

## Close-Up #15

### Developing Employability Skills

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*Employability Skills are not job specific, but are skills which cut horizontally across all industries and vertically across all jobs from entry level to chief executive officer.*

-Sherer and Eadie 1987, p. 16

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## Introduction

Discussions of the need for educational reform and restructuring typically include concern about the gap between the skill requirements for entry-level employment and the skill levels of entry-level job applicants (Stasz 1993, p. 1).

Business and industry representatives express considerable dissatisfaction with the general level of preparedness of prospective entry-level employees (Committee for Economic Development 1985, p. 17). According to research conducted by the Secretary's Commission on Achieving Necessary Skills, "more than half our young people leave school without the knowledge or foundation required to find and hold a good job" (SCANS 1991, p. xv).

Employers' dissatisfaction with young job applicants is not primarily due to inadequate technical knowledge or skill. Wentling's observation is typical:

A review of the literature indicated that employers have no quarrel with the skills performance of today's graduates, but they do have serious reservations when it comes to their nontechnical abilities (1987b, p. 354).

Another name for these "nontechnical abilities" is *employability skills*. "Simply stated," write Buck and Barrick (1987), "employability skills are the attributes of employees, other than technical competence, that make them an asset to the employer" (p. 29). As detailed later in this report, these employability skills include reading, basic arithmetic and other *basic skills*; problem solving, decision making, and other *higher-order thinking skills*; and dependability, a positive attitude, cooperativeness, and other *affective skills and traits*.

## The Employability Skills Literature

Findings cited in this report are drawn from 63 documents pertaining to the topic of

employability skills. Of these, the research documents-41 studies, reviews, and evaluations-address questions such as:

- What skills and traits do employers value most in prospective entry-level employees?
- Why have employability skills become so important in contemporary workplaces?
- What educational practices has research shown to be effective in imparting employability skills and traits to students?

The other 22 documents are related writings-chiefly opinion pieces, curriculum guides, program descriptions, and guidelines for program development-which complement the findings in the research reports.

Subjects in the research on employer-preferred skills are business and industry representatives, usually either CEOs or personnel officers. Subjects in the research on effective practices include instructors and secondary students in both vocational and regular classrooms.

Researchers looked at a variety of classroom management and instructional practices, including indoctrinational versus democratic teaching strategies; cognitive versus experiential learning; and the effects of different kinds of teacher-student relationships, classroom structures, teacher expectations, degrees of teacher autonomy, and others.

## **Research Findings I: Employers and the Workplace**

**Employers want entry-level employees to possess an array of basic, higher-order, and affective employability skills.** (Baxter and Young 1982; Beach 1982; Buchanan 1990; Buck and Barrick 1987; Busse 1992; Carnevale, Gainer, and Meltzer 1988; Commission on Skills 1990; Committee for Economic Development 1985; Gregson and Bettis 1991; Harris and Sweet 1991; Herr and Johnson 1989; Junge, Daniels, and Karmos 1984; Kantner 1985; Lankard 1990; Lundy 1984; Nagle 1987; Neal 1983; Packer 1992; Painter 1985; Poole 1985, 1989; Rosove 1982; SCANS 1991, 1992, 1993, n.d.; Sherer and Eadie 1987; Stasz 1990, 1993; Stemmer and Smith 1992; Stevenson and Bowers 1986; Stone, et al. 1990; Van Shelhamer and Bishop 1984; Wentling 1987; and Young 1986).

The "critical employability skills" identified by these different researchers vary considerably in the way they are organized. One researcher/developer identified 76 different skills in nine categories (Poole 1985); another research group named 36 skills and traits in eight categories (SCANS 1991); and so on.

There is also, however, a great deal of agreement among the skills and traits identified. Comparisons of the employability attributes listed by the different researchers revealed those that were cited most frequently. These were then organized into the three categories of *basic skills*; *higher-order thinking skills*; and *affective skills and traits*, as shown in the display on the following page.

<b>Basic Skills</b>	<b>Higher-Order Thinking Skills</b>	<b>Affective Skills and Traits</b>
Oral communications (speaking, listening)	Problem solving	Dependability/Responsibility
Reading, esp. understanding and following instructions	Learning skills, strategies	Positive attitude toward work
Basic arithmetic	Creative, innovative thinking	Conscientiousness, punctuality, efficiency
Writing	Decision making	Interpersonal skills, cooperation, working as a team member
		Self-confidence, positive self-image
		Adaptability, flexibility
		Enthusiasm, motivation
		Self-discipline, self-management
		Appropriate dress, grooming
		Honesty, integrity
		Ability to work without supervision

Some general comments are in order about this display of findings. For one thing, while a number of employers identified the "3 R's" and various higher-cognitive abilities as critical employability skills, virtually *all* of them named affective characteristics-particularly "dependability," "responsibility" and "positive attitude toward work"-as vital. It should also be noted that, within each of the three categories, the skills and traits are arranged in descending order according to the frequency with which each was cited in the research. Finally, when respondents cited mathematics and/or oral and written communication skills as key employability skills, they often used qualifiers, e.g., *simple* arithmetic, *basic* reading, *brief* memo writing-and frequently noted that applicants need not be highly educated, but possess a solid foundation of these skills.

**Employers value these generic employability skills above specific occupational skills.**

(Baxter and Young 1982; Beach 1982; Busse 1992; Carnevale, Gainer, and Meltzer 1988; Commission on Skills 1990; Committee for Economic Development 1985; Greathouse 1986; Junge, Daniels, and Karmos 1984; Kantner 1985; Lankard 1990; Natriello 1989; Neal 1983; SCANS 1991, 1992, 1993, n.d.; and Young 1986)

This well-supported finding applies to employers in large, medium, and small companies, public and private; reflects the views of workers holding different management positions within the companies surveyed; and holds true regardless of the nature of the work in which the company is engaged. The Committee for Economic Development researchers write:

The results of this survey confirm what has long been suspected of the business community: Specific occupational skills are less crucial for entry-level employment than a generally high level of literacy, responsible attitudes toward work, the ability to communicate well, and the ability to continue to learn (1985, p. 17).

In his summary of 14 studies on the needs expressed by employers for entry-level job qualifications, Natriello writes:

The results of these studies suggest that: 1) employers place greatest importance on employee attitudes, 2) employers emphasize basic skills over job-specific skills, and 3) employers deem it important for workers to have an understanding of the

work environment (1989, p. 1).

And Young, commenting on yet another research effort, says:

The three studies...yielded remarkably consistent results on the question of those competencies most needed by employees. The three studies... emphasized the need for employees to have social skills, positive attitudes about work, and basic skills of communication....Specialized or highly technical skills were not stressed in the three studies but were, in fact, usually de-emphasized (1986, p. 246).

