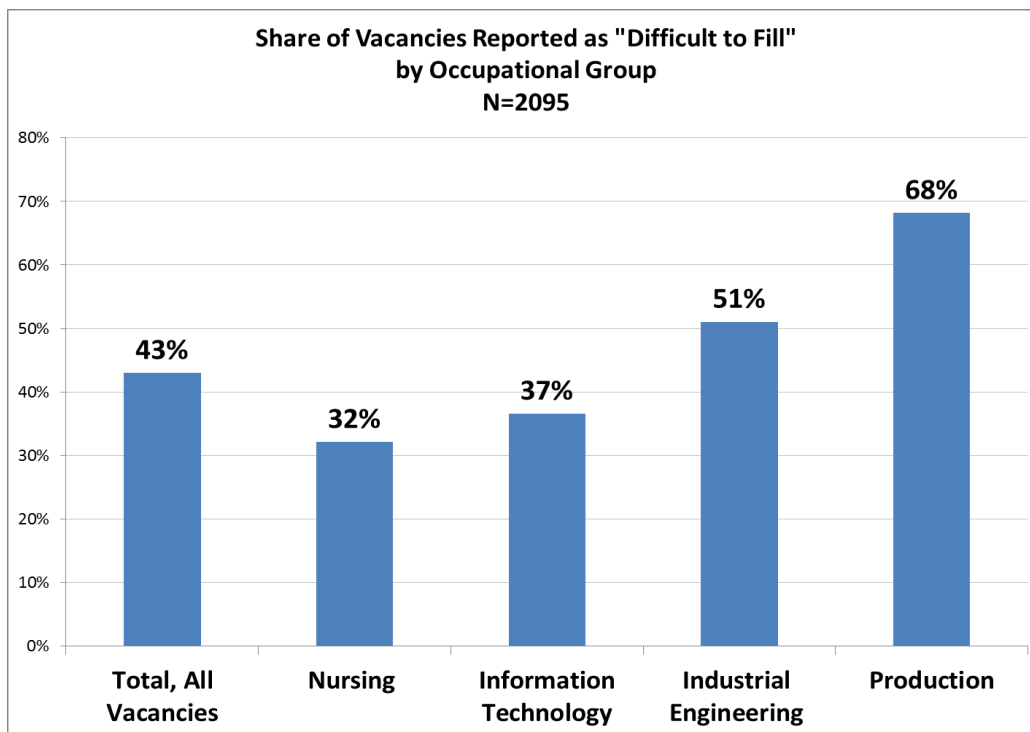


Findings on Skills Gaps in Information Technology

Our newest survey explores hiring difficulties by occupation through in-depth interviews with employers about their experience recruiting for and filling (or not filling) recently open positions. The most recent findings are for Information Technology (IT), but as Figure 1 shows results are also available for certain engineering, nursing and production occupations. Read findings for all occupations at

www.positivelyminnesota.com/Data_Publications/Publications/Hiring_Difficulties_in_Minnesota

Hiring difficulties impacted 37 percent of vacancies in IT occupations (see Figure 1). The reasons for the difficulties were fairly equally split between those due exclusively to skills deficiencies (37 percent); those due exclusively to unattractive demand or other factors (32 percent); and those due to a mix of skills deficiencies and unattractive demand (31 percent).



IT employers stated that the main supply-side problem was work experience and—importantly—the skills obtained through that experience. The following quotes from employers illustrate that point:

- “The applicant pool ... is often very small because people tend to have more of a general skill set compared to the specialized skill set that we need.”
- “It is hard to find people with Mainframe skills (older skills like COBOL that are no longer taught). Also, many people with skills aren't interested in working with older technologies.”

- “Low unemployment in the IT field creates a lot of competition, therefore—despite the huge response to the ads—we are not getting the right type of candidate. We are either getting candidates with too much experience (overqualified) or zero experience.”
- “We’re looking for someone with specific technical skills and experience in Window Installer, Install, Shield, Visual Studio, and familiarity with image editing. We haven't been able to find anyone who has all of those.”

The tendency to set very stringent qualification requirements in the IT field is mainly the result of rapid technological changes and the proliferation of technological platforms that, once adopted by a firm, must be maintained by professionals with hyper-specialized knowledge or experience (Java versus .NET, for example). As new IT graduates learn the most advanced technologies, and seasoned employees trained in “niche”—or even in technologies that are becoming obsolete—start to retire, employers face the problem of maintaining legacy systems that new graduates may not have learned, or may not be interested in working with compared to newer technological platforms. However, sometimes employers can deliberately set very stringent qualification requirements because the candidate pool is large enough that they can be particular.

While formal education is often preferred it is not generally considered absolutely necessary in IT. Fourteen percent of IT vacancies included in the survey did not require any formal education at all. Often, specific skill sets and previous work experience were much more important to the employer than the degree of formal credentials. The most common degrees employers preferred were Computer Science or Management Information Systems.

Where other issues besides skills mismatches were indicated as a challenge, the primary ones were non-competitive wages, low mobility of the workforce, and lack of interest in the nature of the work. Strategies such as making IT workplaces more attractive to women, creating incentives for seasoned employees to stay with the firm, and producing career information that advises candidates on in-demand skill sets could be effective ways of addressing some of these problems.

Survey Quick Facts for IT Occupations

- Period: Based on vacancies open during Fall of 2012
 - Response rate: 70 percent (122 establishments with 559 estimated vacancies responded to the phone survey).
 - Occupations surveyed: Software Developers (Systems software), Software Developers (Applications), Computer User Support Specialists, Computer Network Support Specialists
 -
-