

THE SCANS REPORT REVISITED

William G. Huitt, Ph.D.

Citation: Huitt, W. (1999, October). *The SCANS report revisited*. Paper delivered at the Fifth Annual Gulf South Business and Vocational Education Conference, Valdosta State University, Valdosta, GA, April 18, 1997. Retrieved [date], from <http://www.edpsycinteractive.org/papers/scanspap.pdf>

While the skills and competencies identified by the [Labor] Secretary's Commission on Achieving Necessary Skills (SCANS) have been widely accepted, several additional competencies should still be considered if American workers are to be prepared for the 21st century. This paper reviews some of the major trends affecting workforce skills as the result of movement from an agricultural/industrial- to an information/service-based economy and suggests that several competencies, mainly in the affective and conative/volitional domains, have been overlooked. It is proposed that the psychological literature indicates optimism, goal-setting, goal-orientation, self-efficacy, and self-regulation are important factors for success in the changed environment. A review of futurists' writings suggests six additional competencies in etc the cognitive domain: 1) abstract thinking, 2) critical thinking, 3) intelligence, 4) wisdom, 5) awareness of competitive pressures and cultural shifts, and 6) implicit cultural understandings about time, dress, courtesy, money, causality. In the affective domain additional competencies include becoming: 1) autonomous, 2) benevolent, 3) compassionate, 4) courageous, and 5) courteous. The largest list of additional competencies is in the conative/volitional domain: 1) be ambitious, 2) be a go-getter, 3) engage in self-determination, 4) carry out strategic planning, 5) be willing to constantly upgrade skills and adapt to change, 6) be alert to new ideas and fashions, customer preferences, economic and political changes, and 7) be worldly. It is suggested that portfolio and authentic assessment techniques might be the most appropriate way to assess these competencies, although it is likely that traditional assessments will also be necessary.

The movement from a predominately agricultural/industrial- to an information/service-based economy in the latter part of the 21st century has been well documented (e.g., Naisbitt, 1982; Toffler, 1990). Accompanying trends and their potential implications for society and the American workforce have also been addressed (e.g., [Huitt](#), 1995; [Imel](#), 1990).

A major issue still under discussion centers on the knowledge, attitudes, and skills necessary for success in the transformed workplace. Imel (1990) observed that the appropriate prerequisites for successful employment are as varied as the types of jobs themselves. For example, the three major occupational groups expected to grow most rapidly (1) executive, administrative, and managerial occupations; 2) professional specialty occupations; and 3) technicians and related support occupations) all require high levels of educational attainment and a wide array of specific skills. Even those opportunities for work that require less than a bachelors degree (e.g., brick layers, stonemasons, electricians, repairers, and mobile heavy equipment mechanics) have a wide variety of specialized training. It is only those occupational groups likely to experience a decline in numbers (e.g., operators, fabricators, and laborers) that have the fewest educational requirements and a relatively narrow set of necessary knowledge and skills.

Are there any general requirements that span most, if not all, occupations? While the report issued by the [Labor] Secretary's Commission on Achieving Necessary Skills ([SCANS](#); [Whetzel](#), 1992) has provided a beginning, with particular relevance for the workplace, there is still much to be discussed. One might think, first, and probably rightly so, that one needs to be able to use a computer since it is the major tool of the information age (similar to the plow or tractor for agriculture and the machine for industry.) While the SCANS report advocates the necessity of developing those technical skills, it also promotes other skills such as basic skills, information acquisition and processing skills, interpersonal skills, and personal qualities such as responsibility, honesty, and integrity. But are these necessary and sufficient or are there others that might be equally or more relevant?

The purpose of this paper is to 1) discuss the social and economic context that will impact the American workforce during the next two decades, 2) review the SCANS report in light of the changes and trends discussed by futurists, and 3) suggest modifications in the list of knowledge, attitudes, and skills that might be seen as necessary for success.

Social and Economic Trends

[Toffler and Toffler](#) (1994) provide an excellent summary of the social and economic trends currently impacting our society. Two of the most important trends include the reduction of the workforce in the areas of agriculture and manufacturing and the transformation of work within each economic sector (i.e., information, service, manufacturing, agricultural). For example, the worker who performs standardized work (and at the lowest levels of the income scale) can be replaced easily by someone else doing that same work with relatively little training. Individuals at the high end of the pay scale perform highly specialized work and are replaced with great difficulty. Unfortunately, when these latter workers must find other work because of downsizing or company realignment, they will often take an initial cut in pay until they can work themselves into another highly specialized placement.