**Employers find far too many entry-level job applicants deficient in employability skills, and want the public schools to place more emphasis on developing these skills.** (Baxter and Young 1982; Beach 1982; Byrne, Constant, and Moore 1992; Charner 1988; Commission on Skills 1990; Committee for Economic Development 1985; Gregson 1992; Gregson and Bettis 1991; Kazis 1993; Packer 1992; Painter 1985; Poole 1985; Sherer and Eadie 1987; and Wentling 1987)

**Valuing employability skills-to the point of assigning them an even higher priority than job-specific technical skills-employers are understandably distressed to find so many entry-level job applicants lacking these skills.** Charner (1988) identified and catalogued the reasons given by employers for not hiring young people for entry-level jobs, including:

- Low grades and low levels of academic accomplishments
- Poor attitudes, lack of self-confidence
- Lack of goals, poorly motivated
- Lack of enthusiasm, lack of drive, little evidence of leadership potential
- Lack of preparation for the interview
- Excessive interest in security and benefits, unrealistic salary demands and expectations
- Inadequate preparation for type of work, inappropriate background
- Lack of extracurricular activities
- Inadequate basic skills (reading, writing, math) (p. 30).

Many employers focused specifically on the insufficiency of affective employability skills. The Commission on the Skills of the American Workforce researchers report:

Our research did reveal a wide range of concerns covered under the blanket term of "skills." While businesses everywhere complained about the quality of their applicants, few talked about the kinds of skills acquired in school. The primary concern of more than 80 percent of employers was finding workers with a good work ethic and appropriate social behavior: reliable, a good attitude, a pleasant appearance, a good personality (p. 3).

One can easily see that employability skills are not merely attributes that employers *desire* in prospective employees; rather, many employers now *require* applicants to have these skills in order to be seriously considered for employment. And if employers hire applicants and then find them to lack these skills? Gregson and Bettis write:

...employers discharge, or fail to promote, most employees because of behaviors reflecting an inadequate work value or attitude rather than because of a deficiency in job skills or technical knowledge (1991, p. 2).

Herr and Johnson, after presenting a typical list of general employability or "work context" skills, note that, "Studies show that these are at the heart of work adjustment, job satisfaction, and work satisfaction; low levels are the core reasons that workers are discharged" (1989, p. 17).

And Beach (1982) cites research indicating that fully 87 percent of persons losing their jobs or

failing to be promoted were found to have "improper work habits and attitudes rather than insufficient job skills or knowledge" (1982, p. 69).

Employers expect to train new employees in company-specific procedures and to acquaint them with the behavioral norms, standards, and expectations of their workplace. They often provide training in job-specific technical skills as well. But they are emphatic in their conviction that the schools should take most of the responsibility for equipping young people with general employability skills.

Following their review of over 100 studies undertaken to identify the characteristics and skills desired by contemporary employers, Sherer and Eadie conclude, "It is very important...that the schools provide the basic employability skills so that all students and adults are equipped to handle the complexities of their jobs throughout their lives" (1987, p. 16). Focusing on a specific vocational area, Lundy's (1984) research leads to a reminder about the school's role:

Industrial education teachers in the secondary schools must not forget that there is a great need for preparing young people in their respective classes with good work habits. Students need to be taught such things as honesty, punctuality, regular attendance, productivity, and conscientiousness (p. 23).

Be that as it may, many researchers, as previously noted, have found that "employers do not think that the schools are doing a good job of developing these much-needed abilities" (Committee for Economic Development 1985, p. 17).

**The demand for basic, higher-order, and affective employability skills reflects profound changes in the American workplace.** (Bailey 1990; Berryman 1988, 1989; Busse 1992; Committee for Economic Development 1985; Lankard 1990; Packer 1992; SCANS 1991)

"The World Has Changed," write authors of the 1991 SCANS report, as they address the evolution of the American workplace and its requirements. Making reference to the days when "a strong back, the willingness to work, and a high school diploma were all that was needed to make a start" (p.1), Commission members contrast this with the "high performance workplace" that is becoming more and more common.

Instead of work that is "routinized, repetitive, and organized along hierarchical lines," this modern workplace requires different kinds of tasks, approaches, and employees:

In this new environment, work is problem-oriented, flexible, and organized in teams; labor is not a cost but an investment. Most important, the high-performance organization recognizes that producing a defective product costs more than producing a high-quality one. The solution: design quality into the product development process itself, particularly by enabling workers to make on-the-spot decisions (pp. 3-4).

As Busse (1992) and many others observe, changes in the American workplace have been inspired to a great extent by foreign-and particularly Japanese-competition. In today's "global marketplace," many U.S. business and industry leaders have realized that remaining internationally competitive requires structuring the work environment in ways patterned on the approaches taken by foreign competitors-the use of "quality circles," for example, and lines of communication which allow workers to speak directly with upper management representatives.\* Describing companies that have modeled themselves after foreign competitors, Packer (1992) observes:

These businesses use all of their workers' skills to relentlessly pursue excellence, product quality, and customer satisfaction. They combine technology and people in new ways, moving decisions closer to the front lines, and drawing more fully on the abilities of all workers (p. 29).

The advent of sophisticated technology itself has revolutionized the workplace and its skill requirements. For one thing, many kinds of routinized, repetitive work have been completely eliminated (Lankard 1990). For another, the factory employees and office workers of today must be able to perform increasingly more sophisticated operations, such as operating computers and analyzing data (Bailey 1990; Berryman 1988, 1989; Busse 1992). Identifying the skills employees need in order to be equal to these demands, Lankard's comments are typical of the workplace research:

Entry-level workers need to be able to operate independently, using problem-solving and decision-making skills. The need for worker collaboration and teamwork requires employees to be creative, flexible, and possess good interpersonal and managerial skills (p. 1).

The reference to interpersonal skills points to yet another reason for the changes in employability skill needs of today's workplace: the increasingly multicultural nature of the workforce. The U.S. Department of Labor projects that by the year 2000, three-quarters of workers will be women and/or minorities and/or immigrants. "Good interpersonal skills," writes Lankard, "are more in demand the more multicultural the workforce becomes."

**Failure to equip young people with employability skills has far-reaching consequences.** (Bhaerman and Spill 1988; Byrne, Constant, and Moore 1992; Commission on Skills 1990; Kazis and Barton 1993; Rosove 1982; Wentling 1987)

A final reason for the increased interest in equipping young people with basic, higher-order, and affective skills is the growing awareness of what happens when great numbers of people lack these qualifications. "America may have the worst school-to-work transition system of any advanced industrial country" (p. 4), write the Commission on the Skills of the American Workforce researchers, commenting on our nation's failure to provide young people a solid foundation of employability skills. Following are the words of other observers regarding this failure and its consequences:

- We must remember that employment and employability are not the same thing. Being employed means having a job. For a youth or adult who is not adequately prepared, having a job is likely to be a temporary condition. Being employable means possessing qualities needed to maintain employment and progress in the workplace (Bhaerman and Spill 1988, pp. 42-43).
- For most of our young people, the United States has a more or less do-it-yourself system for making the transition from school to work....what they learned in school is not adequately related to what they need to know to succeed after leaving school (Byrne, Constant, and Moore 1992, p. 23).
- The socioeconomically disadvantaged young-whether white, black, Hispanic, male or female-face almost impenetrable employability barriers (Wentling 1987, p. 353).
- The employment picture for black and Hispanic young Americans who do not continue to college is horrible-and it worsened in the 1980s...According to 1990 data, only 29 percent of black high school dropouts between the ages of 16 and 24 are working at any job...and only a little more than half of all black youths with high school diplomas are employed (Kazis and Barton 1993, p. 3).
- Roughly one-third of all high school graduates, and somewhat more high school dropouts, fail to find stable employment by the time they are thirty...For this group, the rather casual American system does not work well (Economist Paul Osterman, quoted in Kazis and Barton 1993).
- Work-related failure or even unsatisfactory work experience can have serious negative repercussions for the well-being of those unfortunate enough to experience it (Rosove 1982, p. 114).

