012). This technique requires the students to participate in meaningful ways in the classroom. A second example is the use of Student Response Systems, aka clickers. These tools help increase interest in the course content as well as engagement in the classroom (Slauson, 2011). The list of creative exercises, activities, and new approaches is almost endless. The overall understanding of the important of student engagement is not questioned but supported both in pedagogy and models (Bundrick, Quaglia, Corso, & Haywood, 2014). However, these all focus on the course content and not the end result of the career prospects after graduation.

This research paper discusses the first part of a two-part research project. The first part of the project established the basic research questions then surveyed CIS majors regarding those questions. The second part of the project will address the results of the student surveys and take any necessary actions. The methodology used, the survey

results, and the conclusions for part one of the project are included in the following sections.

2. METHODOLOGY

CIS Program
The Computer Information Systems (CIS) major is one of seven majors in the School of Management at a medium-sized, four-year, public college in southern New England. The major consists of the standard General Education program, a management core, several cognates and CIS courses. The General Education program was updated as of Fall 2012 and includes 10 four-credit courses ranging from visual and performing arts to social and behavioral sciences as well as a second language requirement. The management core and cognates include accounting, economics, management, marketing, and math courses. The CIS Program was updated in the Fall of 2014 to correspond as closely as possible with the IS 2010 Curriculum Guidelines (Heikki, Valacich, Wright, Kaiser, Nunamaker, Sipior, & de Vreede (2010). This includes courses in management information systems, networking, databases, systems analysis and design, and programming. The infrastructure topic was added to the networking course but IS 2010.3 Enterprise Architecture has not been incorporated as of June 2016. The students also have the option to take a variety of electives in the areas of web design, security, hardware/software, mobile application development, and data analytics. The CIS Program does not officially have the option of concentrations. Students can informally use their electives to focus on programming or other more technical areas. The number of majors in the CIS Program has varied over the past seven to eight years with typical high and low enrollments corresponding to the economy and census data. Currently the program has stabilized since Fall 2013 with an average of about 80 majors each semester. This allows for strong enrollments in the required courses and the ability to offer two to three electives each semester.

Student Demographics
There approximately 7,500 undergraduate and 1,000 graduate students at this institution and some changing trends in their demographics since 2007 (Fact Book, 2016). The residency of the students is primarily in-state students with a 58% reduction in out-of-state students. There has been a 126% increase in minority students and a 49% increase in the number of majors (accounting, CIS, economics, health care administration, finance, management, marketing) in the School of Management.

Student engagement also can impact student grades. There has been a drop in the mean SAT scores for admitted freshman during this time frame as well. The total verbal scores dropped 24 points or 5% and the math scores 69 points or 14%.

As for the number of students that work while attending college, of the students that responded to a Student Census Survey conducted by the college during the Spring 2016 semester, over 75% are employed in some capacity. Of those that are working, over 35% work 18-23 hours per week and over 28% work 26-33 hours per week. This equates to over 64% of the students working 18-33 hours per week. The response rate to the survey was approximately 30%.

Therefore, the demographics of the students have changed since 2007 and may be impacting students in the classroom. CIS faculty must be cognizant of the fact that enrollments are increasing but the backgrounds and skill levels are different. These items must be considered by faculty before implementing changes.

CIS Faculty Discussions
The organization of the majors in the School of Management at this institution necessitated the need for focused and separate CIS faculty discussions. For the main purpose of administration, the seven

business majors are grouped into three departments - Accounting and CIS, Economics and Finance, and Health Care Administration, Management, and Marketing. With a Chair for each department that is responsible for scheduling/facilitating the meetings, course scheduling, faculty evaluations, and other administrative duties. Therefore, the focus of each monthly department meeting includes discussions on both Accounting and CIS. Although these majors are related in many ways, there are significant differences that the topics are not always relevant to all faculty. Therefore, the CIS faculty took it upon themselves to meet separately in order to have detailed and thorough conversations strictly about the CIS majors. It was during one of these meetings that the problem of student engagement surfaced and the need to take action in order to not only address this issue but also ensure the viability of the CIS major in the future.