Other trends are also having an impact on the workforce. For example, smaller work units, the constant need for innovation, and the globalization of the economy are enlarging both the opportunities and pressures from global competition, while at the same time forcing workers to take more personal responsibility for their work. The reality that capitalism is now dominating the world economy is being accompanied by a trend toward less reliance on government-run safety nets for the unemployed and an increase in the number of home-based businesses. In fact, [Bridges](#) (1993) predicts that 50% of all the homes in the United States will have a home-based business around the turn of the century. These trends of fewer employees, increased self-reliance, and entrepreneurship through home-based business are, in turn, resulting in an increase in the importance of the family as a social institution.

One additional trend deserves mention: the continued importance of immigration. While the United States is creating jobs at the rate of 10,000 per day, this country legally admits approximately 650,000 immigrants each year, more than all other countries combined ([Naisbitt and Aburdene](#), 1990). Many of these immigrants are sought out by American businesses because workers trained in this country lack the required knowledge and skills. One of the reasons this country has experienced a growing economy is because we have been able to utilize some of the

best-trained workers from other countries. This puts an additional burden on our workers to be able to compete at world-class standards and on the social institutions responsible for child and youth development to train them to do so.

How we view these trends as impacting ourselves and our society plays an important role in the types of educational reform we are willing to support. This mental picture or "world view paradigm" guides the process of collecting and analyzing data and the alternatives we are willing to support (Baker, 1992). When we disagree on actions to take in educational reform, we are often disagreeing about our basic paradigms. For example, most of us would probably agree that human beings are living organisms developing and learning within a living or changing environment. However, we might disagree on some important aspects of how to describe human beings, which in turn will lead to disagreements over what steps to take. Some of us may believe that the human being is genetically prepared to unfold in a predetermined manner. Following the rules of success from this perspective, as parents and educators we should provide the proper nutrients and a stable, loving environment, and the individual will grow naturally to actualize all of his or her given potential. Others, however, may see the individual as completely malleable, requiring a great deal of training and supervision if the person is to develop and actualize potential. It is my perspective that the latter is more correct than the former, which makes the identification of critical requirements of success even more vital.

An important consideration in this discussion is that the context or environment can be seen as a system that moves on a bipolar continuum, from static/stable to chaos/completely unstable (see [Forrester, 1996](#)). In times of little change, it is relatively easy to predict success: simply look at what was successful in the past (Pilzer, 1990). Chance (1986, as cited in SCANS, 1991) developed the following list of skills and attitudes needed for the agriculture/industrial age:

1. punctuality;
2. following instructions,
3. recognizing the authority of the supervisor, and
4. working on monotonous tasks for a long period of time.

Our families, schools, churches, and other social institutions did a reasonably good job instilling these prerequisites for success in our young people and we developed a world-class agricultural/industrial economy. As long as the environment for workers remained stable, these characteristics could predict success.

However, times have changed, the environment has moved more to the chaotic end of the continuum, and the prerequisites for success in the current economy are completely different. Unfortunately, our social institutions have not made the necessary adjustments. Looking to the past for the secrets of success is like looking in the rearview mirror while traveling down the interstate at 70 miles per hour; it is not likely to work for very long. This "past is prologue" approach to forecasting was a major mistake made by those who lived during the change from an agricultural to an industrial economy (Rifkin, 1995).

To summarize, the rapidly changing environment in which we now live makes the future difficult to imagine. We have never experienced a context quite like the one we will live in

during the next two decades, making it troublesome to identify with any precision the exact conditions that will enable young people to be successful. However, we have two factors in our favor. First, some generalizations about the attributes of success will likely hold true and we should use our combined intellectual power to detect what those might be. Second, human beings are inherently pliant and modifiable and can acquire the necessary knowledge, attitudes, and skills necessary for success if given the proper learning experiences. We must remember, though, that the proposed attributes and learning experiences should be treated as hypotheses and we must be prepared to modify both as needed.