Some writers have gone on to argue that providing young people with qualifications for employability is, among other things, an ethical responsibility. "This is not just an economic issue," write Bhaerman and Spill (1988); "it is one of equity and fairness." They continue:

Think about employability skill development as one of the civil rights issues....Those responsible for programs in this area have a moral obligation to provide the most complete education and training possible for students and clients (pp. 43-44).

In like fashion, Rosove (1982) writes:

Work is of central importance to the well-being of people in our society. We take a large part of our identification from it and thus it forms a significant part of our self-concept....There is a strong ethical and practical imperative facing all of us who help prepare people for the labor market: to ensure that our clients or students are well-prepared to enter working situations (p. 114).

## Research Findings II: Effective Practices

The research on the effectiveness of different approaches to teaching employability skills generally does not compare entire program structures to one another. That is, researchers do not typically compare the relative effectiveness of, say, cooperative work experience programs and school-based businesses in terms of their power to instill employability skills in their participants.

Recent employability skills research is no longer even concerned with comparing the effectiveness of school-based instruction and learning with that of workplace-based learning, since previous research has shown that both can be effective or ineffective, depending upon how they are structured and managed (Bhaerman and Spill 1988; Stasz, et al. 1993). Nor have researchers set up studies comparing the relative effectiveness of vocational programs and regular academic programs in terms of their ability to build students' employability skills. As noted in the RAND policy brief, "Teaching Generic Skills for the Workplace":

If policymakers focus on the use of an effective instructional model, regardless of setting, they can leave open more options for improving instruction for all students in many different types of programs (1993, p. 1).

What contemporary researchers *have* concerned themselves with is identifying the *practices* in operation in successful programs, regardless of program type or setting. Having identified effective practices (and, for that matter, ineffective ones), they are then able to make research-based recommendations to program developers, supervisors, and teachers about elements to include in (or delete from) their instructional designs.

Some of the research is observational: Researchers may identify teachers whose students exhibit high levels of employability skills and teachers whose students are less equipped with these skills. Then they conduct observations of those teachers' classes, noting differences in instructional content, teaching approach, classroom design, etc.

Other studies are experimental: A control group of students receives no employability skills instruction, an experimental group hears a series of lectures on employability skills, and another experimental group is exposed to employability skills via an interactive, experiential approach. The acquisition of employability skills by students in the three groups (as determined by rating instrument, teacher judgment, workplace supervisor, or other means) is then compared.

**Employability skills are best learned when they are included among instructional goals and explicitly taught.** (Graham, Vitale, and Schenk 1991; Lankard 1990; Meyer and Newman

1988; VEW 1993; Spill and Tracy 1982; and Stasz, et al. 1990, 1993)

This assertion may seem obvious. However, there continue to be many vocational and "regular" program teachers and administrators who believe that students will pick up these skills and abilities incidentally in the course of growing up and being in the public schools. The research conducted with employers and reported above makes it clear that this is not the case.

Others believe that some capabilities-particularly critical and creative thinking and affective traits such as a positive attitude and a cooperative manner-are qualities that people either have or don't have. In other words, they do not see these qualities as teachable.

Research, however, shows that these **employability skills and traits are very amenable to being taught**. (Buck and Barrick 1987; Carnevale, Gainer, and Meltzer 1988; Foster, Engels, and Wilson 1986; Greathouse 1986; Gregson 1992; Gregson and Bettis 1991; Gregson and Trawinski 1991; Herr and Johnson 1989; Meyer and Newman 1988; Stasz, et al. 1990, 1993; and Stone, et al. 1990). After discussing the "bad news" that employers find entry-level job applicants deficient in employability skills, Buck and Barrick state that "the good news is that employability skills can be taught, both directly and indirectly" (1987, p. 29), and proceed to offer research-based suggestions for imparting them to students. Following their analysis of employability skills research, Herr and Johnson conclude that:

The skills related to general employability can be learned; therefore, all of them are appropriate and important targets for professional interventions (1989, p. 26).

In addition, researchers have found that employability skills are most likely to be taught and learned when acquisition of them is explicitly stated along with other program goals. For one thing, doing so keeps the attention of instructors focused on activities to build these skills. For another, it places employability skill development on the same level as academic and technical skills, thereby communicating to students that they are important and need to be learned.

Employability skills, then, can be taught and are important to teach. The findings that follow clarify how these skills can best be taught and learned.

**Democratic instructional approaches are superior to indoctrinational approaches for imparting employability skills to students and workers.** (Gregson 1992; Gregson and Bettis 1991; Gregson and Trawinski 1991; Stasz, et al. 1990, 1993)

One line of inquiry in the employability skills research compares "indoctrinational" and "democratic" instruction in terms of their effectiveness in developing students' work values and attitudes. Democratic approaches are said to:

...raise student consciousness about values, attitudes, and worker responsibilities....pedagogical strategies such as role playing/simulation, problem solving, and group discussion are democratic in nature because they encourage students to explore their attitudes and do not advocate one particular outcome (Gregson 1992, p. 63).

Indoctrinational instruction, meanwhile, is described as:

...a process by which students are given information in such a manner that they are discouraged or prevented from questioning its validity [and] includes pedagogical strategies that minimize student input (p. 63).

Lectures and the use of reward structures are among the strategies considered to be indoctrinational.

Comparison of teachers who are successful in inculcating affective employability skills in their



students with those who are less successful or unsuccessful reveals that the successful teachers rely much more on democratic strategies and much less on indoctrinational ones.

Despite this finding, Gregson and his colleagues also found that "vocational education instructors frequently use indoctrinational pedagogical strategies to teach work values and attitudes" (Gregson and Trawinski 1991, p. 7) and that lecture, in particular, is "one of the most overused and misused pedagogical strategies [and has] not only...been criticized for being exploitative, but it has also been attacked for ineffectiveness" (Gregson 1992, p. 67).