Student Evaluations

Each semester faculty conduct student evaluations in each of their courses. These include a standard set of questions developed and used by all of the faculty in the School of Management. Each major may also include a set of questions unique to that discipline as well as questions for a specific course. Faculty distribute the student evaluations during the last two weeks of the course during a class session. The evaluations are anonymous and the results are not sent to faculty until after submission of final grades. This research project included a set of survey questions with the student evaluations that were designated for "CIS Majors Only" and were collected in a separate envelope. The student survey was part one of this research project, addressing the research questions related to career development and technical skills.

Research Questions

The CIS faculty felt it was important to understand the perceptions of CIS majors before taking any type of actions to address

the issue with student engagement. Therefore, the following research questions were developed:

Research Question 1 (RQ1): Do CIS majors know the main career paths in their chosen field of study?
Hypothesis: The majority of CIS majors (> 50%) do not know the main career paths available in their chosen field of study.

Career paths link directly to skill sets and skills sets link directly to the courses in the CIS program. Therefore, if students were more informed about their career paths, the logic follows that they would be more engaged in the courses that discuss information directly related to their chosen career path. For example, if a student knows that software development is one of the main career paths with a variety of job openings then that student would demonstrate more interest and focus in a programming course. There is evidence that students do not receive information about technical careers in high school (Lenox, Jess & Woratschek, 2011). Therefore, students are left to themselves to be proactive to find this information on their own or wait until it is provided to them.

Research Question 2 (RQ2): Do CIS majors perceive career development topics as valuable?
Hypothesis: The majority of CIS majors (> 50%) do not value career development.

In many cases, CIS faculty have advised CIS majors in this area and recommended the use of the the college's Career Development Center. However, a large percentage of CIS majors do not have a professional resume by the time they take their capstone course in their senior year. This demonstrates either a lack of interest, time or knowledge in career development.

Research Question 3 (RQ3): Do CIS majors perceive technical skill development as valuable?

Hypothesis: The majority of CIS majors (> 50%) value technical skill development.

The CIS major differs from many other majors in that key topics and skill sets must be learned through "doing" instead of reading or listening. Student cannot learn how to program by reading a textbook. They must type, compile and run over and over until the program performs as needed. The same applies to technical support, networking, and database administration. The hands-on nature of this field is critical to student success. In this case, students do seem to prefer hands-on and engagement activities in the classroom. However, it was still important to get the students' perspective.

Research Question 4 (RQ4): What are the perceived barriers to CIS majors attending events outside of class time?
Hypothesis: The majority of CIS majors (>50%) perceive a variety of barriers to attending events outside of class time?

This research question was as an attempt to understand the possible barriers to students attending career related events outside of class. Again, CIS faculty have observed declining attendance at such events in the past several years. By understanding these barriers, faculty could possible adjust the days and times of these events to accommodate the majority of students.

Survey Questions
The student survey (Appendix A) asked a total of 13 questions written for the use of a standard Likert scale. The answers included strongly agree, agree, neutral, disagree and strongly disagree. After collecting the surveys, each answer was assigned a number value of one to five, summarized, and used to calculate a percentage for each question.

The results of the student survey are provided in the next section. Phase two of the research project will discuss the actions taken by the CIS faculty based on these results.

3. RESULTS

After the course evaluations were conducted, the student survey for the CIS majors was separated and tallied. A total of 44 surveys were received for a response rate of about 44/81 or about 54%. The percentage is not completely representative of the number of active students. Of the 81 CIS majors, many are not currently taking courses or taking a CIS this particular semester. However, the CIS faculty feel the students completing the survey are the active members of the CIS program and do represent a large portion of the CIS majors. For improved readability the results were rounded up to next whole number, which is a few cases caused the total to exceed 100% in the tables.

IT Career Paths and Employers
Research Question 1 (RQ1): Do CIS majors know the main career paths in their chosen field of study?

To address Research Question 1, the survey included a question pertaining to career paths and a second question related to IT/IS companies.

Survey Question: I am very familiar the types of jobs/careers available for CIS majors.

Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree
11%	30%	59%

The survey results showed that 39 out of 44 (89%) of the students did not agree with this statement, showing a very strong lack of knowledge in this area.

Survey Question: I am very familiar with the types of companies that hire CIS majors.

Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree
14%	27%	59%

The survey results showed that 38 out of 44 (86%) of the students did not agree with this statement. Again, this means that the students do not know key information about their chosen career path.

Both of these questions support the hypothesis for Research Question 1 and confirms the observations of CIS faculty. In fact, the percentage is much higher than expected. This is a major concern for the CIS faculty and must be addressed as soon as possible.

IT Career Development
Research Question 2 (RQ2) – Do CIS major perceive career development topics as valuable?

To address Research Question 2, the survey included a question about the value of career development workshops and attendance.

Survey Question: College sponsored workshops (free) that focus on IT career development are valuable to CIS majors.

Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree
80%	20%	0%

The survey results showed that 35 out of 44 (80%) of the students agreed or strongly agreed with this statement. This showed the students do value career development.

Survey Question: I would attend College sponsored workshops (free) that focus on IT career development.

Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree

66%	23%	11%

The survey results showed that 29 out of 44 (66%) of the students agreed or strongly agreed with this statement. This also showed that the majority (>50%) of students would attend career development workshops. We can only speculate on the reasons for the 23% of neutral students. This could be a "maybe" or a "depends" on the topic, day, and or time of the event.

Both of these questions do not support the hypothesis for Research Question 2 and differ from the observations of CIS faculty. This indicates that the students *are* interested in career development and see its value but are not necessarily showing this in their engagement in classes or in their attendance at events.

Technical Skills
Research Question 3 (RQ3): Do CIS majors perceive technical skill development as valuable?

To address Research Question 3, the survey included a question about the value of technical skills workshops and attendance.

Survey Question: College sponsored workshops (free) that focus on specific technical skills are valuable to CIS majors.

Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree
66%	30%	5%

The survey results showed that 29 out of 44 (66%) agreed or strongly agreed with this statement. This showed the students do value technical skills but not as much as career development. Again, speculation may indicate that CIS courses provide technical skills already and additional workshops may not be necessary. Whereas, career development is not covered as part of the CIS program.

Survey Question: I would attend College sponsored workshops (free) that focus on specific technical skills.

Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree
64%	23%	14%

The survey results showed that 28 out of 44 (64%) agreed or strongly agreed with this statement. The majority of students would attend technical skills workshops, if provided by the college.

Both of these questions support the hypothesis for Research Question 3. This indicates that the students do value technical skills but again are not necessarily showing this in their engagement in classes or in their attendance at events. It also indicates a possible need for these events. CIS faculty are willing to invest their time and resources but only if CIS majors will attend.

Student Barriers

Research Question 4 (RQ4): What are the perceived barriers to CIS majors attending events outside of class time?

To address Research Question 4, the survey included two questions about the timing of the events and five questions about various barriers to attending events.

Survey Question: The free period (Wed 12:30pm-2pm) is the best day/time for offering technical workshops or career events?

Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree
52%	23%	25%

The survey results showed that 23 out of 44 (52%) agreed or strongly agreed with this statement. Again, the free period at this institution is a time during the week that no

classes are scheduled. It is the one and only time that students and faculty will not have any conflicts. The free period is used by both students and faculty for student organization meetings, department and committee meetings, guest speakers, and other various other events.

Survey Question: After 6pm is the best time of day for offering technical workshops or career events?

Agree/ Strongly Agree	Neutral	Disagree/ Strongly Disagree
48%	30%	23%

The survey results showed that 21 out of 44 (48%) agreed or strongly agreed with this statement. Most night classes offered by the CIS program at this institution are scheduled at 6pm. Recently, there has been the addition of some night classes at 4pm. Both of these are designed to accommodate the non-traditional student and/or working professionals.

Survey Question: X prevents me from attending events at RIC that are scheduled outside of class.

