# 2006-488: GIRLS ARE IT--A WORKSHOP FOR RECRUITING GIRLS INTO INFORMATION TECHNOLOGY

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# Girls are IT

Abstract

If more women are to be attracted to studies in science, math, engineering and technology, it stands to reason that active recruitment will be beneficial. Women who choose STEM studies choose such studies in spite of a variety of societal reasons for not making that choice. Society's place for women in the agrarian social era was that of homemaker, mother, and helper around the farm. The woman was an extension of her husband; indeed, she was considered to be his possession[4]. In the industrial era, the woman's place was still in the home, rearing children and taking care of the husband, except during wartime when women had to man the factories while there husbands were at war. Toffler[9] described women in the super-industrial society as having the position of being able to do anything they want; however, he claimed that the messages that society communicates to girls still encourage domestic pursuits.

If women are to be represented in larger proportions in the STEM fields, society as a whole would be well-served to begin sending a different message to these girls, and educational institutions would likely be well-served by determining how to recruit women into these fields effectively.

This paper details a half-day recruitment event for middle-school girls, designed around the current best practices with respect to the recruitment of women into technical fields. The target audience for the event includes middle schools girls, together with one or more of their parents, their teachers, and their counselors. Attendance is limited by the number of computers available in a small to medium-sized laboratory (ideally 20 or less) so that attendees may receive individual attention. Each element of the recruitment event is designed for a specific purpose that aligns with a best practice to encourage more women to participate in STEM subjects.

Introduction

The National Science Foundation awarded a four-year, $2,469,000 grant in 2004 to establish a Regional Center for Convergence Technology (CTC) in North Texas. The award was made to a group of three colleges: Collin County Community College as the lead institution, and Dallas County Colleges and Tarrant County College District as partners. Note that convergence technology for purposes of this grant includes networks supporting combined traffic of data, voice, video, and image. Recent surveys have indicated that demand for such technologists is growing because these sorts of networks are rapidly replacing the traditionally separate telecommunications and data networks within many large companies.

The predominant goal for the grant is preparing the workforce to handle the emerging area of converged networking through curriculum creation and reform, training faculty, and recruiting students into the field. Special emphasis is placed on attracting those populations not already well represented in information technology (IT) careers. The researcher for this paper is the Primary Investigator (PI) for the grant and is ultimately held responsible for achieving the goals set forth in the grant objectives. This paper focuses on the details of a recruitment event

for girls to attract them into the convergence technology field.  The design of the event is based on current scholarly literature regarding best practices, and the goal of this paper is to assist other programs these types of recruitment events.

## Rationale for The Event

Based on the work of Durkheim[6], Toffler[9], and Belenky et al.[1], it seems reasonable that society and the educational institutions within it would benefit from implementing changes to attract more women into STEM careers.  To continue to do and act as society and educational institutions have done and have acted is almost a certain formula for ensuring that the level of women in STEM careers will not grow.

Durkheim[6] highlights the heavy influence that society exerts on the individuals in the society.  Toffler[9] says that because the information age no longer requires physical strength that was historically used to limit women from some jobs, women can do many more types of work than historically possible for them.  However, he says that society still influences women to choose domestics pursuits.  Belenky et al.[1] supports that at each stage of a woman's development, social influences are strong.

Current research in this area includes several best practices for effective interventions to increase the representation of women in STEM studies.  These best practices include activities to train the influencers (parents, teachers, counselors, etc.) in girls' lives to understand the characteristics of STEM careers; activities to actively recruit women and girls; activities to expose girls to STEM careers and allow them to experience enjoyable experiences with such technology; mentoring activities that pair older girls with younger girls; and the establishment of gender-specific organizations that aid women in competing in a normally male-dominated career area.

No one event can include every best practice.   However, the event described below is designed to encompass many of the best practices highlighted above with the goal of beginning to influence long-lasting change that will ultimately increase the number of women in the field of convergence technology.