**In school settings, employability skills are best learned when classrooms replicate key features of real work settings and student tasks approximate those performed by workers in those settings.** (Berryman 1990, 1991; Graham, Vitale, and Schenk 1991; Gregson and Bettis 1991; Junge, Daniels, and Karmos 1984; Meyer and Newman 1988; VEW 1993; SCANS 1991; Spill and Tracy 1982; and Stasz, et al. 1990, 1993)

This finding validates what is already well known about teaching vocation-specific technical skills-that active, hands-on learning in actual or simulated work environments is far more effective than isolated, decontextualized learning. Yet, in her compilation of "mistakes we persistently make in education and training," Sue Berryman notes that:

Too often knowledge and skills are taught in settings that do not reproduce the settings in which the work must be performed. This teaching out of context impedes the transfer of training to settings outside the training context (1990, p. 6).

Gregson and Bettis, focusing on affective skill development, found that, in successful classes, "instructors attempted to teach work values and attitudes in a context similar to what students would experience in the world of work" (1991, p. 19). Junge, Daniels, and Karmos (1984) make a similar point regarding the acquisition of work-applicable basic skills:

Teaching is more than telling, and learning is more than acquiring and demonstrating mastery of facts. To ensure the transfer of basic skills into the workplace, teachers must engage students as active participants in the learning process. Prospective employers will expect them to be active participants in the workplace (p. 145).

The conclusions drawn by Stasz, et al. (1993) provide some clues as to why active and "situated" learning proves most effective:

It appears that generic skills and work-related attitudes can best be taught in classrooms and programs that blur the traditional distinctions between learning in school and out of school.... This approach requires teachers to...create classrooms where students can acquire and apply knowledge and skills to real-world problems, learn to work with others in a community of learner-practitioners, and develop intrinsic motivation for learning and working (p. 56).

**A key feature of classes that successfully teach employability skills is that instructors hold and communicate high expectations for the learning and behavior of their students-whether or not the overall culture of the school holds high expectations for them.** (Lankard 1990; VEW 1993; and Stasz, et al. 1990, 1993)

The general educational research shows that holding and communicating high expectations for students' learning and deportment are critical features of effective schooling (Cotton 1989). Unfortunately, in some secondary school settings, vocational classes are treated as low-ability tracks and/or repositories for troublesome students. Since research also shows that low expectations are frequently communicated to students in lower tracks (Oakes 1986a, b), students in vocational programs are oftentimes given negative messages about their capacity to

learn and conduct themselves appropriately.

Those teachers-in vocational and other programs-who do hold and communicate high expectations for their students generally find those students to be quite responsive. If, in creating a workplace-like learning environment, they communicate employer-like expectations for basic skill application, punctuality, dependability, thoroughness, decision-making capability, cooperation, and so on, students have opportunities to practice and perfect these skills and traits. This, in turn, enhances the desirable employability qualities of skill-related self-confidence and general self-esteem.

This pattern has been found consistently in high-expectation vocational classrooms, even within schools which, as a whole, do not hold high expectations for vocational students. Conversely, note Stasz, et al. (1993):

When teachers do not hold high positive expectations for student performance and behavior, they do not design and conduct the kinds of rich and challenging classrooms that can foster the learning of generic skills and attitudes (p. xxii).

**In classes that effectively teach employability skills, instructors assume the role of facilitators and coaches rather than lecturers and order givers, requiring students to take much of the responsibility for their own learning.** (Graham, Vitale, and Schenk 1991; Gregson 1992; Nagle 1987; Spill and Tracy 1982; and Stasz, et al. 1990, 1993)

Closely related to the design of realistic learning settings and tasks is the practice effective teachers pursue of relating to their students the ways that supervisors in high-performance workplaces relate to those they supervise. With the instructor functioning as a guide and "expert practitioner," the student engages in group problem solving and decision making with others on his or her team while working on a group project, generating hypotheses, testing ideas, and deriving generalizations (Gregson 1992). In successful classes observed by the RAND researchers:

Typically, teachers moved from group to group monitoring progress and offering limited assistance, instruction, or motivation, much as an "expert consultant" might, but less aggressively (1993, p. 2).

"All students," write Stasz, et al., "need to acquire not only knowledge and skills but also a positive perspective on learning that includes their own responsibility for it" (1993, p. 56).

In another kind of learning activity, students may be given certain situational factors which might be present in a workplace setting, and then, with input and guidance from the instructor, engage in role-playing to resolve the situation or make recommendations regarding it. These simulations, notes Gregson (1992):

...have been shown to be effective in developing good work attitudes and work habits in students...even those students who observe role-playing sometimes experience attitude changes or confirmations (p. 66).

Meanwhile, "lecturing and didactic instruction [are] minimized" (Stasz 1990, p. 52). A demonstrably ineffective approach, lecture "does not have the motivational power that role playing does" (Gregson 1992, p. 67).

**In classes whose participants acquire a high level of employability skills, learning is individualized-determined by students' learning needs and styles-rather than being regulated by textbooks or rigid lesson plans.** (Greathouse 1986; Spill and Tracy 1982; Stasz, et al. 1990, 1993; VEW 1993)

Studies reveal that the instructional content and strategies observed in the classrooms of

successful teachers are not textbook- or schedule-driven; rather, they are provided in response to each unique situation and are based on teachers' understanding of the ways their different students take in and process information. As is often the case in actual work settings, students acquire skills on an as-needed basis. Commenting on the instructional style of effective teachers, the RAND policy brief notes that:

Instruction was offered opportunistically, in response to immediate and specific student needs...The teachers asked students to articulate their learning, i.e., to verbalize their perceptions or conclusions about their own performance (1993, p. 2).

**Teachers are most successful when they have considerable autonomy in establishing curriculum, classroom design, and instructional approach.** (Spill and Tracy 1982; and Stasz, et al. 1990, 1993)

The research on professional teaching conditions reveals an interesting irony: The autonomy and freedom to innovate that characterized the approach of successful teachers was often due to a kind of benign neglect of vocational classes from the administration of their schools. For example:

Autonomy appeared to contribute to the instructor's ability to design classrooms that worked....vocational teachers were given more autonomy because the administration considered them outside the school mainstream (RAND 1993, p. 2).

The researchers who identified these circumstances (Stasz, et al. 1993) elaborate on this point:

This freedom to innovate...was more a by-product of other school policies than a belief that teacher autonomy would lead to improved instruction. [Many of the successful teachers'] courses were not prerequisites for any others.... School administrators paid little attention to these vocational classes... The policies that influence autonomy have to do with course prerequisite requirements, graduation requirements, and credit standards set by the state college and university system. If teachers don't teach college-prep courses, these policies don't constrain what they teach and how they teach it (p. 125).

These researchers advocate that teachers in general should be consciously and deliberately given autonomy to structure their classes in ways that support the acquisition of employability skills.

## Recommendations

Based on the research they have conducted and analyzed, many of the researchers went on to offer recommendations for increasing students' and workers' acquisition of employability skills. These are itemized below, listed by the groups to whom the recommendations are made. They are drawn from: Berryman 1988, 1989; Bhaerman and Spill 1988; Greathouse 1986; Kazis and Barton 1993; Lankard 1990; Neal 1983; SCANS 1992; Spill and Tracy 1992; Stasz, et al. 1990, 1993; VEW 1993; and Wentling 1987b.