X	Agree/ Strongly Agree
Work	80%
Family	41%
Course Work	41%
Sports	23%
Extracurricular Activities	36%

The survey results showed that students have many perceived barriers to attending events outside of class. However, the barrier that impacts the most students (80%) is work. This percentage is similar to the results of the Student Census Survey mentioned earlier in the Student Demographics section. This shows that a

large percentage of the student body at this institution are employed.

All of these questions support the hypothesis for Research Question 4 and that students perceive a variety of barriers to attending events outside of class and the timing of such events is challenging.

Summary of Survey
The table below summarizes the key items from the student survey and highlights the issues that must be addressed by CIS faculty.

	Agree/ Strongly Agree
Familiar with IT careers	11%
Familiar with IT companies	14%
Value career workshops	80%
Attend career workshops	66%
Value technical skills	66%
Attend technical workshops	64%
Free period best time	52%
After 6pm best time	48%

The next section discusses the implications of the results and the proposed actions by CIS faculty.

4. CONCLUSIONS
The student survey confirmed many of the recent observations by CIS faculty but also showed several positive surprises.

Career Development
First and foremost, CIS majors are not familiar with the types of jobs nor the companies that hire IT professionals. This must be addressed and placed as a top priority for CIS faculty. Although the faculty are not career counselors, it is vital for CIS majors to understand their career paths in order to see value in their course work.

In order to educate and better prepare our CIS majors for IT careers, there are many actions CIS faculty could take. This will start by working with the director of the Career

Development Center, scheduling several career related events each semester, and implementing a career assignment in every CIS course, every semester. The key to the success of these items depends on the support by all CIS faculty. It is vital that the events are scheduled at the beginning of the semester, communicated properly to all students, and encouraged by the faculty. Since the events are scheduled outside of class, required attendance cannot be implemented. However, extra credit can be applied or used as a supplement to course material.

As for the technical skills, the approach will focus on in-class exercises until the career events are better established at the institution. This will address the need for this by the students but not impact their schedules outside of class to allow attendance of career events that are rated as a higher need.

The most challenging aspect will be the timing of the events. There clearly is no time that meets the needs of all students, so a mix of both daytime and evening events will need to be offered. One option will be to offer the events during the day in one semester then during the evening the next semester, alternating each year. This creates a level of complexity but may be the only option for the students at this institution. Another option may be to videotape the events and provide online access to the information. This will require additional resources and support from the college.

This research project will also need to continue surveying students each spring to access progress. One element that should be added to the survey are questions related to workforce readiness skills. These are the soft skills mentioned earlier and are key hiring factors by many IT employers (ENTER IT RI, 2016).

Lastly, the goal of this research project is to improve student engagement. This will not

only help to improve the CIS program but also the economy of the local region and state. Students that are more engaged in their courses will develop higher skill sets in many areas, helping them find high paying/fulfilling jobs and contribute more fully to their employers. This will hopefully translate into a long and successful career after graduation.

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Appendix A – Student Survey

1. I am very familiar the types of *jobs/careers* available for CIS majors.

   Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

2. I am very familiar with the *types of companies* that hire CIS majors.

   Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

3. RIC sponsored workshops (free) that focus on specific *technical skills* are valuable to CIS majors.

   Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

4. I would attend RIC sponsored workshops (free) that focus on specific *technical skills*.

   Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

5. RIC sponsored workshops (free) that focus on *IS/IT career development* are valuable to CIS majors.

   Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

6. I would attend RIC sponsored workshops (free) that focus on *IS/IT career development*.

   Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

7. The *free period (Wed 12:30pm-2pm)* is the best day/time for technical workshops or career events?

   Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

8. *After 6pm* is the best time of day for offering technical workshops or career events?

   Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

9. *Work commitments* prevents me from attending events at RIC that are scheduled outside of class.

   Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

10. *Family commitments* prevent me from attending events at RIC that are scheduled outside of class.

    Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

11. *Course work* prevents me from attending events at RIC that are scheduled outside of class.

    Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

12. *Sports commitments* prevent me from attending events at RIC that are scheduled outside of class.

    Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree

13. *Extracurricular activities* prevent me from attending events at RIC that are scheduled outside of class.

    Strongly Disagree   Disagree   Neutral   Agree   Strongly Agree