## Girls are IT - A Middle-School Recruiting Event

The National Science Foundation CTC grant provides funding for recruiting students into the field of convergence technology.  Typically, grants of this sort expect results within the years of the grant (by 2008), and recruitment events are designed to accomplish rapid increases in the number of women involved in studying within a particular discipline.  However, as an outcome of the study upon which this paper is based, it appears that focusing on changing attitudes at younger ages than can actually affect enrollments during the grant is warranted.  VanLeuvan[10] highlights that girls' views of technical careers decline between seventh and twelfth grades; therefore, it appears reasonable to implement interventions that begin to affect girls' attitudes by middle school or before.  Illustrating the fact that convergence technology is a specific area of information technology, the workshop is entitled "Girls are IT".

Additionally, the design of the middle-school recruitment event includes activities to train and influence girls' parents, teachers, and counselors according to the guidelines identified by Blum & Frieze[2] and by Boudria[3].  Further, capitalizing on the success of mentoring younger girls by older girls shown in the BUGS project by Harrell et al.[7], the event uses young women in two IT careers in the convergence technology area to conduct the workshops; the workshop also uses the adult teachers in the convergence technology program as lab assistants to assist the parents, teachers, and counselors in the event.   Following the best practices for providing enjoyable technical experiences detailed by Nicoletti[8] and Denner[5], the event includes hands-on, fun activities.  Throughout the half-day event, the young women leaders of the event highlight how they have prepared for their jobs and how their work fills their own requirements for fulfillment.

Specifics of the Design

The CTC grant office held a high school teacher-training event in Spring 2005 that, although it was originally scheduled solely to train high school teachers, actually interested students, their parents, and their counselors.  These additional people were invited to attend as well.  This was a serendipitous event because the event's outreach ultimately generated great interest in the students as well as the adults who influence them.

Building on the good fortune of having seen success in working with the combined student and adult population and building on the current best practices already listed, this paper describes a half-day recruiting event for middle-school girls, their parents, their teachers, and their counselors.  The event is typically held on a Saturday morning, beginning with a continental breakfast and ending with a casual lunch.  While all the logistics of the event are organized and managed by the full-time employees in the grant office, the event itself is led and managed on the day of the event by two young women who have careers in the convergence technology area.  One woman is a network administrator for a converged network for a hospital, and the other women goes into people's homes integrating computers, entertainment systems, security systems, etc. for home use.  This choice is made to align with the best practice of having older girls mentor younger girls while also supporting lab instruction for the influencers of those girls through existing professors.

Each young woman begins her hour with the girls by sharing photographs of her workplace and statistics about the salaries, job characteristics, and advancement possibilities available in her chosen career.  She also talks about why she chose her career and what she did to prepare for it.  She then conducts a short, hands-on lab to highlight what a girl might do if she were in a similar career.  Finally, she facilitates a discussion after the lab to allow the girls and their adult influencers to share questions, experience, and the general excitement.

Aligning with the best practice of providing enjoyable technical experience for women highlighted by Nicolletti (2004) and Denner[5], the two hands-on labs give the girls experience and success in working with technology.  The first lab allows the girls to build a secure wireless network such that they can use to play a game with one another, and a second lab allows the girls to configure Voice over IP telephones through their laboratory computers such that they can talk with one another over the Internet and even telephone their homes to leave messages.  Both of these labs have contemporary value in that they highlight skills and convergence technology activities that are very relevant to the girls and representative of the highlighted careers.

The event closes with a luncheon discussion in which the girls, teachers, parents, counselors, young women leaders, grant staff, and convergence technology teachers share concerns, answer questions, and talk about follow-up workshops. Finally, the event concludes with a drawing for a technical/entertainment tool such as an MP3 player, donated by local business.

Publicizing the Workshop

The approach for publicizing this workshop is based on the experience of the lead institution, Collin County Community College, in presenting similar events. The design is not supported specifically from current research although the approach is a proven one. The details of publicity for the event are provided in this paper because the event relies on publicity to attract the girls, parents, teachers, and counselors to attend the session, and, as is typical in education, marketing and advertising budgets are sparse.