Federal and State Policymakers:

1. Establish as a top-priority national goal that every student should complete high school possessing sufficient employability skills to earn a decent living.
2. Require that all federally funded vocational preparation programs include components for teaching employability skills.
3. Encourage and support continued experimentation with and learning from diverse programs linking schools, employers, and young people.
4. Direct federal resources toward: (a) increasing teachers' capacity to teach employability

skills, and (b) engaging participation of the private sector in providing learning opportunities for students at worksites.

5. Establish a national assessment system that will permit educational institutions to certify the levels of employability competencies their students have achieved.

#### District and School Administrators:

1. Establish programs which are long-term and in-depth, beginning with career awareness activities in elementary school.
2. Include the development of employability skills among the explicitly stated district- and school-level goals.
3. Structure programs in keeping with local needs-e.g., programs should reflect the kinds of employers in the community and local preferences for kinds of employer-school interaction.
4. Extend teachers considerable latitude for structuring their curriculum, classroom design, and instructional approaches.
5. Provide teachers support, including setting up summer internships, offering common preparation periods to plan interdisciplinary projects, and hiring teachers for planning/professional development over the summer. "Of all the resources required for reinventing schools around the SCANS ends [a typical set of employability skills], none are more important than those devoted to teacher training and staff development" (SCANS 1992, p. 9).
6. Encourage the use of performance assessments and the information they provide to develop student "employability profiles" that students can share with prospective employers.

#### Teachers:

1. Arrange the classroom in such a way that it replicates key features of actual work settings and assign students tasks similar to those performed by workers in those settings.
2. Reinforce to students that employers value basic, higher-order, and affective employability skills highly-even more highly than job-specific technical skills.
3. Communicate to students that they have the ability to perform tasks successfully and that they are expected to do so; provide monitoring and encouragement to help them achieve success.
4. Demand good deportment in the classroom. This conveys high expectations and familiarizes students with workplace norms.
5. Express work values through classroom instruction. Model attention to quality, thoroughness, and a positive attitude.
6. Utilize democratic instructional strategies such as role playing/simulation, problem-solving exercises, and group discussion with students; keep the use of lectures and reward structures to a minimum.
7. Monitor and support students' work as a consultant or master craftsman would, relating to them as intelligent, promising employees and providing them guidance and feedback.
8. Adapt instructional strategies to the tasks being taught and to the students performing them; do not hold rigidly to texts or syllabi.
9. Individualize instruction as much as possible, making use of a range of materials in different media in response to students' differing learning styles.
10. Reach agreements with supervisors at learning sites so that the importance of employability skill development will be emphasized at both school and workplace.
11. Help students to build employability "profiles" or "portfolios" that provide a more accurate picture of the students' command of the skills and traits employers value.
12. Participate in professional development activities and/or enroll in classes that emphasize methods to teach employability skills.

#### Employers:

1. Take steps to establish the standards of quality and high performance that now characterize our most competitive companies.
2. Develop internal training programs to equip present employees with the full range of basic, higher-order, and affective employability skills.
3. Continue to communicate to the schools the critical importance of instilling employability skills in students.
4. Collaborate with local schools to provide learning experiences that will foster students' development of employability skills.

In addition to its critical role in the U. S. economy, preparedness in employability skills is also an important contributor to the individual's self-regard and general well-being. Giving greater attention to this developmental area can therefore be expected to contribute to both social betterment and personal fulfillment. As Bhaerman and Spill (1988, p. 44) conclude:

When carefully structured and thoughtfully conceived, employability skill development enables all individuals-young and old-to develop needed self-confidence and motivation, to meet successfully the challenges of work, to survive, and-most important-to flourish.

## Key References

Bailey, T.

"Jobs of the Future and the Skills They Will Require: New Thinking on an Old Debate." *American Educator* 14/1 (1990): 10-15; 40-44.

Presents finding from several case studies undertaken to investigate the effects of technological advances in manufacturing and service industries on the skill requirements of jobs in those industries. In sharp contrast to previous predictions, contemporary research reveals that advances in technology INCREASE the need for workers with strong technical skills, initiative, problem-solving and decision-making skills, and teamwork capabilities.

Baxter, M. B., and Young, J. L.

"What Do Employers Expect From High School Graduates?" *NASSP Bulletin* 66/458 (1982): 93-98.

Reports the results of a survey of manufacturing, service, public, wholesale, and retail employers to determine what skills and attitudes are of greatest importance on the job, which skills and attitudes require more emphasis in the schools, and how they determine whether workers possess desired skills and attitudes.

Beach, D. P.

"A Training Program to Improve Work Habits, Attitudes, and Values." *Journal of Epsilon Pi Tau* 8/2 (1982): 69-74.

Cites research on the employability skills desired by employers. Describes development and piloting of a training program, the Affective Competency Workshops, intended to help employees identify employability skill areas in need of improvement and to address these systematically. Evaluations of the pilot effort were positive.

Berryman, S. E.

*Designing Effective Learning Environments: Cognitive Apprenticeship Models*. New York, NY: Columbia University, Institute on Education and the Economy, September 1991. (ED 337 689)

Identifies several incorrect assumptions about the ways that learning takes place—assumptions on which many instructional programs for students and adults are based. Offers findings from cognitive science describing the ways people in fact learn, and identifies ways that these concepts can be used to design more effective learning environments.

Berryman, S. E.

*Eductions and the Economy: A Diagnostic Review and Implications for the Federal Role.* New York, NY: Columbia University, Institute on Education and the Economy, July 1988. (ED 314 530)

Reports findings from case studies of various industries and discusses the implications of these findings for the educational system. Includes a series of recommendations for actions to be taken by the federal government to improve the educational system's preparation of people for employment.

Berryman, S. E.

*When American Businesses Change: The Imperatives for Skill Formation.* NCCE Occasional Paper No. 9. New York, NY: National Center on Education and Employment, May 1990. (ED 347 215)

Presents research-based recommendations to businesses regarding how they can improve the processes and outcomes of training programs. Identifies common practices in education and training that are ineffective and proposes approaches that can improve the way that training is provided and assessed.

Busse, R.

"The New Basics: Today's Employers Want the æThree R's' and So Much More." *Vocational Education Journal* 67/5 (1992): 24-25, 47.

Identifies skills beyond the "3 R's" that business and industry leaders require on the part of prospective employees. Discusses the influence of foreign—and particularly Japanese—companies on the increased value that U.S. business leaders now place on these generic employability skills.

Carnevale, A. P.; Gainer, L. J.; and Meltzer, A. S.

*Workplace Basics: The Skills Employers Want.* Alexandria, VA: American Society for Training and Development; Washington, DC: U.S. Bureau of Labor, Employment and Training Administration, 1988.

Summarizes research on basic workplace skills, including changing demographics, technological developments, current needs of employers, skill deficits in the workforce, generic employability skills, and education/training practices shown by research to foster employability skills.

Commission on the Skills of the American Workforce.

