



Letter from the President:

Hi everyone,

Our unofficial theme for this semester seems to be *improvement*. With your efforts, we are taking advantage of opportunities to better ourselves, our organization, and the community.

Earlier this month, the Western New York chapter of HFES hosted a career roundtable webinar for students. We heard from several HF/E professionals about their advice for how to better prepare ourselves to launch a career post-grad school. We feature some of the discussion points that students found most helpful on page 2 of this newsletter.

Other developments this winter have resulted in ODU HFES strengthening ties with the local community. The inaugural meeting for the local Hampton Roads UX community was a success. In fact, a few ODU HFES members are also core contributors to UxNorfolk, which we hope will evolve into a fruitful relationship. Additionally, ODU HFES is taking steps toward using our psychology and usability knowledge to improve training and volunteering procedures at an elementary school in Norfolk's Park Place neighborhood. Through these efforts, we hope to create and reinforce connections with other local professionals as well as fine-tune some of our HF/E skills.

Articles in this newsletter provide further advice for self-improvement. An article on page 3 identifies common programming and software requirements for job applications. And finally, Alex describes some lessons she learned during her first few semesters of teaching on pages 4 and 5.

I want to thank those of you who volunteer to help with planning and executing our events and projects. We are all incredibly busy with research, classes, teaching, and everything else, but a little help goes a long way! I really am proud of all we are accomplishing.

Becca Kennedy

Save the dates:

Serious Games Webinar with Heather Lum
Wed, March 6th, 12:30 pm

April meeting and officer elections
Wed, April 10th, 12:30 pm

Spring Social at Mambo Room & Plaza del Sol
Fri, May 10th

Field trip to National Area Medical Sim Center
TBD (May or June)

2013 Virginia Student Conference
TBD (Fall semester), George Mason University

Upcoming conferences:

3/8-12 SxSW Interactive; Austin, TX

3/10-13 International Symposium on Human Factors and Ergonomics in Health Care; Baltimore, MD

3/11-14 BRiMS 2013; San Antonio, TX

4/27-5/1 ACM SIGCHI; Paris, France

5/22-24 International Conference on Naturalistic Decision Making; Marseille, France

7/9-12 UXPA Annual Conference; Washington DC

7/21-26 HCI International; Las Vegas, NV

Spring 2013 ODU HFES Officers

- Becca Kennedy:** President *rkenn014@odu.edu*
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- Alex Proaps
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Find us on Facebook (ODU Human Factors)!



Student Reactions to the HFES Career Roundtable Webinar

Becca Kennedy

On February 7th, ODU HFES members participated in an online career roundtable hosted by the Western New York chapter of HFES. The goal of this meeting was for several professionals in the Buffalo and Rochester areas to give students advice about beginning professional HF/E careers. The panelists were Stan Caplan, founder and president of Usability Associates, Dr. Esa Rantanen from Rochester Institute of Technology, Dr. Kathleen Kremer of Fisher-Price, Mark Johnson, former Safety Engineer and current Manager of Corporate Medical Services and Workers Compensation, and Dr. Michael Gerard, usability engineer contractor at IBM.

To begin the webinar, Dr. Gerard and Dr. Rantanen presented salary information and results of surveys given to HF/E employers. The surveys addressed questions about new hires, such as what skills are perceived to be most valuable? What skills are often missing? The final half hour of the webinar was reserved for student questions.

The information presented in the webinar provided an abundance of useful tips for entering the HF/E field. The panelists also provided first-hand advice to help students develop an understanding of what to realistically expect from a new career. I asked ODU HFES attendees to reflect on things they learned and send me some of their reactions to the webinar. Below are some students' responses.

"I thought it was reassuring to see that someone with a PhD in HF will earn about the same within the first year of work as someone with a Masters in some usability oriented field. However, after a few years, HF PhDs earn considerably more."

"I thought the section about what employers wish students in HF programs had learned was interesting! Rantanen and Moroney asked employers a number of questions, including questions about applicant preparedness, deal breakers and deal clenchers. They expected applicants to apply design and programming skills at least a few times a week, but writing and applying knowledge on a daily basis. They also said applicants fell below the average requirements for jobs. They also were concerned that students had a lack of creativity, problems working in disciplinary teams, and were not knowledgeable about the systems design life cycle. The number one weakness was design."