Fortunately, the CTC grant has established methods of communication with the middle-schools and high-schools of the region such that announcements for events such as "Girls are IT" can be widely distributed through electronic means, public media means such as newspapers, and through written invitations delivered to the educational institutions. Approximately twelve weeks before the event, grant office personnel meet with the Public Relations department at Collin County Community College to develop a marketing plan specifically for this instance of "Girls are IT." Based on this meeting, a timeline and work schedule are designed for the creation and distribution of electronic invitations, press releases, web presence, and written invitations. In spite of the fact that the Public Relations department provides free design services for events such as this, approval of the materials created still resides with the grant PI.

Once designed and approved, the electronic invitation is distributed through the Tech Prep network of counselors in the region as well as through the direct contacts with teachers, counselors and parents for middle schools in the area. It is also posted on the grant web site. While the Tech Prep network largely reaches high school representatives, the grant's experience has been that this network is invaluable in forwarding information to appropriate recipients, even if the recipient is not in the high school population. The electronic invitation highlights the activities of the workshop in the text of the email, and it also includes a flyer for the event that recipients are asked to print and post. To allow for ordering appropriate amounts of food for breakfast and lunch, all invitations require R. S. V. P. responses to the grant office.

In addition to the electronic invitation, printed invitational flyers, similar to those attached to the electronic invitation itself, are mailed and/or delivered to counselors, career and technical teachers, math teachers, science teachers, and principals of the middle schools in the region. Additionally, a letter is sent to the head counselors and to the principals, asking them to duplicate the invitational flyer and send it home with their middle school girls, asking parents to attend.

Additionally, public press releases are prepared and distributed to the local media, characterizing the event's agenda and goals and asking for attendance. A two-pronged approach

is used with these press releases: they are distributed via normal college publication means, and telephone contact is used with reporters at several of the newspapers that have provided coverage in the past. The latter approach is important because it allows the reporters to ask clarifying questions that might not be answered in the general press release.

Finally, about two weeks before the event, grant personnel phone counselors from middle schools who have not responded to refocus attention on the event. This personal telephone call allows the counselors to ask questions, and it also provides a reminder about the workshop if they possibly have overlooked the event.

Documenting the Workshop for Others to Use

The Texas Higher Education Coordinating Board, the state agency governing the community colleges in the state of Texas, prescribes formats that must be used for any curriculum created using state grant funds. While this half-day recruitment event is funded by Federal money, the same templates required by the state are used. The detailed syllabus, a detailed assessment plan, and a detailed learning activities plan may be found in the appendix of this paper and may be used by others.

The syllabus is a document that guides the activities of the workshop. It is posted on the grant web site and distributed to the adults so that they know what to expect. While the targeted girls may see it on the web site, it is likely not as interesting to them as the more marketing-oriented pieces. The syllabus summarizes the highlights of the workshop in the workshop description, describing its purpose, the detailed hour-by-hour agenda, and the approach for using younger women to lead and the older convergence technology instructors to help with the event. Following the template provided by the Texas Higher Education Coordinating Board, the syllabus also lists the expected outcomes for the event, and it highlights the purpose of the pre-workshop survey and the post-workshop survey.

The learning activities plan covers details regarding the two hands-on lab activities used in the workshop. Each of these activities requires the instructor, the young woman in the relevant career, to have completed the lab in advance to ensure that the lab can be completed appropriately.

The assessment document includes the actual pre- and post-workshop survey instruments. The purpose of the pre-workshop instrument is to capture attitudinal data from all attendees regarding their impressions and opinions regarding the two specific convergence technology careers. The post-workshop survey asks the same questions as in the pre-workshop survey and also asks questions regarding the presentation of the workshop itself. The data collected is analyzed for differences between these two surveys for each individual and for the group of girls, the group of parents, the group of teachers, and the group of counselors who attend the event. Additionally, differences are calculated for the group as a whole.

The attitudinal portion of the post-workshop survey is also distributed on a voluntary basis via email approximately six months and then again approximately one year after the workshop to ascertain if attitudinal differences that might have been apparent at the end of the

workshop have long-term effect. Depending on interest in participating in these follow-up surveys, they may be further distributed each year until the girls have chosen their initial college majors.

