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Message from the Chair

We had a good turnout of ETG members for our business meeting - see the minutes later in the newsletter to review the business covered.

We handed out our student award to Kim Wolfinbarger from the University of Oklahoma. Congratulations, Kim. I attended Kim’s presentation to learn how changes made to the intro ergo course resulted in an overwhelmingly positive student response – suddenly students started liking ergonomics a whole lot more.

I’d like to thank Dan Nathan-Roberts, ETG student representative, from U of Michigan, for chairing the committee which reviewed the papers and selected the student winner. Thanks also to Dan’s committee - ETG appreciates the assistance of these student reviewers: Philart Jeon from Georgia Institute of Technology, Rachel Phillips of Old Dominion U and Cara Stitzlein from the U of Queensland.

Frank Durso, program chair, is to be commended for developing a strong program for HFES2010. It was a good mix of practice-oriented panel discussion sessions (distance ed, the future of HF ed, and teaching HF/E professionals), a research/lecture session and what turned out to be a demonstration session of innovative ways to visualize HF/E through use of technology and devices in the classroom.

I’d like to welcome aboard our new ETG Webmaster, Caroline Joseph. Caroline is in the last year of her PhD program at the University of Buffalo. She’s already been working with our content to get the website http://www.hfes.org/etg/index.html up to date. If you have recommendations for content that would be useful to members, please send me a message.

Turning to what’s coming down the road for us in the coming year, HFES will be trying out some new ideas to better reach and serve members. You’ll be receiving more info on each of these: (1) HFES is creating a social networking home on LinkedIn.com and each TG will be subgroup. The intent is to foster communication and collaborations among members. We’ll be in touch with you as this develops. (2) HFES has formed a committee and provided funds to sponsor a junior faculty networking event at the conference. (3) HFES plans to begin a webinar series to offer workshops and/or educational content. They will be seeking ideas for content and presenters – I think this will be a perfect opportunity for us educators to contribute our talents.

Something else to keep in mind, we’ll be holding ETG officer elections in the Spring/Summer 2011 for chair, program chair-elect and newsletter editor. When we put out the call, please consider nominating a fellow member or even volunteering yourself.
And finally, it’s never too early to start planning for next year - the 55th Annual HFES meeting will be Sept 19-23, 2011, at the Red Rock Hotel in Las Vegas, NV.

Happy Holidays!

Tracey Wortham
ETG Chair

Education Technical Group
Business Meeting Minutes
Wednesday, Sept. 29, 2010

- Welcome and introductions – 24 members were in attendance.
- Acknowledgements – Tracey Wortham
  - ETG meeting sponsorship: Many thanks to Rebecca Boren and the Boren Family Foundation for supporting our breakfast!
  - Thanks were expressed for the efforts of the officers: Frank Durso, Program Chair, Rebecca Boren, Newsletter Editor, Sahika Korkmaz, Webmaster, and Dan Nathan-Roberts, Student Representative.
- Review of Membership and Funds Report
  - Membership is 195 as of 9/3/2010 (down slightly from 211 last year)
  - Current balance is $5201 as of 8/20/2010 (compared with $4800 last year)
    - Breakfast for 25 estimated to be $813, offset by $450 contribution from the Borens
    - ETG Student Award and plaque ($290)
    - $100 Brochure holders for the Education Booth #4 (Student Affairs also contributed $100.)
      Each year members are invited to display their university/program brochures at the exhibition. The holders were needed due to space limitations and organizational issues.
- ETG Program – Frank Durso announced 5 sessions. He reported that a couple of presenters had missed their session due to flight conflicts when HFES changed the date of their session after they already had booked flights.
- Future Programs – Frank reported that the Executive Board is encouraging a top down approach in next year’s sessions. TGs are encouraged to set up invited sessions with high profile speakers. Haydee Cuevas suggested that an international exemplary teacher be considered for the invited session. Discussion moved to last year’s workshop with the request that we hold another Monday workshop. Beth Blakensderfer was nominated to chair the committee to develop a workshop for 2011. Requests made for documentation from the previous workshop went unfilled because no such documentation was produced; therefore it was suggested that a student member be appointed to attend, take notes, and send notes to the speaker for confirmation of material.
- ETG Student Award – Dan Nathan-Roberts announced the 2010 winner is Kimberly Wolfinbarger of the U. of Oklahoma for her paper “A new approach to laboratory-based learning in an introductory ergonomics course”
- Newsletter – Rebecca Boren announced that she will be putting together a newsletter in November. She will send an email with the submission deadline.
- Website – Sahika Korkmaz has resigned from the webmaster position. Recommendations for a replacement were sought. A request will be sent via the LISTSERV.
- Elections this spring/summer for chair, program chair-elect & newsletter editor; term 2011-2013
- Council of Technical Groups Report – Tracey reported on the CTOG meeting. Incoming HFES president Tony Andre laid out an ambitious agenda. (a) He advised TGs to have a financial spending plan that addresses why dues are continuing to be collected and a plan for spending. (b) HFES has formed a committee to have the TGs use LinkedIn under the HFES umbrella. It will create a guide for use. (c) HFES is planning a mid-year meeting on a specialized topic. TGs are asked to identify the most important emerging/popular topic in their area for future meetings. (d) Changes to the annual program – TGs are encouraged to have at
least one invited session. (e) HFES plans to start a webinar series and/or virtual workshops. TGs are asked to identify potential topics and speakers.