"I thought the information about how to address the portfolio question was helpful. I think it is a great way to at least have something to show and is a great way to showcase the work done in classes. The panelists suggested detailing class projects. Also, someone suggested using screen shots for websites to discuss what could be done."

"I was especially interested in the results of the survey completed by HF employers that was presented during the second set of slides. I found it very interesting that employers ranked more general skills (such as writing ability, research aptitude, presentation skills, ability to work well with others, etc...) above more applied skill sets (such as, advanced stats knowledge, computer coding, etc...). On a slightly related note, I also really took notice of employers who reported valuing basic experimental design understanding and basic mathematical/statistical knowledge for new hires."

"One of the thoughts I left the webinar with was that although it is safe to assume that a positive relationship exists between technological system development and the demand for human factors and ergonomics (HF & E) professionals, it appears that these systems are growing more quickly than the HF & E workforce is. This is good news for students whom are considering careers in HF & E, as well as for those whom are eager to create more of a demand."



Applying for jobs: Do my skills match job application requirements?

Alex Proaps

There comes a point in every doctoral student's career when he or she is ABD. This means it's time to wrap up a dissertation and think about job opportunities. Even though this is a Human Factors program, some students may be interested in UX and HCI jobs instead of academic jobs. Others might be interested in government over industry. Regardless of which path you choose, it might be overwhelming to read job postings. You might ask yourself some questions like, "What skills do I have? What skills does the company require? Do those skills match?" In some cases, your experience might not match with the requirements of a job application perfectly, so you may decide to "get smart" on those programs. This is a list of programs and software tools most commonly found in government and industry job application requirements.

Programming languages: Ruby, Java, JavaScript, HTML5, CSS

Statistical analysis: SAS, SPSS, MATLAB

For those interested in design, UX, HCI work: Adobe Creative Suite, Balsamiq, Omnigraffle, Photoshop, Fireworks, Axure, Sketchflow

Visualization and modeling tools: MATLAB, CATIA, ProEngineer, JACK, RAMSIS

Many HCI-focused positions request that applicants be Certified SOA Architects. Such a certificate can be obtained with some online training and an on-site exam offered a few times each year.

Human Factors in the News – upcoming tech

via techland.time.com

One great thing about being involved in human factors is the rapid changes taking place in technology development. Just as we're discovering new things about the human brain and human behavior, new technology hits the marketplace. Vizio recently showcased a prototype of their glasses-free 3D television. It is a 55-inch, 4K glasses-free 3D TV prototype developed with Dolby. According to Techland writers at Time magazine, it is has comfortable viewing from all angles, despite some "3D sweet spots" six feet away. Chief Technology Officer Matt McRae said it uses an "active lenticular layer to send slightly different images to each eye, just like other glasses-free technology." McRae also said Vizio's creation involves software processing, but also "trickery" in refresh rates. Stream TV Networks is also in the process of having glasses-free 3D systems built into televisions with an algorithm that converts 2D video to 3D at 4K resolutions. Time will tell if these glasses-free screens take off in home around the US – opening the doors for research.



Image via cnet.com



Lessons learned during my first semesters of teaching

Alex Proaps

This article is a summary of a lab meeting discussion we held in the REACTS lab last semester. I shared some of the lessons I learned while teaching my own course of record for one year and while taking Dr. Justice's Teaching of Psychology class.

A. Ask yourself some questions: What are my goals in the classroom? Who was your favorite teacher and why? What kind of teacher do I want to be? Bulik & Shokar (2007) conducted a faculty workshop in which they asked teachers to discuss their own teaching beliefs. Dr. Justice also asked her students to brainstorm our teaching beliefs in the Fall in her Teaching of Psychology course. It was one of the most beneficial aspects of developing our teaching portfolios. The following is a list of the prompts Bulik and Shokar (2007) used in their workshop:

1. Beliefs about the learner
 - a. What do you believe about human beings?
 - b. Their potential for growth and development?
 - c. Their ability to change or improve?
 - d. Their motivation for learning (intrinsic or extrinsic)?
 - e. The influence of nature versus nurture?
2. Beliefs about the aims of teaching.
 - a. What ought we to be accomplishing as teachers?
 - b. What does it mean to "meet student needs"?
 - c. What do you hope to accomplish as a teacher?
 - d. What is the role of distance (Web-based or video conferencing) learning?
 - e. What about assessment?
3. Beliefs About Subject Matter.
 - a. A 1994 AAMC report identified the following: "Faculty members' first goal should be to foster their students' lifelong learning by helping them to develop their learning skills." Do you agree?
 - b. To whom do you teach—to what level do you teach?
 - c. What do you believe about teaching the content of your discipline?
 - d. What is the balance between subject-specific teaching and encouraging self-directed learning?
 - e. Do content-specific evaluation methods foster lifelong learning?
4. Beliefs About the Teaching-Learning Transaction.
 - a. What do you believe is the optimum environment for learning?
 - b. What is your role in the transaction (implies two way)?
 - c. What are your beliefs about feedback?
 - d. How do you learn best?