Note also that both the pre-and post-workshop surveys are reviewed by information technology instructors, administrators, as well as middle school teachers and counselors, to validate that the questions in the survey are appropriate. The surveys are modified as necessary as a result of these reviews.

Summary

Based on the research documented in this paper it seems reasonable for society and the educational institutions in it to actively work to recruit women in to STEM careers. Given that the National Science Foundation Regional Center for Convergence Technology grant has as its goal the recruitment of underserved populations into the field of convergence technology, the "Girls are IT" workshop is designed to assist in accomplishing this goal by attracting more girls into studying these subjects. The workshop's approach aligns with the effective best practices identified in a search of current scholarly literature concerning interventions that positively affect the attitudes and knowledge of girls and their adult influencers with respect to careers in convergence technology.

1. Belenky, M., Clinchy, B., Goldberger, N., & Tarule, J. (1986) *Women's ways of knowing.* New York: Basicbooks.

2. Blum, L., & Frieze, C. (2005). *The evolving culture of computing.* Frontiers: A Journal of Women Studies, *26*(1): 99-109.

3. Boudria, T. (2002). *Implementing a project-based technology program for high school women.* Community College Journal of Research and Practice, *26*(9): 709-722.

4. Chirot

5. Denner, J., Werner, L., Bean, S., & Campe, S. (2001). *The girls creating games program.* A Journal of Women Studies, *26*(1): 90-99.

6. Durkheim, E. (1973; orig. 1925). *Moral education.* New York: The Free Press.

7. Harrell, P., Walker, M., Hildreth, B., & Tyler-Wood, T. (2004). *Mentoring BUGS: an integrated science and technology curriculum.* Journal of Computers in Mathematics and Science Teaching, *23*(4), 367-378.

8. Nicoletti, D. (2002). *An analysis of the effectiveness of the admissions policy for an outreach program for girl's engineering.* Journal of Women & Minorities in Science & Engineering 8(2): 221-234.

9. Toffler, A. (1983). *Previews & premises.* Boston: South End Press.
10. VanLeuvan, P. (2004). *Young women's science/mathematics career goals from seventh grade to high school graduation.* The Journal of Educational Research, *97*(5): 248-267.

# Syllabus

## Information Technology Workshop

## Girls are IT!

## Middle-School Girls, Parents, Teachers, and Counselors

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WORKSHOP DESCRIPTION: This workshop is a half-day, fun, but intensive, hands-on workshop with the stated purpose of interesting more middle-school girls in careers in information technology. Acknowledging that these girls are influenced by their peers, their parents, their teachers, and their counselors, to name only a few, the workshop is aimed at all four audiences simultaneously, and it is led by young women in the field. Adult information technology instructors function as lab assistants in this class, leaving the lead role to the young role models. (The format is more of a social event than a learning event although learning is scheduled to occur. The aim is to have mind-stretching fun and have the girls learn in the process.)

PREREQUISITES: An interest in finding out about what it might be like to choose a career in IT (or perhaps only an interest in possibly winning the MP3 player or other "cool" prize offered in a drawing for those middle school girls who attend the event.)

RESOURCES: Handouts including statistics regarding salaries, job characteristics, etc; demonstrations; hands-on labs; photos.

LEARNING OUTCOMES: Upon completion of this workshop students will be able to explain the typical day for individuals in the two information technology careers discussed in the workshop.
1.   Explain the educational requirements for each of the two careers.
2.   Describe the salary ranges and characteristics of each of the two careers.
3.   Explain how each of these careers helps society.

ADDITIONAL ATTITUDINAL OUTCOMES:
1.   Students will describe information technology careers using more positive terms than used in the pre-workshop survey.
2.   Students will describe the workshop experience in positive terms.

COURSE ASSESSMENT: (Brief description of recommended assessment method and tools)

Pre-workshop online survey asking participants to
- Select terms and phrases characteristic of two major careers in information technology from a list of both positive and negative phrases.
- Select terms and phrases describing the typical workday for each of these two careers.
- Select terms and phrases describing how people in each of these two careers help society.

