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## THE THREE KEY INTERVIEW QUESTIONS

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Over the course of my 30+ years in industrial Research and Development (R&D) I have recruited dozens of interns and new hires. I recruited for a global Fortune 500 consumer products company with billions of dollars in annual sales and for a small, start-up biotechnology company working off of venture capital funding. What I learned from these experiences is that the qualifications defining a successful candidate, whether an intern or a permanent employee, are the same regardless of company size, and they can be boiled down to the following three key questions:

- 1. Do you know your stuff?**
- 2. How do you solve problems?**
- 3. Will you fit?**

While there are a myriad of ways to ask these questions, and even more ways to probe with follow-ups, they basically boil down to demonstrating three key competencies: Technical competence (Question 1), Creativity and the ability to learn (Question 2) and, the ability to work well with others (Question 3).

In this article, I provide my perspective on these questions and what an employer is looking for in the answers provided by prospective candidates.

### **DO YOU KNOW YOUR STUFF? Demonstrating Technical Competence**

If you are being recruited for a job as a chemist or biologist, for example, you had better come into a job interview knowing basic chemistry or biology. It would not be at all unusual for an interviewer to ask, “How would you make a 0.1

Molar, pH 5 phosphate buffer?” Or, “how would you determine the concentration of a dye in solution?” It’s unlikely you will know the exact right answer. That’s not important. What the interviewer is looking for is whether or not you have enough basic knowledge to know how to get the right answer... and saying, “I would look it up on Google” is NOT the right answer!

Here, a little background research on the candidates’ part can be very helpful. What is the primary work of the employer? Have they published any technical papers, patents, or other information where they discuss test methods or explain how they gather data? Are they a highly technical company requiring in-depth expertise in specific areas like gene sequencing, bioinformatics, mass spectroscopy, etc., or, is their work more general requiring a broad technical background? Knowing the general technical areas where a company plays can help a prospective new hire prepare for the technical portion of the job interview.

I currently work for a company where the primary R&D focus is microbiology. When we interview candidates for R&D positions we skew our technical questions toward that discipline. If we are interviewing a microbiologist we may ask how they would go about enumerating a product claiming to contain certain types of bacteria. If we are interviewing a chemist, we may ask how they would determine the concentration of a particular analyte in a biological mixture. In neither case do we expect the candidate to know the exact right answer. What we want to see is if they can provide a

reasonably accurate technical description of how they would go about the task based on our expectation of what someone with academic training in microbiology or chemistry should know. We may follow up with more specific questions to probe the candidates' depth of knowledge in a given area or if we have doubts about basic technical competency.

For interns, the technical interview will likely be less rigorous. We understand that interns are still building their technical base and may have limited experience depending on where they are in their academic career or in the background experience they bring. When interviewing an intern, I tailor Question 1 according to their academic background. For example, for a sophomore with one year of general chemistry classes and laboratory experience, I may ask "what is the proper way to neutralize an acid?" For a candidate with two or three years of Biology classes and associated laboratories, I might ask, "What methods are commonly used for enumerating bacteria?" The point is to see if the candidate has basic technical competency commensurate with their academic training and the requirements of the job.

While some companies live and die by technical competency, in my opinion it is the least critical of the three basic competencies. If a candidate has a demonstrated ability to learn (Question #2), and is enthusiastic about learning new things, they can acquire technical competence on the job. We can teach you what you need to know.

However, those job candidates demonstrating strong technical competence in the interview process will generally have an advantage when it comes time to make a hiring decision assuming they also hit the mark on the other two questions. Which brings us to...

## **HOW DO YOU SOLVE PROBLEMS? Demonstrating Creativity and the Ability to Learn**

Employers typically start recruiting for a position by looking for people with certain skills or technical expertise. Job postings will call for applicants with training and background in defined technical fields. This is based on the employer's assessment of the skill set required for the job and is often used as a quick screen to identify candidates for further consideration. Obviously, if a job requires a specific skill, say microbiology or gene sequencing, the employer only wants to see candidates with that skill set. However, it is not unusual for employers to recruit against a general technical background even though the specific job may not require that technical background per se. This is because the employer has a history of success recruiting candidates with training in a specific field. When I worked for Procter & Gamble (P&G), we often recruited chemical engineers for positions where the primary responsibility did not require a chemical engineering degree. However, historically, P&G had great success recruiting chemical engineers into the R&D organization so the assumption was that chemical engineering training provided a good base on which a new hire could build a successful R&D career.

