[1]How do you make the student to professional transition?

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This article is a summary of the "Transitioning from Student to Professional: What's in Your Future" and "To Ph.D. or not to Ph.D.? That is the Question" panel presentations conducted at the 42nd Annual Meeting of the Human Factors and Ergonomics Society Conference in Chicago, IL, 1998. Participants for the panels included: Anthony D. Andre (Interface Analysis Assoc.), Eugenie Bertus (IBM Corp), Megan Brown (Thomson Consumer Electronics), Nancy J. Cooke (New Mexico State University), Melroy E. D'Souza (Gateway 2000), F. Thomas Eggemeier (University of Dayton), D. Kristen Gilbert (University of Montevallo), Dieter W. Jahns (SynerTech Association), Arnold M. Lund (US West Advanced Technologies), Ronald G. Shapiro (IBM), Victoria S. Schoenfeld (Old Dominion University), and Douglas A. Wiegmann (National Transportation Safety Board).

General Tips for Making the Transition

While you are in school you need to learn to think and gather specific domain knowledge necessary to succeed in industry. It is also advisable to prepare to transition from an academic to an industrial environment. Good planning and preparation throughout your graduate career normally facilitates this transition.

Preparing a Plan

The best place to begin is to draw up a rough plan on paper describing what you want to do for the next 5-10 years to see what skills you need to meet your goals. When creating your plan here are some questions to consider: what would like to do, what skills do you currently have, what skills do you want to develop, where do you see yourself professionally in the future, what type of work do you like (e.g., research, teaching, product design)? When developing your plan it is not necessary to have a single focus (e.g., academia vs. industry). Many people in government and industry teach as adjunct faculty, while academicians often provide consulting services in addition to their university appointment.

Making Contacts

While planning your future, there are a variety of resources at your disposal. You can get information and make contacts at conferences, especially technical group business meetings. Not only do you want to make contacts you also want to establish relationships that will help you reach your future goals. The Internet also has a wealth of information, just make sure the source is reliable.

Increasing Business Knowledge

Another option to aid you in developing your plan is to gain business knowledge by attending a few classes in your university's business department. General classes on management, marketing, information development, economics or product development are some of the available options. This knowledge will help you understand your customers and how businesses requirements influence product development. It is also beneficial to gain industry specific knowledge, especially if you are entering an industry with a rich history (e.g., automobile manufacturing). Prior to an interview, it is useful to learn about a company's current product line, how it works, etc. This upfront research will better focus you interests and guide you in your internship or employment choices.

Looking for a Job or Internship

One of the common themes discussed by the majority of panelists was the importance of participating in an internship prior to graduation. Internships provide an opportunity to learn about a particular area, gain practical experience, apply what you have learned during your academic graduate training, develop professional relationships with individuals in the field, and more.

One place to begin is to use the Internet to scan job listings for necessary skills and job areas. Some available sites are: the HFES job site (http://hfes.org/), Association for Computing Machinery (http://www.acm.org/), Society for Technical Communication (http://www.stc-va.org/), http://www.monsterboard.com, http://www.kforce.com, http://www.headhunter.net, http://www.job-hunt.org, http://www.collegehire.com, http://www/jobbankusa.com, and http://www.careermosaic.com. Taking this a step further, it is useful to look at various company web sites to get a good idea of a company's makeup. You want to make sure to choose a field in which you are interested in working. Advisors, contacts, and the HFES placement

[1] The paper presents a composite point of view from the author and panelists. Thus, viewpoints expressed may not be those of the author and all of the panelists and do not necessarily represent the viewpoints of their employers.

service can also help you find job and internship opportunities.

When looking for an internship do not exclude companies that do not have a formal internship program. It is possible that you could develop an internship position. When evaluating various internship programs consider the length of the opportunity. The panelists recommended a six month minimum because anything less does not provide enough time to learn the specific area and develop new skills. Remember, an internship is a great way to learn about an area, as well as determine if you have an interest, before you make a formal job commitment.

Preparing for a Job or Internship Interview

The two main items to consider when preparing for a job or internship interview are practice interviews and your résumé. Completing at least three practice interviews will help you prepare for unusual questions and the interview atmosphere. Your résumé is also very important, as it is your first contact with a company. Below are four suggestions, from our panelists, to increase your chances of making it to the interview:

1. Have someone review your résumé prior to sending it to potential employers. If possible have someone in your field of interest critique it.
2. Do not assume that the strong skills you have are common to all applicants, make sure to list them all (e.g., computer skills).
3. Review the skills section of a job announcement and fine-tune the skill section of your résumé to reflect the information in the job announcement.
4. Include a personalized cover letter describing your strengths and how you would fit into the company. Including a cover letter that merely states, "résumé attached" is a waste of time.

At the Interview

Your first interview may not necessarily be face-to-face as many companies conduct phone interviews to pre-screen potential employees and interns. Do not be surprised if more than one person interviews you at one time. The following suggestions should help you prepare for your interview regardless of how it is structured. During the interview get to know the people that are interviewing you. Ask them questions like: "What do you like about your job?" "What types of challenges do you face?" etc... This could help you make that one-to-one connection with the interviewer that could help you get the job.

When listening to questions, realize that they may have multiple meanings. For example, when you are asked, "What have you done?" realize that the real question may be "What won't I have to do when you join us?" Another common question is "Do our goals match?" If you cannot answer yes to this question then the job/internship is not for you. When talking about your work and experiences use action verbs, and be prepared to provide actual examples of your work experiences and leadership skills. Try to impress upon the interviewer how your performance in the job will benefit them in the long run. It is important to remember that not only is the job interviewing you; you are interviewing the job. Not only do you want to impress your potential employers, you want to be impressed with them and excited about the job.

