# What employers need

# Students need to prepare now for a tough job market

By Dean Poeth

(Op-ed published in the Daily Gazette, Schenectady, NY on Sunday, December 5, 2010)

Recent New York graduates are facing the tightest job market in decades. With unemployment stagnant at 9.8 percent and relentless international competition due to globalization, many graduates after years of hard work are moving, not into a job, but into the ranks of the unemployed.

The good news is that as the economy begins to strengthen, businesses will need to hire again. As this happens, what will compel these companies to fill their openings with New York graduates? What can current students do now to increase the chances they will be hired when they graduate? What do employers need?

In an effort to help their children, parents and communities work hard to provide the best formal education possible. This is the right focus because, in today's competitive job market, employers expect every applicant to have mastered the basics.

The risk is in taking this to an extreme by parents abdicating the education of their children exclusively to the public schools and universities. While these institutions are vital and necessary, they are no longer sufficient to compete in an increasingly global economy.

### NOT ENOUGH

The problem is that a good formal education, by itself, is not sufficient for success. In fact, history shows that some of the greatest inventors and business leaders this country has produced had little formal education. Clearly something more is required.

Theoretical knowledge, often the primary focus of a formal education, is important but it is only a tool in the hands of a new graduate. The fact is that few real problems come neatly packaged like those in a textbook. In the real world of business, textbook-style problems are the exception, not the rule. What is needed by employers, and often missing in new graduates, is a balance between theory and practical, applied knowledge.

This is obvious. Would you want to have cardiac surgery by a doctor who knew medical theory but had never held a scalpel? Who would buy a cookbook from someone who knew food science but had never cooked?

A lack of applied, hands-on knowledge caused a problem for Chrysler's PT Cruiser when it began production. The engineers at Chrysler who designed the Cruiser did not understand how difficult it was to install an engine on a moving assembly line. The consequence of this lack of real-life, nuts-and-bolts knowledge was that, when the car went into production, the workers found it almost impossible to install the engine because there wasn't enough extra room. Production needs demanded that it take two minutes or less to install each engine, but it initially took an entire day. Weeks of hard work were required to recover from the problem.

A lack of applied knowledge can also have tragic consequences. In 1981 two walkways at the Hyatt Regency Hotel in Kansas City collapsed, killing 114 and injuring almost 200.

During the subsequent investigation it was discovered that the architect, apparently having no hands-on knowledge of how walkways were constructed, specified a component that was nearly impossible to fabricate. The architect's design had to be modified to make it practical. After all, this wasn't a theoretical problem; the contractor needed to build a real walkway for a real hotel. An error was made in the redesign that ultimately led to the collapse.

## INSTANT GRATIFICATION

The problem starts long before the student graduates from college. Today in America, most kids are no longer exposed to even the most basic hands-on skills while growing up, and as parents it's our own fault. We flood our children with toys that come ready-to-play from big-box retailers. Toys that provide instant gratification and where, in many cases, the child doesn't even need to install the batteries.

What is missing in a young person's extracurricular education is hobbies. While it is difficult for hobbies to compete with instant messaging, video games, and smartphones, they provided real educational value by introducing a young person to hands-on skills. This is important, because the school of applied knowledge is best started when young.

Building model airplanes, electronic circuits, or a coaster go-kart with a parent can help a child understand how things work together as a system and how they are made. Almost anything that can be built from scratch can make a useful project. Be prepared to become frustrated, however. Learning by doing, while having the benefit of providing gutlevel knowledge, can also be very challenging.

A good place to start is the local hobby shop. Magazines and the Internet also offer a wealth of information for a person pursuing applied knowledge. Nuts and Volts magazine (nutsvolts.com) Make magazine (makezine. com) and the website instructables.com and many others provide drawings, schematic diagrams, and instructions.

Economists tell us we are at the end of the Great Recession. The time is now for students to prepare for the anticipated improvement in the job market.

### APPLIED SKILLS

Building things with one's hands is not just fun. It rounds out a person's education by complementing theoretical knowledge with applied, hands-on knowledge and skills. It also teaches perseverance, self-confidence and nurtures what may become a lifelong passion for engineering and technology.

By complementing a formal education with applied knowledge, graduates will be in a better position to win the ultimate prize: a good job in the tightest job market New York has seen in decades.

Dean Poeth lives in Glenville and is an adjunct professor at Union Graduate College.

# http://poeth.com/

Copyright © 2010 by Dean F. Poeth. All rights reserved.