*America's Choice: High Skills or Low Wages!* Executive Summary. Rochester, NY: National Center on Education and the Economy, June 1990.

Discusses the problem of low productivity in the American economy, skill needs of prospective employees as expressed by business and industry representatives, and recommendations for improving skills and school-to-work transitions of American students.

Committee for Economic Development, Research and Policy Committee.

*Investing in our Children: Business and the Public Schools.* New York: Committee for Economic Development, 1985.

Outlines a school reform strategy designed to increase the capacity of American young people to acquire and hold good jobs and contribute to the U.S. economy. Calls for in-depth and sustained involvement of the business community, labor, civic leaders, parents, educators, and school boards in working together to improve the quality of U.S. education.

Foster, D. E.; Engels, D. W.; and Wilson, M. J.

"Knowledge Acquired in a Program for Building Employability Skills." *Journal of Employment Counseling* 23/4 (1986): 176-177.

Compares the employability scores of secondary students who participated in an employability skills course with those who did not. The Employability Inventory scores of experimental girls were higher than those of control girls and significantly higher for experimental boys than control boys.

Gregson, J. A.

"Effective Pedagogical Strategies for Work Attitudes Instruction." *Journal of Industrial Teacher Education* 29/3 (1992): 60-79.

Cites research findings about various indoctrinational and democratic instructional approaches used in vocational education courses and in work settings to instill in workers the kinds of work-related attitudes and behaviors desired by employers. Concludes that democratic approaches are more effective than indoctrinational ones.

Gregson, J. A., and Bettis, P. J.

*Secondary Trade and Industrial Education Work Values Instruction: Emancipatory or Indoctrinational?* Paper presented at the American Vocational Association Convention, Los Angeles, CA, December 1991. (ED 341 781)

Conducted interviews with 50 trade and industrial education instructors identified as effective in inculcating positive work values and attitudes to determine what pedagogical methods they used with their students. The successful instructors used more democratic methods than indoctrinational ones, but students were not encouraged to analyze or question the pyramidal structure of most workplaces.

Gregson, J. A., and Trawinski, S. C.

*The Impact of Designed Democratic Pedagogy on Trade and Industrial Students' Work Values and Attitudes.* Paper presented at the American Vocational Association Convention, Los Angeles, CA, December 1991. (ED 341 780)

Reports the results of a study of the relative effectiveness of democratic and indoctrinational approaches for fostering generic employability skills and attitudes in students enrolled in trade and industrial education programs. Confirms findings from the literature review, namely that democratic instructional strategies are superior to indoctrinational ones.

Junge, D. A.; Daniels, M. H.; and Karmos, J. S.

"Personnel Managers' Perceptions of Requisite Basic Skills." *The Vocational Guidance Quarterly* 33/2 (1984): 138-146.

Presents the results of a survey of personnel officers in large companies with corporate offices in the state of Illinois to determine the skills needed by entry-level workers and the relative importance of those skills. Both specific content knowledge and work-related attitudes were cited.

Lankard, B. A.

*Employability - The Fifth Basic Skill*. ERIC Digest No. 104. Columbus, OH: ERIC Clearinghouse on Adult, Career, and Vocational Education, 1990. (ED 325 659)

Summarizes research on the generic employability skills employers desire in job applicants in addition to basic and job-specific skills. Cites approaches indicated by research as effective in fostering the development of these skills in secondary students.

Lundy, L. L.

"Teach More Than Skills and Knowledge." *Industrial Education* 73/1 (1984): 22-23.

Offers results from a survey of 215 companies in the state of Wyoming undertaken to determine what sorts of generic knowledge, work habits and personal attributes industrial employers want their workers to possess. Qualities are rank ordered according to how many times they were cited by those surveyed.

Meyer, E. C., and Newman, D.

"Effects of a Commercial Self-Improvement Program on the Work Adjustment Skills of Cooperative Marketing Education Students." *Journal of Vocational Education Research* 13/2 (1988): 35-51.

Compares the effects of a cognitively oriented program and an experiential program in terms of their effects on the development of "work adjustment skills"-self-concept, human relations skills, and work attitude-by secondary students in marketing education programs. Experiential program students exhibited significantly better human relations skills and work attitudes; there were no significant self-concept differences.

Nagle, R. A.

"The Ideal Job Candidate of the 21st Century." *Journal of Career Planning and Employment* 47 (1987): 36-40.

Draws upon the work of futurist writers to describe the nature of the workplace of the 21st century and to identify the abilities and other qualities that an ideal worker of the future will need to have to be successful.

Natriello, G.

*What Do Employers Want in Entry-Level Workers? An Assessment of the Evidence*. National Center for Education and Employment Occasional Paper No. 7. New York: Columbia University, 1989.

Reviews 14 studies on the needs expressed by business and industry employers regarding the qualifications necessary for new employees in entry-level jobs. Findings include that employees place the greatest importance on employee attitudes and place basic skills over job-specific skills.

Neal, W. G.

"Nontechnical Behaviors and Attitudes for Employability of Students in Post-Secondary Cooperative Programs." *Journal of Cooperative Education* 20/1 (1983): 25-34.

Reports the results of a study intended to identify "nontechnical behaviors and attitudes for employability" which employers consider important for cooperative education students to possess. Findings comprise a typical list of employability attributes, with being on time and following instructions cited as the two most important attributes.



Packer, A. H.

"Taking Action on the SCANS Report." *Educational Leadership* 49/6 (1992): 27-31.

Identifies the generic skills and competencies identified in the SCANS reports as basic to all employment and discusses the need for educators and business people to collaborate to assure that young people develop these skills.

Painter, C. M.

"A Survey of Communications Skills Needed On-the-Job by Technical Students." *Journal of Studies in Technical Careers* 7/3 (1985): 153-160.

Reports the results of a literature review and a study concerning the kinds of communications skills needed by students in technical career preparation programs and contrasts these with findings about the types of communications skills these students are typically taught.

Poole, V. A.

"Work Experience Programs Can Help Develop Human Relations Skills." *Business Education Forum* 39 (1985): 9-10.

Cites the human relations capabilities employers identify as the most important for prospective employees to have and argues that work experience programs are the best means of inculcating these capabilities in students.

RAND.

"Teaching Generic Skills for the Workplace." *Education & Human Resources Program Policy Brief*, Issue No. 2, April 1993.

Presents the results of a study aimed at identifying the essential features of classes which were successful in imparting to students generic work skills and work-related attitudes. A more complete report of this research may be found in Stasz, et al. (1993), below.

"Researcher lists lessons for school-to-work transitions."

*Vocational Education Weekly*, Monday, April 26, 1993, pp. 3-4.

Draws upon the research findings of the Manpower Demonstration Research Corporation to identify the features of school-to-work transition programs that have been successful at moving disadvantaged young people into productive postsecondary employment or additional education. Cites 10 key elements.

Secretary's Commission on Achieving Necessary Skills.