In my case, I was trained as a physical chemist and my first job at P&G drew on that chemistry background. But, within a few years I was managing research programs on protein engineering and biotechnology. My physical chemistry training was not particularly helpful. However, what was helpful was knowing how to get answers to technical questions, knowing who to ask when I ran into technical problems, and building a network of technical experts that I could draw on as needed. In essence, it helped knowing how to solve a problem even though I may not have specific technical training in the area. In this case, the answer “I would start by looking at what’s available on the web” is a perfectly acceptable way to begin finding solutions to problems outside your area of technical expertise.

In my current role, I am managing an R&D program in microbiology. I have no formal training in microbiology, so I read a number of textbooks to get familiar with the field. Then I went out and hired a very good microbiologist! This is an important point. Don’t be afraid to acknowledge your technical gaps. If you don’t have the knowledge, go find someone who does!

One of the ways I ask the question “How do you solve problems?” is by presenting a problem we have encountered in our work and asking the candidate how they would go about finding a solution. I am listening for two things in their answer. Does it make technical sense and is there an element of creativity? Years ago, during an interview with a freshly minted Ph.D., I described the problem we were having trying

to communicate benefits of a new technology to our marketing colleagues. She thought about it for a bit, asked some clarifying questions, and then proposed a set of simple “before-your-eyes” demos that could showcase the unique benefits of the technology. Her answer showed depth of technical thinking and creativity. She got the job.

Companies need people who can identify and then solve problems. People who have the ability to think analytically, perform under pressure, cope with complex situations, and produce workable solutions. It is almost a certainty that, at some point, in any job you will run into a problem neither you nor your employer have encountered before. Identifying the problem and knowing how to solve it is the reason you are in the job in the first place. Employers want to make sure the people they hire have critical thinking and problem-solving skills that enable them to tackle these new, unexpected challenges. This is why problem-solving questions are such an important part of any interview. In my opinion, problem-solving and critical thinking are the most important skills a new hire offers an employer followed closely by...

## **WILL YOU FIT?**

### **The Ability to Work Well with Others**

One of the best hires I ever made was a recently graduated biologist who saw our fledgling basement start-up laboratory facilities and got excited by the future possibilities, not discouraged by the current limitations. That excitement spoke volumes about his passion and energy. I knew he would be a good fit for the job. “Fit” is a



significant factor when assessing potential new hires. The ability to fit the job requirements and corporate culture is critical to their success.

What does it mean to “fit?” It’s a difficult concept to define. Fundamentally, it is the way things get done. It is the alignment between employee behavior and employer values and expectations. In the example above, I was looking for someone who could expand our internal R&D capabilities while working with a very limited budget. The job candidate was looking for a place where he could contribute immediately and leverage his technical skills to help grow the organization. It was a good fit!

In essence, for both the employer and prospective hire, the entire interview process is an attempt to determine fit. The employer is looking for fit against cultural elements like work dress, language, company history, daily work practices, and diversity. They are also making an overall assessment on less tangible elements of fit. Is this a person I want to work with? Will this person work well with the rest of the organization? The prospective hire, on the other hand, is trying to understand the company culture and determine if they will be comfortable working in that environment.

To help understand “fit” the interviewer may ask you to describe the work environment in which you are most productive. Do you prefer working alone or in teams? What management style enables your best work and effort? What are the important factors that must be present in the work environment for you to be successful? These questions are geared toward understand-

ing how you would fit within the specific corporate environment. How you answer these questions can be the deciding factor in whether or not you get an offer.

In trying to understand company culture and whether or not you would be comfortable working there, you should ask “fit” questions as well. Ask the interviewer what they enjoy the most about the company? What do they wish they could change? What is the company policy regarding flexible work hours? Is it possible to work from home? Ask those questions that are important to you when it comes to work environment. In my interview with P&G I asked about company dress. At that time, it was the norm for men to wear ties. My interviewer made it clear, that was the expectation and for years I wore a tie to work. Fortunately, over time P&G adopted a business casual dress-code that I found more comfortable.

Cultural fit matters. Employer and employee will be happier and more successful when there is a good match. When that is combined with technical competence and a demonstrated ability to learn and think critically, a prospective new hire has a very good chance of landing the job.