Post-workshop online survey asking participants to
- Re-evaluate the items from the pre-workshop online survey in light of the workshop
- Rate the excitement, enjoyment, and learning factors of their workshop experience, including space for general comments

WORKSHOP SCHEDULE: (Sequence of instruction recommended based on learning outcomes)

| Time | Activity/ Outcome | Assignment |
|---|---|---|
| 9:00-9:30am | Continental breakfast/meet and greet | |
| 9:30-9:45 | Pre-workshop survey | Participants complete the pre-workshop survey online |
| 9:45-10:00 | Students hear from a young woman working as a network administrator in a converged network in a hospital about<br>  How and why she chose her career; salary ranges; statistics about the number of people in the career, etc.<br><br>  What she likes and dislikes about her career choice, with emphasis on how her work helps society<br><br>  What sort of education or other preparation she did to obtain her current job<br><br>Outcome:  Participants are better able to characterize this job and have a more favorable impression of this career | |
| 10:00-10:30 | Young woman acting as teacher conducts small demonstration and hands-on laboratory highlighting her area of specialization (wireless network) | Participants complete the hands-on laboratory |

| | | |
|---|---|---|
| 10:30-10:45 | Young woman facilitates a discussion with the participants about the laboratory, highlighting that it was a fun experience | |
| 10:45-11:00 | Break and more small discussion | |
| 11:00-11:15 | Students hear from a young woman working as a home technology integrator about<br><br>How and why she chose her career; salary ranges; statistics about the number of people in the career, etc.<br><br>What she likes and dislikes about her career choice, with emphasis on how her work helps society.<br><br>What sort of education or other preparation she did to obtain her current job<br><br>Outcome:  Participants are better able to characterize this job and have a more favorable impression of this career | |
| 11:15-11:45 | Young woman acting as teacher conducts small demonstration and hands-on laboratory highlighting her area of specialization | Participants complete the hands-on laboratory |
| 11:45-12:00 | Young woman facilitates a discussion with the participants about the laboratory, highlighting that it was a fun experience | |
| 12:00-12:15 | Post-workshop survey | Participants complete the post-workshop survey |
| 12:15-1:00 | Participants have lunch together, and they discuss the workshop including the jobs and the labs completed. | |
| 1:00 | Drawing for an MP3 player or other "cool" prize | |

Appendix B – Learning Activities Plan

Information Technology Recruitment Workshop

Girls are IT

# Learning Activity 1

**Learning Outcome**
The girls, the parents, the teachers, and the counselors attending this session will develop a positive attitude toward the IT career of network administrator for a converged network in a hospital.

**Recommended Resources for Learning Activity**
Photos to pass around of the workplace; statistics about salary ranges, number of people in the field, growth potential, etc.
Whiteboard for diagramming the converged network.

**Recommended Instructor Preparation for Learning Activity**
Young woman currently in the career of network administrator for a converged network at a local hospital acts as the instructor.

Female regular class instructors function as lab assistants, helping the teachers, counselors and parents

**Recommended Instructor/Student In-class/lab Activity**
Methods to:
- **Capture Student Attention:**
    - Show photos of the workplace, emphasizing characteristics of the job, discussing the human side of the job; display and hand out salary information

- **Develop Learning Activity part one:**
    - Talk about the fun parts of the job
    - Talk about the education needed to get the job and keep the job
    - Talk about the hours
    - Talk about variety or lack of variety
    - In short, cover all the characteristics listed on the pre-workshop survey as they apply to this job

- **Develop Learning Activity part two:**
    - Have the girls complete the wireless lab, setting up a secure wireless network.
    - Once they have completed the lab, creating their wireless network, let them play a networked computer game Talk about the fun parts of the job

- **Conclude Learning Activity:**

  o End learning activity with strong summary of both the career and the lab itself.

# Learning Activity 2

**Learning Outcome**
The girls, the parents, the teachers, and the counselors attending this session will develop a positive attitude toward the IT career of home technology integrator.

**Recommended Resources for Learning Activity**
Photos to pass around of the workplace; statistics about salary ranges, number of people in the field, growth potential, etc.
Whiteboard for diagramming the converged network.

