**Interview with IBM Manager**

According to a manager at IBM, the skill sets required of employees have changed from knowledge of just technical skills to a better-rounded set of skills:

"The engineer is no longer the one designing the motherboard, the physical design, or drawing the physical design - that is being done by somebody else. The skill sets are stepping up a level. It is no longer the nuts and bolts types of skills; what we need is more strategic, more innovative, and higher thinking individuals. The same model is true for other groups, not just engineers - HR groups and executives, for instance. Employees need more managerial skills, project managerial skills, good communication skills. It makes the person more rounded from a business point-of-view as opposed to the employee who is only trained to write code.

The manager also addressed the issue of the shift from hiring of permanent to part-time and contract employees:

"Now in the 2000s, we have changed a lot of our hiring to include contractors in jobs in which the employees would not have to be trained over and over again. They have an IBM badge, but they also have a number that tells us that they are contractors, not full-time employees. Contractors are used for test organization in our xSeries division - they are the ones who will validate the functions and write test cases. A lot of our test engineers are contractors.

"For example, a technician in my department in hardware would take care of ordering parts and equipment for testing. They would be well versed in the ordering system but they are skilled technicians and, if need be, they could do soldering. We don't need to re-train the guy, and the same person can move division to division without retraining. In the past, all were IBM employees, now outsourcing is done on a mini-scale to contractors. This is down even to the department level."
Interview with SAS Employee

A SAS employee highlighted how employees now bear the responsibility of their career trajectories:

"The key thing these days is that every individual has to manage his or her own career. The prospects of advancement have a high degree of correlation to the amount of initiative you show. The theory is that with initiative you will develop new skills using which you can do higher-value job functions. None of the managers tell you to take such-and-such a course to improve your skills or to attend such-and-such a conference - you have to take the initiative on your own and the company supports and rewards these decisions."

Interview with Former Employee of Leading IT Company in RTP

Similarly, a former employee indicated the kinds of skills necessary in the changing marketplace for IT jobs:

"American engineers would be seeing temporary, contracted positions, moving from one job to the other with no long career at one particular company. When the job market is soft (from 2000 until now) - a lot of companies wanted a lot of different programming skills and also experience (5+ years). So it isn't enough just to know a specific software program, you now need to be well versed in several different programming languages. That improves your chances of getting a job."