

A Summary of the 1999 HFES Career Panel

“Preparing for your Professional Career: What Every Student Should Know”¹

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This paper is a brief summary of a panel discussion that took place at the 43rd Annual Meeting of the Human Factors and Ergonomics Society in Houston, Texas. The panel included Ronald G. Shapiro (Chair), IBM; Anthony D. Andre (Co-Chair), Interface Analysis Associates; Aaron E. Sklar, IDEO Product Development; Sabina M. Alteras-Webb, University of Connecticut; and Jennifer McGovern Narkevicius, ARINC, Inc.

General advice

The purpose of this panel was to address common concerns and questions that students in the field of Human Factors and Ergonomics face when preparing for a career. The single suggestion that came up most often was the need to diversify your education. This means pursuing knowledge outside of your field in domains such as computer science, mechanical engineering, and business. By taking some courses outside of your major, you enable yourself to not only understand what an engineer or programmer is saying, but to be understood as well. Furthermore, a broad background offers you the tools to explore several different fields without limiting yourself to one. This gives you incredible job flexibility.

Another suggestion was to find a mentor in the human factors field whose opinion you value. A mentor can be anyone with more experience than you who is willing to share his or her knowledge and give you advice. Mentors can be faculty members, co-workers, professors, managers, and anyone else who offers you guidance in your professional development. A mentor can even be a person you have never met before; an email sent to the author of a book you found fascinating, or a researcher whose work you admire, will often result in an enthusiastic reply. Most people enjoy talking about their work and are flattered when somebody expresses an interest in them. Likewise, most people are more than willing to give advice; all you have to do is ask.

Finally, students were advised to learn how to communicate to clients. The notion that a great idea is worthless if you can't explain it to someone was best summarized by Andre's statement, "It's not what you know, it's what you communicate." This is true regardless of whether you work in academia or industry. The ability to express your thoughts eloquently as well as effectively is one of the most important skills you can learn. Along the same lines is Shapiro's advice: Learn how to sell. Indeed, the art of persuasion can be a valuable tool when applying for everything from grants to jobs. The successful graduate will know what their strengths are as well as how to market them.

To PhD or not to PhD?

Ultimately, there is no right or wrong answer to this choice. There are, however, many factors that come into play when deciding which path is right for you. Although the general belief is that a PhD can command a greater salary than somebody with a Master's degree, this is not always the case. An MS student who gets out of graduate school in two years and starts earning (and investing) money right away may be better off financially than a doctoral student who graduates in five years and earns a slightly higher starting salary. On the other hand, the doctoral student may start out at a considerably higher salary upon graduating, depending on the field. Other considerations include tuition and/or stipends. Can you live on a doctoral student's stipend for five years? Or does it make more sense to pay the tuition out-of-pocket for a Masters program that only lasts two years? One option is to work for a company that will pay for your higher education. When making these decisions, it is important to think of your long-term professional goals. While it may be tempting to take the shorter route now, will this hinder your chances of achieving a future position?

One suggestion to aid in the decision process is to look at people whom you admire or who hold your dream job. What degrees do they hold? How did they get to their present position? In what field was their degree? In some cases, it might actually be advantageous to get a second MS in a different field rather than a PhD. You should also consider your personal goals. Will you be happy with an MS, or have you always wanted the prestige of having the 'Dr.' before your name?

Do I have to do usability testing?

Usability testing is a common starting point for the recent graduate. But is it the only portal of entry into the field of human factors? No. One thing to keep in mind is that job descriptions are often out-dated, inaccurate, or just plain incomprehensible. It is unfortunate, but companies looking to hire often advertise for a *job position* instead of advertising for *people*. The difference

¹ This paper presents a composite point of view from all authors. Thus, viewpoints expressed may not be those of all of the authors and do not necessarily represent the viewpoint of their employers.

is that a job description is usually either too strict or too vague to accurately portray what the company needs and ultimately falls on generalized job titles. A good employee will recognize what needs to be done and use their professional skills to solve the problem. In other words, don't be misled by the 'usability' job title; it may encompass more than you think.

Another point to consider is that a good company will help you grow into a position that is right for you. Upon demonstrating that you have sufficiently diverse skills as a usability engineer, a good manager will help you move up in the company and place you on projects that best suit your talents. Along these same lines, it is important for you to communicate where you would like to be in five or ten years so that they can help you achieve your goals.

Keep in mind that human factors and usability positions should be part of the whole developmental process. If the job seems separate from the rest of the developmental team, then perhaps you should seek out a more integrated position elsewhere.

Balancing diversity and specialization

Given that a diverse background is desirable, where does specialization fit in? One suggestion is to specialize in 'the big picture' rather than specific products. For instance, instead of being pigeon-holed as a keyboard guru or website designer, try to hone the research and usability skills that allow you to switch easily from keyboards to computer screens to washing machines to shopping carts. This will make you more marketable as well as more efficient in your projects.

In terms of education, go broad. Audit some extra classes to build your diversity. Once you are exposed to a variety of fields, you can research specific disciplines that you find interesting on your own. Remember to consider as many skills as possible when rounding out your professional toolkit. After all, you may find yourself in a position where your job is not to *build* a product, but rather to *break* it.

Established firms vs. small businesses

The decision to work for an established firm versus a small business is a highly personal one that depends on the individual. If you are looking for a comfortable, relatively safe atmosphere where there will be plenty of mentors to help you grow within the company, then an established firm might be for you. On the other hand, some people prefer the faster-paced environment of a small business or start-up company. Of course, smaller companies are often more risky for recent graduates because there are fewer opportunities for mentoring and the new employee is often left to work on projects alone.

Consulting firms are a good choice for somebody who has been out of school for a few years and wants to diversify their background. As a consultant within a

firm, your job can change from month to month, and you can often pick your projects. If you are a recent graduate who wants to go into consulting but doesn't have enough experience yet, take heart. A good rule of thumb is that you will be most marketable 3-5 years after your first job. You might want to spend the next few years building your resume and polishing your skills before knocking on the door of a consulting firm.

No matter what decision you make, be sure to ask the company *where* in the developmental process human factors is placed. Would your job be in the design phase, or would your work come too late to make a difference in the product. Ask the company what they have accomplished over the last 5 products. Has their developmental process improved through the application of human factors, or do they use it more as an afterthought?

The international workplace

As the world is brought closer together through the Internet and other communication tools, we can expect to see more overlap of international human factors communities. One way to experience this first hand is to take an internship overseas. This type of experience is invaluable for learning how businesses are run in other countries as well as for improving your professional diversity. Working in another country (or simply being a member of an international team) will give you a unique perspective on how to develop a product that meets the needs of people from widely differing backgrounds.

Another way to experience the international workplace is to join a large company that has branches in other countries. Oftentimes they will pay your relocation costs and help provide a smooth transition to your new home.

Conclusion

Entering the workplace is an exciting time for a recent graduate. One of the best ways to make yourself more marketable is to diversify your educational background and develop skills outside of your area of expertise. When applying for positions, stress your uniqueness and what you can do for the company. At the same time, assess how the position could help you grow professionally. If the job you want is not available, contact people at companies that spark your interest (the HFES directory comes in very handy here!) An informational interview with a fellow HFES member could be just the stepping-stone you need to get your foot in the door.

Once you find a position, try to take as much away from the job as you put in. Learn new skills and diversify your toolkit. Most importantly, don't get discouraged if your first job isn't your dream job. Chances are, you will have the opportunity to grow and evolve within your position once you become familiar with the company.