**Recommended Instructor Preparation for Learning Activity**
Young woman currently in the career of home technology integrator acts as the instructor. Female regular class instructors function as lab assistants, helping the teachers, counselors and parents

**Recommended Instructor/Student In-class/lab Activity**
Methods to:
- **Capture Student Attention:**
  o Show photos of the workplace, emphasizing characteristics of the job, discussing the human side of the job, especially emphasizing the flexibility of the hours and variety of the job. Discuss salaries, growth potential, etc.
- **Develop Learning Activity part one:**
  o Talk about the fun parts of the job
  o Talk about the education needed to get the job and keep the job
  o Talk about the hours
  o Talk about variety or lack of variety
  o In short, cover all the characteristics listed on the pre-workshop survey as they apply to this job
- **Develop Learning Activity part two:**
  o Have the girls complete the Voice over IP lab, phoning each other over the Internet from one computer to another, and phoning outside to their homes to leave a message on their answering machine.
  o Once they have completed the lab, let them call each other at will. Talk again about the fun parts of the job

- **Conclude Learning Activity:**
  o End learning activity with strong summary of both the career and the lab itself.

Appendix C – Assessment Plan

Information Technology Workshop

Girls are IT

# Pre-workshop Survey

LEARNING OUTCOME
This is a pre-workshop assessment to determine prior knowledge, impressions, and attitudes about two major careers in information technology:

1) Network administrator for a converged network in a hospital
2) Home technology integrator independent contractor who integrates networks in homes

RESOURCES REQUIRED
Zoomerang online survey tool or other online survey tool is preferred although the surveys will also be provided in printed form for those not comfortable online.

WRITTEN ASSESSMENT FORMAT & INSTRUCTIONS

1.      Select one of the following characteristics

 I am a girl attending this workshop
 I am a female parent of a girl attending this workshop
 I am a male parent of a girl attending this workshop
 I am a female teacher of a girl attending this workshop
 I am a male teacher of a girl attending this workshop
 I am a female counselor of a girl attending this workshop
 I am a male counselor of a girl attending this workshop

*Based on the selection in #1, girls will get survey question 2, and all others will get survey question 3*

2.      If you are a girl attending this workshop, please rate how well you agree with each of the phrases or statements below

   a. I like computer technology

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

b. I am good at computer technology

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

c.   I have experience with computer technology

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

d.   I like math

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

e.   I am good at math

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

f.   I like helping people

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

g.   I want a career that makes a lot of money

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

h.   I want a career that helps people

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

i.   I want a career that offers a lot of variety

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

j.  I do not want a career

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

3.  For parents, counselors, or teachers attending this workshop, please rate each of the following phrases or sentences

a.  I like computer technology

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

b.  I am good at computer technology

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

c.  I have experience with computer technology

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

d.  I like math

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

e.  I am good at math

| Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | No Opinion |
|---|---|---|---|---|---|

4. Select the words below that describe your current impressions of the job of network administrator for a converged network in a hospital.

   a. People who choose to be a network administrator for a converged network in a hospital are likely to be

      geeks
      male
      female
      antisocial
      social
      smart
      dumb

   b. The job of being a network administrator for a converged network for a hospital is
      interesting.
      exciting.
      boring.
      geeky.
      fun.
      enjoyable.
      easy.
      hard.
      financially rewarding
      not financially rewarding
      a career for women
      a career for men
      a career that helps people
      a career that helps society in general

   c. What knowledge do you believe to be required for a career as a network administrator for a converged network for a hospital?
      math
      science
      technology
      engineering
      computers in general
      routers
      Internet
      type of traffic on the Internet
      ability to talk to people
      gaming
      electronics

d.  What level of education is required to be a network administrator for a converged network for a hospital?

at least a 4-year university degree
at least a 2-year community college degree
at least some college
at least a high school diploma
no particular education is required

e.  The work of network administrator for a converged network in a hospital

is constantly changing
is creative
is similar every day
is often different from day to day
does not require much interface with people
offers opportunities to advance
is an attractive job
does not interest me
is a good job for a woman
is a bad job for a woman

f.  The work hours for a network administrator for a converged network in a hospital are