- Education & Training Committee – Nancy Stone reported the committee met and recommended updates.
- Discussion – Use of funds: Members suggested a variety of ideas including (a) sponsoring a meet-and-greet the expert restaurant luncheon for students whose papers were accepted by ETG; (b) purchasing equipment to record the workshop with the idea of posting it to YouTube or iTunes U; (c) increasing ETG membership to reach out to more educators and students.

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**Kim Wolfinbarger Wins Education Technical Group Student Award**

By Dan Nathan-Roberts, Education Technical Group Student Representative

Kim Graves Wolfinbarger, University of Oklahoma, won the best student paper award given by the HFES Education Technical Group (ETG).

Wolfinbarger’s paper titled “A New Approach to Laboratory-Based Learning in an Introductory Ergonomics Course” was chosen from all of the student works at the HFES conference submitted to the ETG. The well written paper proposes a model for improving classroom teaching of lab based courses. Wolfinbarger applies the model to the redesign of a lab based ergonomics course, and measures the results. The paper would be useful in improving lab based courses, or courses with a lab component across the field.

The award comes with a plaque and $250 prize and recognizes the best student paper accepted to the annual HFES conference by the Education Technical Group.

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**Games To Explain Human Factors: Come, Participate, Learn & Have Fun!!! Update**

Ronald G. Shapiro, Ph. D.

To celebrate National Ergonomics Month 2010 I delivered the Games to Explain Human Factors: Come, Participate, Learn and Have Fun!!! program to the Fordham University at Lincoln Center Psi Chi chapter, to the 22nd Greater New York Conference on Behavioral Research at Lander College for Women (Harold Takooshian Conference Director, Nava R. Silton Conference Chair) and to an introductory Human Factors class taught at Tufts University. During the past month I’ve also delivered it to a high school in Rhode Island and explained the program to Girl Scout leaders in Rhode Island at their annual cookie kickoff. I’ll be delivering the presentation to the 2010 Christa McAuliffe Technology Conference in New Hampshire on December 1 and visiting another Rhode Island High School in December. Additionally, I’m currently arranging to bring the presentation to a number of schools and conferences in early 2011.

I was delighted to receive a note from a university professor who attended a Games workshop several years ago saying “I love your workshops btw. They really helped get me involved in human factors and teaching that course.”

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If you are not already familiar with the Games presentation please request a copy, available to HFES and Education Technical Group (ETG) members at no cost. Simply send a note to DrRonShapiro1981@SigmaXi.Net including your name, school and HFES affiliation and how you might use the presentation. Since the Games file is 10 meg, please be sure to send your request from an email account (such as GMAIL) which accepts large capacity files. I’ll be pleased to discuss the presentation with you over the phone at no cost. If you prefer, I do on-campus presentations as well. If you have an older version of Games, please request the current version which has been updated to work with Microsoft Office 2010.

Transitioning from School to the Professional World:
How to Find and Secure a Great Position
Meghan Rogers, North Carolina State University, Raleigh, NC

Introduction

The 54th Annual Meeting of the Human Factors and Ergonomics Society’s Student Career Day Panel focused on the theme of maximizing your experience in school in order to find and secure a Human Factors position after graduation. Panel participants across industry provided guidance and answered audience questions to aid future job seekers on how best to prepare for a job search. The 2010 panel included: (a) Ronald G. Shapiro, Independent Consultant; (b) Mica R. Endsley, SA Technologies; (c) Justin F. Morgan, Virginia Tech Transportation Inst.; (d) Arathi Sethumadhavan, Medtronic, Inc.; and (e) Brent-Kaan White, Oracle Corp. Each panelist was asked to provide a recommendation for how to find a job as part of their introduction. Questions and comments from the audience further enhanced the discussion.