B. Ask your students some questions: What are your goals in the classroom? Why are you here? Who was your favorite teacher and why? What kind of student do you want to be? Do you work outside of school? What is your career goal? What are some of your interests outside of school? Make it personal for them. Tell them why it's important to them. Help them create episodic memories in addition to semantic memories.

C. You're the boss (not a therapist or a friend). Ultimately, you know more about most of the topic than they do. There is no reason to worry about what they think of you. Boundaries are good, especially when you're young. Use humor to offset issues with authority.

Continued on page 5



- D. Engage.** This means valuing them. Value their input. Value their ideas. Ask for their insight. Take them seriously. Incorporate discussion into every class period, if possible. We know humans can only pay attention for short durations of time, so use that knowledge. After 10 minutes, ask questions. Make them form groups. Don't lecture nonstop for an hour or more. They won't stay engaged.
- E. Be enthusiastic. Always.** When they see your passion, it helps them stay engaged. Some days are harder than others. Some topics are not as interesting. Never let them know. Stay excited.
- F. When you don't know, say so.** Ask the class if they have any ideas. Write the question down. Answer the question next class or send out an email.
- G. Be yourself.** Tell your story. Hilton (1999) wrote:

By the end of any given semester, my introductory psychology students know a lot about my life. [...] Why do I tell them so much about my life? I do it because I want to find as many ways to connect with them as possible. I want to avoid the chasm of impersonal indifference. I want my students to think of me as a fellow human, not as some remote automaton. I want them to know that the things that we cover in the class affect me as well as them. I do it because it helps them remember. [...] One way to make sure that you do not dwell on your personal life at the expense of pedagogy is to ask whether your anecdote makes a point. If it doesn't, or if it requires a big stretch to see the point, then it is probably a mistake. But if it makes a point and provides a connection, it is well worth it" (Hilton, p. 118).

- H. Quality versus Quantity. Deep versus Wide.** There is only so much time to cover material in a semester. Each chapter would probably take 2 weeks to cover. It would take even longer if you choose to cover material above and beyond the chapter. Decide if you want to dig deeper into a handful of constructs or if you want to cover as much material as possible. This might change depending on the course. Also decide which stage in Bloom's Taxonomy of Cognitive Development you want them to achieve by the end of the semester. This stage will change as your students progress in the course.
- I. Everything is new to them.** Sometimes we forget that it's not basic knowledge. The best teachers are those that can teach complex ideas to novices. This is difficult. Don't talk over them. Don't assume they know anything. But treat them like they have something to contribute. Hilton (1999) reminds us that sometimes we forget everything is new to them.

No matter how many times you have used a demonstration, made a certain point, or told a particular anecdote, remember that it's new to them every time. You don't need to change your story just because you told the same story last year. Finally, remember that if you're happy, they're probably happy. One year after taking Monotone man's [a US history professor he disliked] class I found myself sitting in an auditorium waiting to take an exam in yet another lecture course. As I sat there, I overheard two women in front of me discussing a history professor who was, in their words, 'The best teacher they had ever had.' Full of curiosity, I asked them who the professor was. Imagine my surprise when they named Monotone himself. When we then compared notes we discovered that we had all been in the same class but clearly we had very different experiences. Keep in mind, your mileage may vary (Hilton, p. 120).

- J. Be flexible. But not too flexible.** Plan the best you can, but don't plan to stick with that plan 100%. Sometimes the best lectures weren't the lectures, but the discussions. Get student feedback. Change your syllabus if you need to change it (within reason). At the same time, stay in *control* and stay organized.

References:

- Bulik, R.J. & Shokar, G.S. (2007) "Coming About!"—A faculty workshop on teaching beliefs. *Teaching and Learning in Medicine*, 19(2), 168–173.
- Hilton, J.L. (1999). Teaching large classes. *APS Observer*, 115-120.