Approximately 8 am – 5 pm, weekdays
Approximately 40 hours per week, but work hours are flexible
Approximately 8 am – 5 pm, weekdays, but some overtime is also required
Good for a person who wants to have a career and a family

g.  Network administrators in hospitals work with

math
people
computers
routers
cables
software
hardware

5. A converged network contains the following technologies

> Voice over IP
> data networking
> computers
> routers
> cable
> software
> video
> image
> medicine
> televisions
> lighting systems
> security systems
> air conditioning and heating systems
> smart appliances

6. Select the words below that describe your current impressions of the job of home technology integrator.

   a. People who choose to be a home technology integrator are likely to be

   > geeks
   > male
   > female
   > antisocial
   > social
   > smart
   > dumb

   b. The job of being a home technology integrator is
   > interesting.
   > exciting.
   > boring.
   > geeky.
   > fun.
   > enjoyable.
   > easy.
   > hard.
   > financially rewarding
   > not financially rewarding
   > a career for women
   > a career for men
   > a career that helps people
   > a career that helps society in general

c. What knowledge do you believe to be required for a career as a home technology integrator?

math
science
technology
engineering
computers in general
routers
Internet
type of traffic on the Internet
ability to talk to people
gaming
electronics

d. What level of education is required to be a home technology integrator?

at least a 4-year university degree
at least a 2-year community college degree
at least some college
at least a high school diploma
no particular education is required

e. The work of a home technology integrator

is constantly changing
is creative
is similar every day
is often different from day to day
does not require much interface with people
offers opportunities to advance
is an attractive job
does not interest me
is a good job for a woman
is a bad job for a woman

f. The work hours for a home technology integrator are

Approximately 8 am – 5 pm, weekdays
Approximately 40 hours per week, but work hours are flexible
Approximately 8 am – 5 pm, weekdays, but some overtime is also required
Good for a person who wants to rear a family

g. A home technology integrator works with

    math
    people
    computers
    routers
    cables
    software
    hardware

7. A home technology integrator may work with the following technologies

    Voice over IP
    data networking
    computers
    routers
    cable
    software
    video
    image
    medicine
    televisions
    lighting systems
    security systems
    air conditioning and heating systems
    smart appliances

8. Please tell us why you are here

_____

9. What else would you like to know?

_____

10. What else would you like us to know?

_____

Post-workshop assessment

Repeat pre-workshop evaluation

Add the following workshop evaluation questions on the workshop itself:

| **Overall Objectives** | | | | | |
|---|---|---|---|---|---|
| | Strongly agree | Agree | Neither Agree nor disagree | Disagree | Strongly Disagree |
| This workshop helped me to better understand the career of network administrator for a converged network in a hospital. | | | | | |
| This workshop helped me to better understand the career of home technology administrator. | | | | | |

| **Facilities** | | | | | |
|---|---|---|---|---|---|
| | Strongly agree | Agree | Neither Agree nor disagree | Disagree | Strongly Disagree |
| Workshop registration was easy to use. | | | | | |
| Workshop facilities were excellent. | | | | | |
| Workshop facilities were kept clean & fresh. | | | | | |
| Computers labs & equipment were excellent. | | | | | |

| **Food and Beverages** | | | | | |
|---|---|---|---|---|---|
| | Strongly agree | Agree | Neither Agree nor disagree | Disagree | Strongly Disagree |
| Breakfast was enjoyable. | | | | | |
| Lunch was enjoyable. | | | | | |
| The snack was enjoyable. | | | | | |

| Workshop Staff | | | | | |
| --- | --- | --- | --- | --- | --- |
| | Strongly agree | Agree | Neither Agree nor disagree | Disagree | Strongly Disagree |
| The young network administrator for a converged network in a hospital was informative regarding her job. | | | | | |
| The converged network lab was enjoyable | | | | | |
| The young home technology integrator was informative regarding her job. | | | | | |
| The home technology integration lab was enjoyable. | | | | | |

1. What was best about the workshop?

2. What was least enjoyable about the workshop?

3. What suggestions do you have for improvement?

4. What suggestions do you have for more workshops?

5. What else would you like us to know?