Recommendation I: Network

Endsley: Networking at the HFES Annual Meeting is a great way to find a job. Strike up a conversation at technical sessions, in the hallway, and during the student reception. Attend the technical group meetings. The technical groups are a great way to expand your network and are good sources for scholarships and publications. When approaching someone you don’t know, you can start a conversation by asking the other person about their current work, company, and other previous research. However, don’t restrict yourself with a one sided conversation. You should meet the person but also allow them to meet you.

Shapiro: Other networking opportunities at the annual meeting include the Business Meeting and the BCPE reception. Getting involved in the society is a great way to meet and network with new people.
**Recommendation II: Post Your Work Online**

*White*: Have a digital aspect of your research/work to show potential employers. Be sure to not only show the final product, but the process you went through to get the end result.

*Where should we post our work?*  
*(Ashley Benedict, Purdue University)*

*White*: There are many options including LinkedIn, PowerPoints, or a hidden site. Make sure you express your thinking and process as well as highlight the main portion of the research. Visuals are also important.

*Endsley*: You can present work you have done in school projects or while volunteering. You should show that you can do the type of work you want to do once you graduate.

*Shapiro*: Get involved in projects so that you will have something to show employers. There is a lot of opportunity to get work within the student and local chapters of HFES as well as the society as a whole.

*If I create a digital portfolio, how do I discuss my work when there are proprietary restrictions?*  
*(Adrian Musters, University of Utah)*

*White*: Use a Google image search to get a representative image to convey the broad idea. Be sure to show the process visually as well. You can communicate what you did without getting too specific. Also, there is often more liberty when you are showing stuff in person.

*Endsley*: Find out from the lab if there are proprietary issues. One approach you can take is to show an old product and then point out what you are improving.

*Shapiro*: You can also try to get permission to show a similar approach without the details.

**Recommendation III: Multifaceted Approach**

*Morgan*: The best way to find a job is to adopt a multifaceted approach and be proactive. Develop a highly polished Curriculum Vitae or a portfolio if you are more design oriented. You shouldn’t rely solely on job search websites and career centers. If you have a good network, you can use them as well. Distribute CD-Rom business cards and have your portfolio and work on it to show employers.

*White*: When searching for jobs online, don’t just use the term “Human Factors.” You should also search for other key terms such as cognitive psychologist, user experience architect, human computer interaction, etc.

*Audience Comment*: Let your network know you are looking for a job. *(Adam, Texas Tech)*

*Shapiro*: Volunteer and meet people at HFES.

*Audience Comment*: Create a portfolio of your work even if it is not design related and customize it to each company. Make it terse by describing research projects on only one or two PowerPoint slides. *(Neil Bating, Booze Allen)*

*Shapiro*: Be sure to describe your contribution to the project, not just the project itself. What did you do and/or accomplish? How did you make it specific? How did you know it was good?

*White*: Don’t misstate your contribution but be sure to show confidence in what you have done. Show you can handle work.

*Endsley*: Be prepared to talk intelligently about your own work. How is it different from other similar work? How is it beneficial for industry? Why did you pick that hypothesis?

*Shapiro*: Explain to the employer why they should care about work you have previously completed.

*Sethumadhavan*: Be aware of the form of work (research vs. industry) for which you are applying. If you are going into industry, be able to apply principals to real world solution. Practical experience in school will bump up your skills.

*Morgan*: Demonstrate you have theoretical knowledge and the skill to apply that knowledge, as well
as knowing which tools to use during the application.

**Recommendation IV: Internships**

**How can students find internships?**

*Audience Question*

**Endsley:** I strongly encourage internships because experience stands out. Internships can also help you decide what you do and don’t want to do after graduation. You can ask about internships around the conference.

**Morgan:** An internship is the greatest thing you can do for yourself. It shapes knowledge of what you want to do and what area you want to be in. Go at it like you are going for a full time job.

**Are internships in something off topic from your studies still beneficial?**

*Han Zhang, Mississippi State*

**Endsley:** They are still good for basic skill development such as data collection, report writing, etc.

**Morgan:** HFES is a broad field so any experience can be helpful.

**Sethumadhavan:** It can help build credibility.

**Shapiro:** You don’t know where you will end up in 20 years. You need a lot of diverse experiences so you shouldn’t be too narrow in your internships. However, doing too many internships can have a negative effect. Completing 1-3 internships is optimal.

**I've had real world experience in the Marine Corps, should I still do an internship?**

*Matt Rambert, New Mexico State University*

**White:** It depends on the company. Often companies will only offer internships if you don’t have experience. Sometimes an internship is the only position available. Voice your desire to find an internship to faculty and see if they can help.