*Learning a Living: A Blueprint for High Performance. Executive Summary.* A SCANS Report for America 2000. Washington, DC: U.S. Department of Labor, April 1992.

Restates findings from other SCANS investigations as a context for making recommendations for fundamental restructuring of education to equip students with skills for the employment market of the future.

Secretary's Commission on Achieving Necessary Skills.

*Skills and Tasks for Jobs.* A SCANS Report for America 2000. Washington, DC: U.S. Department of Labor, no date.

Identifies the job-relevant skills identified by the SCANS group and gives examples of how they are applied in a variety of jobs. Also focuses on specific occupations and shows how each makes use of the SCANS skills. Provides suggestions for the use of the resource by people in different professional roles.

Secretary's Commission on Achieving Necessary Skills.

*Teaching the SCANS Competencies*. A SCANS Report for America 2000. Washington, DC: U.S. Department of Labor, 1993.

Offers educators ideas for teaching the SCANS competencies by providing examples of activities to use with students, organized by traditional curricular areas and by specific jobs. Describes real-world projects that have been undertaken to teach the SCANS skills. Includes sections on ESL students, computer literacy, and assessment.

Secretary's Commission on Achieving Necessary Skills.

*What Work Requires of Schools*. A SCANS Report for America 2000. Washington, DC: U.S. Department of Labor, June 1991.

Identifies and discusses the ways that the workplace has changed in this century and introduces and describes the components that make up the SCANS "Workplace Know-How." Describes five scenarios—from the manufacturing, health services, retail trade, accommodations and food services, and office services sectors of the economy—to illustrate how this know-how is applied in actual work situations. Offers recommendations.

Sherer, M., and Eadie, R.

"Employability Skills: Key to Success." *Thrust* 17/2 (1987): 16-17.

Discusses the concept of employability skills and draws from findings of over 100 studies to identify the characteristics and skills employers in virtually every field want employees and prospective employees to possess. Skills and abilities are cited within the general categories of basic skills, pre-employment skills, and work maturity traits.

Spill, R., and Tracy, M.

*Work Maturity Programming for Youth Under JTPA*. Washington, DC: National Alliance of Business, Inc., 1982. (ED 306 447)

Discusses the need for equipping young people with work maturity skills, provides guidelines for assessment and measurement of these skills, and provides program descriptions of several Job Training Partnership Act (JTPA) programs which include work maturity skill development as a major program component.

Stasz, C.; Ramsey, K.; Eden, R.; DaVanzo, J.; Farris, H.; and Lewis, M.

*Classrooms that Work: Teaching Generic Skills in Academic and Vocational Settings*. Santa Monica, CA: RAND, 1993.

Builds on findings from a previous research effort (see Stasz, et al. 1990) to study academic and vocational classrooms in which teachers successfully imparted generic employability skills to secondary students. Offers a model for designing classroom instruction based on findings.

Stasz, C.; McArthur, D.; Lewis, M.; and Ramsey, K.

*Teaching and Learning Generic Skill for the Workplace*. Santa Monica, CA: RAND, 1990.

Investigates the instructional and classroom management practices of four successful vocational educators to determine what kinds of generic employability skills they seek to teach and how these skills are imparted to students. Classroom observation, surveys, and interviews were used to gather information.

Stemmer, P.; Brown, B.; and Smith, C.

"The Employability Skills Portfolio." *Educational Leadership* 49/6 (1992): 32-35.

Describes a large-scale effort undertaken in 22 Michigan school districts to plan and implement systems in which students make use of portfolios of their accomplishments in acquiring and demonstrating employability skills.

Stevenson, B., and Bowers, E.

*Qualities Employers Seek in Employees*. Columbus, OH: Ohio State Advisory Council for Vocational Education, 1986. (ED 277 827)

Offers findings and recommendations emerging from a study of representatives of 60 Ohio companies regarding the qualities they seek in applicants for entry-level skilled and semi-skilled positions. Concludes with recommendations for vocational program improvement.

Stone, J. R., III; Stern, D.; Hopkins, C.; and McMillion, R.

"Adolescents' Perceptions of Their Work: School Supervised and Non-School Supervised." *Journal of Vocational Education Research* 15/2 (1990): 31-53.

Compares the attitudes of employed secondary students in school-supervised programs with those in non-school-supervised programs. Compared to the students with non-school-supervised jobs, those with school-supervised jobs exhibited greater career and social maturity, greater work autonomy, more learning, less negative impact on school grades, and greater understanding of the relationship between school and work.

Van Shelhamer, C., and Bishop, D.

*Personal Characteristics Which Make People More Employable in Agribusiness*. Bozeman, MT: Department of Agricultural and Industrial Education, Montana State University, 1984. (ED 253 725)

Reports the results of a study designed to determine the skills and characteristics agribusiness employers in Montana desire in entry-level employees. Recommendations to providers of agribusiness education providers follow study findings.

Wentling, R. M.

"Employability Skills: The Role of Business Education." *Journal of Education for Business* 62/7 (1987): 313-317.

Presents essentially the same findings and recommendations as identified in Wentling 1987b, following.

Wentling, R. M.

"Teaching Employability Skills in Vocational Education." *Journal of Studies in Technical Careers* 9/4 (1987): 351-360.

Presents research-based information on employability skills-what they are, who needs them, where and how they should be taught, and what vocational educators can do to insure that their students learn employability skills as well as specific technical course content.

Young, J. L.

"What Competencies Do Employees Really Need?-A Review of Three Studies." *Journal of Career Development* 12/3 (1986): 240-249.

Discusses and synthesizes the results of two state-level surveys and one national survey undertaken to identify and rank the competencies that employers regard as most important for prospective employees to possess. As with many other investigations, dependability-coming to work reliably and on time-ranked first.

## General References

Berryman, S. E.

"Economic Change: The Implications for Student Learning." *NASSP Bulletin* 73/514 (1989): 59-70.

Identifies recent changes in the U.S. economy that have led business and industry to require a broader and more sophisticated range of skills on the part of their current and prospective employees. Identifies education and training needs which must be met if students and workers are to possess these skills.

Berryman, S. E.; Flaxman, E.; and Inger, M.

"Integrating Academic and Vocational Education: An Equitable Way to Prepare Middle Level Students for the Future." *ERIC Clearinghouse on Urban Education Digest* 83 (November 1992).

Calls for the integration of academic and vocational education as a means to increase equity in the educational opportunities offered to students of different socioeconomic levels, races, national origins, etc. Recommends a variety of steps schools and districts can take to achieve integration of these traditionally separate approaches to learning.

Bhaerman, R., and Spill, R.

"A Dialogue on Employability Skills: How Can They Be Taught?" *Journal of Career Development* 15/1 (1988): 41-52.

Presents the research- and experience-based views of two experts in the vocational education field, including convictions about what constitute employability skills, what practices are most effective in developing these skills in students and employees, and what kinds of assessments enable teachers and employers to know whether and to what degree students possess employability skills.

Buchanan, J.