The SCANS Report

The SCANS report (1991) is one of the most frequently discussed presentations on the needs of workers in the twenty-first century (Packer, 1992). An accompanying document on teaching these skills has also received wide attention (The Secretary's Commission on Achieving Necessary Skills, 1993). The recommended foundational skills and competencies are shown in [Appendix A](#). This list is a result of reviews of literature, discussions with experts in business and industry, and an analysis of jobs representative of various economic sectors. The widespread acceptance of the recommendations of the commission is one indication of their validity.

SCANS Revisited

As definitive as the SCANS report (1991) is, I believe there are some serious omissions. [Appendix B](#) shows a reorganization of the SCANS recommendations categorized under the rubrics of the faculties of mind (cognition, affect, and conation) and overt behavior. It is immediately apparent that the vast majority of recommended competencies are cognitive (thinking and reasoning) and skills (taking action or behaving) oriented with few recommendations in the areas of affect/emotion (feelings and values) or conation (connecting thinking and feeling to action.) I believe there is ample research in the behavioral sciences literature to justify the addition of at least four additional workforce qualifications: optimism, setting and using goals, self-efficacy, and self-regulation.

Optimism

Seligman (1990, 1995a, 1995b) provides evidence to support optimism as an important affect variable. There are three components of optimism: mastery (the perception that one has control over one's environment), positivity (the feeling that the world is a positive place to live), and explanatory style (belief that things generally will or will not work out in a positive manner.) Optimism has been demonstrated to be related to: 1) how well a person is accepted in social situations, 2) executives' success, 3) the ability to cope with stress and be physically healthy at all ages, and 4) the tendency to suffer bouts of depression as well as the severity of the illness.

Setting and Using Goals

A variety of researchers and writers have pointed to the area of "goals" and "goal-setting" as an important conative variable. Studies by Elliott and Dweck (1988) and Ames (1992) support the proposition that goals guide thinking, feeling, and behavior. These studies document two primary

goal-orientations in learning environments: mastery goals (sometimes called process, learning, or task-involvement goals) versus performance goals (sometimes called ego-involvement goals.) The focus of an individual with mastery goals is on understanding the work requirements and on improving levels of competence. The attribution of success is the internal attribute of the amount of personal effort expended. The focus of an individual with performance goals is on determining one's ability or self-worth relative to others. The attribution of success is either the internal attribute of ability or the external attributes of luck or task difficulty. In a learning situation, learners with mastery goals are more likely to focus on developing competence while learners with performance goals are more likely to focus either on the end result in terms of grades or other external standards of success or on not embarrassing oneself because of failure.

McInerney, Roche, McInerney, and Marsh (1997) purport that these two goal orientations are not bipolar or mutually exclusive. They point to research supporting other goals, more social in nature, such as working to preserve in-group integrity, interdependence of members, and harmonious relationships. Maehr and his colleagues (1984, 1986, 1995) found that the variables of sense of purpose and task effort (intrinsic, mastery); self-esteem and token reinforcement (extrinsic, performance); and social concern (social) were all significantly related to the criterion variables of math and English achievement, attendance, and desired occupation. These findings were consistently significant for the five different cultural groups studied (Anglo Australian, immigrant Australian, Aboriginal Australian, Navajo Indian, and Betsiamite Montagnais Indian.)

Self-efficacy and self-regulation

Bandura (1997) and Schunk (1991) provide evidence that self-efficacy (an affect component) and self-regulation (a conative/behavior component) deserve attention as important variables related to success. Self-efficacy is an expectancy belief (as is optimism mentioned above) and is defined as "beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, p. 2). Self-efficacy has mainly been studied as it relates to academic achievement (Schunk, 1991), but researchers have also found a relationship to social skills, assertiveness, and athletic performance (Pajares, 1996).

Self-regulation, on the other hand, is "a style of engaging with tasks in which [individuals] exercise a suite of powerful skills: setting goals for upgrading knowledge; deliberating about strategies to select those that balance progress toward goals against unwanted costs; and, as steps are taken and the task evolves, monitoring the accumulating effects of their engagement. As these events unfold seriatim, obstacles may be encountered. It may become necessary for self-regulating [people] to adjust or even abandon initial goals, to manage motivation, and to adapt and occasionally invent tactics for making progress" (p. 245).

In the rapidly changing context in which we live, one's beliefs about one's success and one's skills in directing oneself to meeting those goals would seem of paramount importance. In fact, these factors may even be more important than any specific set of knowledge and/or technology skills.

