

Basic skills or professional knowledge: Which is more important?

In discussions about School-to-Work, much is made of the so-called SCANS-Skills. In his fifth report, Robert Egloff outlines exactly what these qualifications are, and what place they have in the US's emerging workforce development system.

What is SCANS?

In 1990, Secretary of Labor Bill Brock created the Secretary's Commission on Achieving Necessary Skills [SCANS]. The commission spent 12 months talking with company owners, executives, union representatives, and staff members. They did this intending to explore the general demands of the modern workplace, and to find out whether young American high school graduates can meet these demands. The result of these investigations was the so-called SCANS-Report, which describes the skills and abilities that are considered foundation skills for workplaces here in the USA.

These so-called SCANS-Skills consist of three basic, personality-oriented skills and five workplace-related abilities, which together are considered requirements for a solid work performance (see display).

Without a doubt, these foundation skills are an important basis for every form of education. Cultivation of the three basic skills in particular certainly belongs in the job description of schools. The problem here in the USA stems from the fact that (1) education is equated always with school, and (2) education is always understood to be sequential, and never parallel or dual. What this means is

that the mastering of all these SCANS-Skills is delegated to the schools, which by now are used to being responsible for everything, and so consequently guilty for whatever goes wrong. This leads then to schools offering so-called „Workforce Readiness“ courses, in which students are taught things which they could learn more naturally on-site in an apprenticeship situation.

The assumption held by American educators that a training phase, whether voluntary or not, must be completed before one begins something else, combined with the the fact that the integration of several learning environments (such as school and workplace) is very rare leads to two further questions: When are these foundation skills mastered?, and what level must one have reached before one is employable in the economy? The big problem facing American high schools is that community colleges and universities, the main training facilities for adults, are asked to include such preparatory programs in their catalogs. No wonder, therefore, that the statistics show that Americans on average begin their careers at age 27, after they have either gone to school or floundered around for a while on the labor market. And also not surprising, that the average age of the few American apprentices that do exist is 28.

Professional knowledge

"AMD's view is this: Although we gladly train people, of course, in our specific occupational activities, we do not really think that we should be responsible for basic education," says Ed Crump, head of the personnel department of AMD Texas. AMD, the local semiconductor manufacturer mentioned in my pervious articles, is therefore aware that it can not expect the schools to teach occupational skills. With their ground-breaking programs, the firm also has shown that it is definitely ready to contribute its part to a dual training system.

On the national level, 22 teams of industry representatives have compiled skill standards lists (see enclosed), which could be used for the occupational education of staff members and apprentices. It's just too bad that these skill standards are explicitly voluntary here, in the country of unlimited possibilities and personal freedom. This, and the fact that reaching these goals does not lead to any kind of certification, means that, at least here in Austin, nobody really gives a darn.

The wrong track

And now I find myself surprised or, to be more honest, a little annoyed by something I've come across. In a videotape published by the national office for School-to-Work (the Department of Labor), workforce development and its three elements are described in the following way:

School-to-Career
<ul style="list-style-type: none"> • rigorous education for all students • broad career exposure and preparation • pathways to Postsecondary education • mature role models for youth • a competitive workforce for the USA

including the three elements:

School-Based Learning
<ul style="list-style-type: none"> • hands-on learning, in and out of school • employers help develop curriculum • high academic standards for all • new schedules and teaching approaches

Work-Based Learning
<ul style="list-style-type: none"> • real work experience • reinforcement of academic lessons • adult mentors • introduction to life-long learning

Connecting Activities
<ul style="list-style-type: none"> • community-wide partnership • workplace and college placements • student supports • school-employer staff exchange

from: School-to-Careers: Connecting Youth to the Future
Video produced for National School-to-Work Office (202/401-6222) by AYPF and JFF

Putting aside for a moment the general school-orientedness of all of these objectives, what annoys me more than anything is the description of work-based learning. It's no wonder that organizations are not very interested in the training of young people when they have to sure that students get real work experience with a reinforcement of their academic education under an adult mentor who should foster an „introduction to life-long learning,“ whereby life-long learning in the USA means going to school your whole life long! Aren't some important things missing here, like occupational abilities, knowledge and skills?

In-house education, which includes both on-the-job training and work-accompanying courses, clearly aims to turn staff members into competent staff members. In order to be considered competent, I must (1) understand something about what I am doing, and (2)

master certain abilities and skills which would actually help me solve an occupational problem.