*Alaska's Youth: Ready for Work, A Call to Action*. Anchorage, AK: Alaska's Youth: Ready for Work, November 1990.

Presents findings about the work readiness of Alaska's high school graduates, as determined by CEO's representing 20 percent of Alaska's workforce. Needs were identified and presented along with the RFW's recommendations and plans to address those needs.

Buck, L. L., and Barrick, R. K.

"They're Trained, But Are They Employable?" *Vocational Education Journal* 62/5 (1987): 29-31.

Discusses the importance of entry-level workers having employability skills as well as technical competence, and provides suggestions for helping students in vocational programs to address areas of weakness in their employability skills.

Byrne, S. M.; Constant, A.; and Moore, G.

"Making Transitions from School to Work." *Educational Leadership* 49/6 (1992): 23-26.

Indicts the "more or less do-it-yourself system for making the transition from school to work" prevalent in the U.S., contrasts this haphazard approach with the systematic approach taken in other countries, and identifies components of the "overall systemic change" advocated by the authors.

Charner, I.

"Employability Credentials: A Key to Successful Youth Transition to Work." *Journal of Career Development* 15/1 (1988): 30-40.

Explains the concept of employability credentials-documentation of a young person's development of employability skills-and discusses the Career Passport program, a specific approach to documenting and displaying the employability skills students have acquired.

Cotton, K.

*Expectations and Student Outcomes*. Research Close-Up #7. Portland, OR: Northwest Regional Educational Laboratory, 1989.

Reviews research on the effects of teacher and schoolwide expectations on the achievement and attitudes of students. A major finding: communicating high expectations promotes achievement and positive attitudes of all students.

Gold, L. N.

*States and Communities on the Move: Policy Initiative to Create a World-Class Workforce*. Washington, DC: William T. Grant Foundation Commission on Work, Family and Citizenship, et al., 1991.

Summarizes recent publications which have identified needs and problems in America's workforce and then identifies and briefly describes programs designed to improve students' educational preparation and school-to-work transitions.

Graham, S. A.; Vitale, E.; and Schenck, M. L.

"Developing Methodologies to Integrate Content and Behavioral Skills: A Pragmatic Approach to Curriculum Design." *Community/Junior College Quarterly of Research and Practice* 15/3 (1991): 285-293.

Describes the process and outcomes of developing and implementing a program in which job-specific technical skills instruction was combined with work-related skills and attitudes, including communication, organization, and interpersonal relations. Presents a six-step program development model.

Greathouse, L.

"More Than Technical Skills Needed for Career Success." *Business Education Forum* 41/2 (1986): 9-11.

Identifies the personal attributes that employers want potential information processing employees to have in addition to technical skills and makes recommendations of teaching strategies that can be used to develop these attributes in students.

Harris, T., and Sweet, G.

"Why We Believe in Vocational Student Organizations." *VocEd* 56/6 (1981): 32-35.

Identifies and describes 13 areas of knowledge and skill, beyond the technical skills associated with specific occupations, that are developed in students who become participants in vocational student organizations (VSOs).

Herr, E. L., and Johnson, E.

"General Employability Skills for Youths and Adults: Goals for Guidance and Counseling Programs." *Guidance & Counseling* 4 (1989): 15-29.

Draws from research which has identified employability skills within the three categories of general, occupational, and firm-specific, and discusses activities that can be undertaken by guidance and counseling personnel to help students develop general employability skills.

Kantner, E.

*Vocational Education Student Organizations. Five Star Approach to Excellence.* Westerville, OH: Ohio State Council on Vocational Education, 1985. (ED 289 075)

Presents the results of a study which (1) gathered interview data from several groups associated with Vocational Student Organizations in the state of Ohio regarding the effectiveness of VSOs in enhancing students' technical and personal work-related skills, and (2) surveyed teacher/advisers of exemplary programs to determine what they did to promote VSO success. Conclusions and recommendations follow study data.

Kazis, R., and Barton, P. E.

*Improving the Transition from School to Work in the United States.* Washington, DC: American Youth Policy Forum, Competitiveness Policy Council, and Jobs for the Future, 1993.

Criticizes the haphazard manner in which school-to-work transitions occur in the U.S., and contrasts this with the efficient and systematic transition systems in Japan and several European countries. Identifies promising practices and makes recommendations for federal initiatives.

Oakes, J.

"Keeping Track, Part 1: The Policy and Practice of Curriculum Inequality." *Phi Delta Kappan* 68/1 (1986): 12-17.

Discusses the widespread use of tracking and its negative effects on poor and minority students, as well as demonstrating that tracking interferes with both educational excellence and equity.

Oakes, J.

"Keeping Track, Part 2: Curriculum Inequality and School Reform." *Phi Delta Kappan* 68/2 (1986): 148-154.

Continues the discussion of tracking in American schools, including a focus on why tracking is so entrenched and approaches educators might take to change attitudes toward tracking and being to "de-track" schools.

Poole, V.

*Classroom Activities in Employability Skills for Education for Employment.* Bulletin No. 9479. Madison, WI: Wisconsin State Department of Public Instruction, 1989. (ED 317 845)

Contains classroom activities intended to integrate employability skills into Wisconsin's K-12 curriculum. For each of nine skills, activities are provided for lower elementary, upper elementary, middle/junior high, and high school students. Employability skills curriculum content was derived from extensive research on skill needs and deficiencies of entry-level workers.

Randall, J. D.

*Job Notes æ91 Curriculum. A Career Development Unit Addressing Competency Statements from the National Career Development Guidelines.* Concord, NH: New Hampshire State Occupational Information Coordinating Committee, 1991. (ED 341 775)

Presents 15 lessons based on competency areas and indicators from the National Career Development Guidelines. Promotes skill development in areas determined to be of importance to employers as it addresses such topics as relating values to careers, relating skills to careers, interviewing skills, and job search strategies.

Rosove, B.

"Employability Assessment: Its Importance and One Method of Doing It." *Journal of Employment Counseling* 19/3 (1982): 113-123.

Describes a programmed learning package called *place*: Guided Steps to Employment Readiness, which is designed to provide measurable employability information and help users to assess their own employability and make improvements as needed.

Tannenberg, D.

"Vocational Student Organizations Make a Difference." *VocEd* 59/7 (1984): 45-47.

Discusses, from the perspective of business, the benefits of student participation in vocational student organizations. Argues that leadership and communication skills, positive self-regard, and good attitudes are developed and enhanced by membership in these organizations.

Tomal, A.

"Bring Performance Appraisals Into the Classroom." *Business Education Forum* 47/2 (1992): 17-19.

Discusses the generic employability skills that contemporary employers consider important, and offers business educators guidelines for developing and using performance appraisal instruments with their students in the classroom setting. Includes a prototype performance appraisal form.

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**\* A subset of the literature on employability skill development and school-to-work transitions is the literature detailing the education and training systems of other countries and the ways these contrast with the American approach. While this topic is outside the scope of the present summary, some researchers whose work is referenced in this report drew upon their knowledge of foreign systems to design studies or make recommendations.**

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