Now that You Have the Job what do You Do? (first day job tips)

So you have landed this great job, now what? The first thing you want to do is to not have a "first day on the job". Make sure to stay in touch with your new employer during the consideration time and before you start. If possible, stop by and get to know your future colleagues a few days (or more) before your first day. Once you are there be patient, not everything may be ready or go exactly as planned on your first day. Introduce yourself to the secretaries/staff assistants, human resources, people within your department, and the one who knows about computer systems and the network. These people are invaluable resources that will benefit you throughout your tenure.

Besides the individuals mentioned above, there are three other people you want to get to know. First is the Truthteller/Truthsayer, this person will always tell you the truth regardless of what it is. Second is the Scoopsayer. He/she will give you all the 'scoop' or gossip going around whether or not it is true. The suggestion here is not to be involved in gossiping but to be aware of what is being said because it may impact your work environment. The third person is the Feedback-giver/Mentor. This person will tell you how you are doing and give you support and guidance. All of these people can be great assets; the hard part is finding them.

Another important thing to remember about beginning a new job is that you have to earn credibility. Learning and understanding the engineering/design process is the key to initial credibility. Also, ask people "How can I be of help to you?" This shows that you are ready to work and you are a team player. Do not sit alone in your cubicle/office waiting to be told what to do.

Student Questions answered by the Panels

This section answers many of the questions graduate students ask related to all stages of the student to professional transition.

1. *When do you use academic/professional titles? (E.g., Dr., Ph.D., Major, etc.)* As graduate students, we are usually trained to call our professors Dr. and always include professional titles on any publications or written documents. This is not necessarily the case in industry; often the use of titles is situation dependent. The best way to make sure you address the people you work with appropriately is to pay attention to how they address one another. Email signatures, name plates, and phone listings are good and will usually clue you in as to how someone prefers to be addressed.

2. *Is a Ph.D. necessary?* It is usually not a requirement for obtaining an industry position. With that being said, a doctorate will provide you more benefits. You will probably start out with a larger base salary and may have better employability with a Ph.D. The possibility does exist that you could eventually receive all the benefits of a Ph.D. without obtaining one; by starting at a young age and working your way to the top of a big company. This is not a common situation but it is possible.

3. *What is important about my thesis/dissertation to a company?* Companies are most interested in the skills obtained throughout your academic career; these are not necessarily specific to the particular research you studied. If your thesis/dissertation topic fits into what the company does or is of interest to them this will only benefit you. Your thesis/dissertation topic may be more important to government jobs because the issue of funding, via grants and fellowships, is typically more important.

4. *Will you find basic and applied research in the same job?* Across the board, the panel believes that this is probably not the case. Overall, research in industry does not follow the same process as research conducted in an academic setting.

5. *What are the keys to success?* This question has countless answers. The items the panelists felt were very important are listed below.
   - Good communication skills
   - The ability to learn, quickly apply and continue obtaining new skills
   - Problem solving skills
   - Time management skills
   - Technology savvy
   - Good preparation
   - Teamwork

6. *Should you take management classes?* In general, it does not hurt to learn how businesses are run, but you can also obtain this information from sources outside of the classroom. A focus on business issues already exists within the area of human factors. This skill while appealing to the potential/current employers may result in you being moved to other areas outside of human factors.

7. *What does the job market look like?* Overall, the job market looks good, especially for people with a technical background and 3-5 years experience.

8. *What type of backgrounds do experienced HF people have?*
   One sample career path:
   - Started at Bell labs and stayed for 9 years
   - Moved to a general manager position
   - Made a geographic and job change
   - Made another job change, moved to doing work on the web
   - Worked in design and usability areas
   - Moved to management within software group
   - Back to design and usability work

9. *How do different areas in companies, generally, view HF people?* Obviously, this depends on the company and the area in which you work, but the following is generally true.
   - Marketing will probably see you as competition. Hopefully, you will be able to develop a positive working relationship with them because they have useful information about what customers want.
   - Tech. support will see you as a psychologist.
   - Engineering/Product development will initially see you as a psychologist. You can gain their respect if you have an engineering background or an understanding of the process they go through.

10. *How can you tell if your company/ organization supports your professional development?* This is not a question that you would normally bring up directly in an interview situation, but you really need to know the answer. The best people to ask about this are the newer hires. You might try asking this indirectly by asking the new hires how the company has helped them. They will be able to give you the real answers on how the following are really applied in your area.
    - Whether or not the company pays dues to professional organization is relatively unimportant.

- To get an idea about the level of support look at how the local site/manage supports your technical development.
- Find out if the company supports writing publications.
- Look for a pattern of support for continuing education or growth in general.

11. *What are some of the industry roadblocks that HF people face and how can you overcome them?* The three main roadblocks are timing, compromise, and government procedures (if applicable).
    - **Timing** issues mainly occur when HF is introduced in the development cycle; sometimes it does not come in until the end (during testing). You can turn this into a positive by using it as an opportunity to build relationships with teams and clients so that you will be brought in first/earlier next time. Another advantage of being the "last in" is that many of your suggestions can get into the product because they are fresh on everyone's mind. Try to be the one who develops the prototype. If you are one of the people prototyping and testing the tool, you have more opportunities to include usability enhancements. This will also help you gain respect from the more design/ engineering-oriented individuals in your group.
    - **Compromise** is another roadblock that people new to the field can find challenging, especially due to our academic background. You are usually required to change the way you would do things, due to time constraints, funding, or other issues. The important thing to remember is that you will still be making a positive impact. It just means that you may not be making the 'perfect' product the first time out.
    - **Government procedures:** When working in the government sector additional constraints are placed on you or your work environment. If you make sure you are knowledgeable of the procedures in advance you will be better able to handle them.

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