**Endsley:** Many companies use these internships as a trial period for a full time job.

**Shapiro:** An internship is essentially an extended job interview. If you have previous experience in another field, determine how your experience relates to HFES. Use your work to determine if that’s what you want to do.

**Sethumadhavan:** Be able to apply your previous work to what you want to do in the future.

**How do you apply previous work to a different field?**

*Robert McCall, University of South Dakota*

**Audience Comment:** Show your ability to learn new topics. *(Chad Uy, North Carolina State University)*

**Audience Comment:** Show passion for a specific branch or field. *(Rachel Edwards, Rice University)*

**Audience Comment:** Be able to parallel one experience to a new branch of work. An example is paralleling Aviation with Healthcare: both involve checklists and accidents/crashes.

**Audience Comment:** Mention you wanted to stay in Human Factors but weren’t involved in the Marines any longer. *(Tom, Cornell University)*

**Endsley:** Do your homework! Find out what the company does and ask good questions.

**Audience Comment:** Know something about the company to which you are applying. Look at forums, identify problems, and propose solutions. *(Neil Bating, Booze Allen)*

**Morgan:** Although you are coming in from a different discipline, you can make parallels between fields. Take a skill set you learned in A and transfer it to B.

**White:** Know as much about the new field as possible. Pour over the website and look at breaking news. Talk to alumni in current field about their experiences.
**Shapiro:** Figure out what the person you are talking to cares about. Personalize the interview.

**Sethumadhavan:** Focus on what you can do in the future in this new field as opposed to what you did in the past.

**Morgan:** It is important to convince the person that it won’t take them a high amount of effort to get you up to speed.

**Endsley:** Jobs around campus (TA, RA, etc) also count as jobs. Show initiative by getting a job on campus or at a local company.

**Shapiro:** Look at the history of the field and apply the knowledge to your new field. Aviation is ahead of Medical but they can apply what Aviation has done in the past to bring Medical up to speed.

**Endsley:** Jobs around campus (TA, RA, etc) also count as jobs. Show initiative by getting a job on campus or at a local company.

**Shapiro:** Look at the history of the field and apply the knowledge to your new field. Aviation is ahead of Medical but they can apply what Aviation has done in the past to bring Medical up to speed.

**Endsley:** There are similar problems throughout industries but be careful not to push the similarities. Instead, know how these problems are unique in their field.

**I did an internship under my mother. How does that look to a future employer?**

*(Matt Rambert, New Mexico State University)*

**Endsley:** Be honest in the interview but don’t be too direct that it was under your mother.

**Shapiro:** Avoid using your mother as a reference.

**How do you find which areas you want to work in?**

*(Anna Pereira, University of California Berkeley)*

**Sethumadhavan:** Take classes to figure out what you like.

**Once I have graduated, if I have no experience should I look for an internship or a full time job?**

*(Daniel Hor, New Mexico State University)*

**Shapiro:** Slow down your progression towards graduation by getting an internship and finishing your degree later.

**Endsley:** If you can get either, take it!

**Recommendation IV: It’s not too early to start looking.**

**Sethumadhavan:** Start your job search early and identify organizations you are interested in and talk to hiring managers. If you are shy, give a talk. People will approach you to ask about your research. Be sure to follow up with these people down the road.

**Shapiro:** Don’t look for a job, have a job look for you. You can accomplish this by keeping in touch periodically with people you meet and/or offering to help while you are still in school. Use the HFES directory to meet with people and talk about careers in that field.

**Endsley:** Smaller companies can be very last minute with job postings so don’t get discouraged. Larger companies can often plan ahead.

**Audience comment:** I had a good experience cold calling through the HFES directory. I talked to multiple people and found work. People are willing to help. *(Eric Steinet, University of Denver)*

**Audience Comment:** Your school’s alumni association is another good resource to meet people and expand your network. Often they can put you in touch with hiring managers. *(Augusto Espinosa, Embry Riddle University)*

**Shapiro:** Also take advantage of your school’s placement office. Use it to practice interviews.

**Audience comment:** Start early and get advice on your resume. Ask for guidance on what skills you are missing so you can build on them. *(Ashley Sorenson, University of South Dakota)*

**Shapiro and Endsley:** We agree with Ashley’s comment. You can get feedback and they might forward your resume to others who could be interested. Plus, if it is a stellar resume they could remember your name.
Shapiro: In regards to resumes, they should have an objective but don’t put references on the bottom.

Endsley: Make sure your objective matches the company and job description.