In a seminar on basic skills, which I attended shortly before our departure for the USA, Professor Dubs gave the following example, which illustrates the problem beautifully: "If I am going somewhere in my car, and my motor stops, a mastery of the foundation skill „problem solving“ doesn't help me much. To make the car run again, I also need to know something about cars and have the skills needed to repair them."

Basic skills are an important foundation, but you can't make it in any career without specific occupational knowledge. Obviously, this knowledge is gained the best in the proper occupational environment or, in other words, on the job. The dual system represented by apprenticeships has worked outstandingly in this area, a fact which many Americans are just about to discover again. All the more reason, then, that I am bothered when I hear how many Europeans, including the Swiss, seem to be ready to give it up.

Performance against SCANS~Skills

Foundation Skills					
Basic Skills	The ability to read, write, perform arithmetic and mathematical operation, listen and speak	3	2	1	0
Thinking Skills	The ability to think creatively, make decisions, solve problems, visualize, reason and know how to learn	3	2	1	0
Personal Qualities	Displays responsibility, self-esteem, sociability, self-management and integrity and honesty	3	2	1	0
Competencies					
Resources	Effective management of time and money to complete tasks within budget and deadline constraints. Ability to organize co-workers based on personal qualities and work requirements , and to use materials and facilities effectively.	3	2	1	0
Information	Identifying and analyzing relevant information and keeping track of it in an organized method. Includes synthesizing and using a computer to manipulate information to be communicated in the most effective format.	3	2	1	0
Interpersonal	Objectively working with others as an effective member of a team, as a trainer of new co-workers, and being able to assist customers effectively. Includes taking on a leadership role to improve existing procedures - to make some process better.	3	2	1	0
System	Understanding and manipulating a procedure to produce desired results. To measure and correct the procedure for improvement or even design a new alternative method.	3	2	1	0
Technology	Understanding and applying the most appropriate piece of equipment for the job, maintaining that equipment in good condition, and troubleshooting any problems for correctable solutions. 3	3	2	1	0
	Overall evaluation of student's performance against SCANS skills	3	2	1	0

Evaluator's comments:

The US Voluntary Skill Standards Projects

Advanced High Performance Manufacturing:

Technical Workers

Agricultural Biotechnology:

Agricultural Biotechnology Technician

Air-Conditioning, Heating and Refrigeration:

Air-conditioning, heating and refrigeration technicians in residential and commercial environments

Automobile, Autobody, and Medium/Heavy Truck:

Entry level automobile, autobody, and medium/heavy truck technicians

Bioscience:

Beginning level bioscience specialists (Standards for entry level specialists cover twenty related occupations)

Chemical Process Industries:

Entry level chemical laboratory technicians and process technical operators

Computer Aided Drafting and Design:

Computer Aided Drafting and Design (CADD) users across all industries

Electrical Construction:

Electrical Construction Worker, Electrical Line construction Worker, and Electrical Residential Construction Worker

Electronics:

Manufacturing Specialist, Administrative/Information Services Support, Pre/Post Sales

Electronics:

Entry Level electronics technicians (covers those employed within basic and applied research, product development, manufacturing, marketing, maintenance, and repair of electronic components, devices and systems)

Grocery:

Customer service/Stock Associate and Front-end Associate (encompass all entry level positions)

Hazardous Materials Management Technology:

Entry Level Hazardous Materials Management Technician (encompasses several job titles)

Health Care:

Health care core (applying to all workers in health services) and four occupational clusters: therapeutic; diagnostic; information services; and environmental services.

Heavy Highway/Construction & Environmental Remediation:

Pipe laying work, concrete work, lead remediation, and petro-chemical remediation

Hospitality and Tourism:

Front-line positions in hospitality and tourism industry. Four are from food service - server, host, cashier, and busser, and four are from lodging - front desk associates, reservationist, bellstand, and concierge.

Human Services:

Entry level human service occupations (cluster includes: case managers, job coaches, and residential support staff)

Industrial Laundry:

Production workers and Maintenance Technicians (these occupations include most of the non-degreed workers in the industry)

Metalworking:

Machining, Industrial Equipment, Tooling and Metalforming Technicians

Photonics:

Photonics Technicians (cluster includes workers in the following specialties: Defense/Public Safety/Aerospace, Medicine, Computers, Communications, Manufacturing/Test and Analysis, and Environmental/Energy/Transportation)

Printing:

Prepress/Imaging, Press, and Binding/Finishing/Distributing

Retail:

Professional Sales Associate

Welding:

Entry level Welder (a semi-skilled, production worker requiring significant supervision)