Should we include a cover letter with our resume? If so, should we still have an objective? (Eric Steinet, University of Denver)

Shapiro: You should have both as if they were both stand alone documents. Your resume should still have an objective statement and the cover letter should be an elaboration of the objective.

Endsley: It is important they can stand on their own because electronic submissions could lead to lost documents.

Shapiro: In the cover letter, call out specific names. Reference other people’s work and state “I want to work for you because…”

Audience comment: Incorporate key words into your cover letter and resume, specifically the ones used in the job description. Often the machine filtering applications won’t pick out a resume if it doesn’t have key words. (Antoine Juhel, Embry Riddle University)

Can you start a full time job before finishing a dissertation? (Audience Question)

Shapiro: Before making this decision you should ask yourself the following questions:
  1) Will they pay you the same amount pre-graduation?
  2) Do you have the self discipline to work full time and do a dissertation?
  3) How much do you care about your dissertation?

Morgan: Another question you should consider is whether or not the company will support your dissertation work.

Endsley: I’ve seen it go both ways in the past, and in the end some finish and some don’t.

Miscellaneous Questions

How do you get clients as a consulting company of 1? (Sean, University of Colorado at Boulder)

Shapiro: Networking and cold calls.

Endsley: You can get new work based on work you have previously done.

Is it true FDA regulations are based off Military Specs? (John Tercean, California State University, Northridge)

Endsley: They are very similar. MIL-STD-1472 has been applied to other industries.

Could a company hire you at a Masters level if you have PhD? (Antoine Juhel, Embry Riddle University)

Shapiro: Sure, why not? You might make less money. If they offer you a lower level job they probably don’t view you as in the top percent. You should also ask yourself if this work will be of interest to you and whether or not it will help you improve.

White: If you know what you are interested in, it will help your job search and career.

Endsley: In 5 years, it won’t matter where you went to school.

Do you need a PhD? Is it worth it? (Scott, California State University, Northridge)

Panel: The answer to this is highly variable. Don’t just do it for the money, figure out what you want to do and see what degree is needed. Your career will not be capped off if you only have a Masters degree.

Endsley: If you are going into a strict research based discipline then the type of degree probably matters. However, if you are going into product design, the degree won’t matter as much. The
important aspect will be your ability to apply what you have learned.

Summary

Four major recommendations were provided by the panelists: (a) network, (b) post your work online, (c) use a multifaceted approach, and (d) complete an internship.

The panelists stressed the importance of creating a network and using it when searching for a job. There are many outlets a student can use to create a network including meeting people during the annual meeting, joining and volunteering for the local and student chapters, cold calling professionals using the HFES directory, and joining a technical group. Regardless of the outlet one uses to meet new people, you can strike up a conversation by asking the professional about their company, job, research, etc. However, it is also important to introduce yourself and to allow the professional to meet you. Having a good network is important when job searching because your network can pass along your name to potential employers or let you know about potential job opportunities.

Having your work posted online, in visual form, will help employers get an idea of the type of work you are interested in and are capable of doing. It is important to also include your thinking and the processes you went through during the project. If you run into restrictions due to proprietary information you can often get around the issue by posting similar images of nonproprietary products you find on the internet or by showing a picture of the old product and describing the improvements you made.

A multifaceted approach to job searching is beneficial in order to maximize your opportunities. Don’t restrict yourself to job search engines. You should also consult your network. Polish your CV and portfolio. Have both printed onto a CD-Rom for distribution. It is important to not only describe projects you have worked on but to state to which part you contributed. You should be able to talk about what you did and show how you can apply this information to projects in the future.

Finally, the panelists recommend completing an internship to gain experience. These internships, even if they are focused on a topic you are not interested in pursuing, can help you gain a skill set you can use in the future. Plus, often companies use internships as a trial period for a full time job. The best thing you can do to prepare yourself for a job after graduation is to complete at least one internship during your studies.

Acknowledgements

The author would like to thank Sandra Garrett of Clemson University and her team for organizing the Student Career Day Panel, as well as those who participated, including panelists and audience members.

HFES 55th Annual Meeting

Make plans to join us at the HFES 55th Annual Meeting in Las Vegas Sept. 19-23, 2011 at the Red Rock Hotel. The deadline for proposals is February 17, 2011. Details will be available in December on the HFES website or in the October edition of the HFES Bulletin.

Mark your calendar...

- HFES 56th Annual Meeting, Westin Boston Waterfront, Boston, Massachusetts, October 22-26, 2012
- HFES 57th Annual Meeting, Hilton San Diego Bayfront, San Diego, California, September 30-October 4, 2013
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