Summary of Futurists

[Appendix C](#) shows another set of recommendations based on the writings of futurists, incorporating the variables of optimism, goal-setting, self-efficacy, and self-regulation discussed above. This list provides some important contributions. For example, abstract thinking, critical thinking, intelligence, and wisdom are attributes specifically mentioned by these authors. They also make explicit a need to be "aware of competitive pressures and cultural shifts" as well as "implicit cultural understandings about time, dress, courtesy, money, causality, etc.," which are only implied in the SCANS report.

In the area of attitudes, only honesty, integrity, and responsibility are common to suggestions from futurists and the SCANS report. The others (autonomy, benevolence, compassion, courage, courtesy, optimism, and self-efficacy) are sometimes implied in the SCANS report although they are not made explicit. For example, courtesy is an important dimension to getting along with others; being autonomous might be seen as a component of responsibility; courage might be implied in facing up to unknown challenges. However, benevolence and compassion, mentioned by several authors as important because of the uneven distribution of wealth that seems inevitable as whole societies change paradigms, as well as optimism and self-efficacy discussed above, do not appear among the recommendations of the SCANS report.

It is in the conative or volitional area that the SCANS report seems to be the most deficient. One might make a case that a "willingness to constantly upgrade skills," to "adapt to change," "being alert to new ideas and fashions, customer preferences, economic and political changes", and "being worldly" are implied in the SCANS report, but they certainly do not receive extensive attention.

The attributes of being "ambitious" and a "go-getter," of "goal-setting" and "strategic planning," as well as "self-determination," seem to deserve more consideration, especially in view of the trends that are forcing workers to think of themselves as working for "You, Inc." (Bridges, 1994). These characteristics are often mentioned by those writing in the area of entrepreneurship (e.g., Sexton & Smilor, 1997; Shefsky, 1996). It seems inevitable that a severe impact on the nature of work is occurring as the industrial age comes to an end. The "job" took precedence during the 70 years encompassing the second industrial revolution that began in the early 1900's (Rifkin, 1995). However, fewer and fewer workers have one full-time job that serves as their primary source of income. And the nature of the information work that is the focus of over 50% of today's workforce is quite amenable to working from home and being in business for oneself. Combined with the socioeconomic [trends](#) of

- fewer workers needed in agriculture and manufacturing,
- corporate and governmental downsizing,
- lowered prices of the necessary technology to establish a home-based business (e.g., high-speed computer, answering machine, fax machine, copy machine, etc.),
- decentralization, and
- pushing decision making down to the point at which work is actually done,

there is an increased likelihood that a large number, if not a majority, of workers will receive at least a portion of their income from some entrepreneurial, probably home-based, effort.

Summary and Conclusions

The SCANS report was developed and written in response to a growing concern that American schools are not preparing young people for the workplace of the future. The advocated foundational skills and competencies have been widely accepted by educators as well as leaders in industry and government. However, when these are compared to current psychological research and suggestions of writers who study trends and the future, certain omissions seem evident. These are most apparent in the domains of affect and conation (see [Huitt](#), 1999 for an elaboration of important student outcomes).

As we continue to make progress in identifying necessary skills beyond the basics of reading, writing, and arithmetic, it is important to reflect on the concept of [W.Y.M.I.W.Y.G.](#) (What You Measure Is What You Get) (Hummel and Huitt, 1994). Unless specific outcome measures are developed and regularly administered and reviewed, it is unlikely that the desired outcomes will become the focus of the classroom and school. Barell (1995) suggests that student self-assessment in the form of videotapes or portfolios may be one way to address these types of competencies. Marzano (1994) concurs, adding that outcome-based performance assessments are more likely to address the types of desired outcomes addressed in the SCANS report. However, he suggests educators proceed with caution for two reasons. First, the reliability and validity of these types of assessments are often questionable, at least as they are presently developed by classroom teachers. Second, the complexity of this type of evaluation task is such that only a small number of competencies can be assessed in this manner. This means that for the time being, at least, they must be supplemented with more traditional types of assessments.

References

- Ames, C. (1992). Classroom goals, structure, and student motivation. *Journal of Educational Psychology*, 84, 261-271.
- Barell, J. (1995). *Critical issue: Working toward student self-direction and personal efficacy as educational goals*. Oak Brook, IL: North Central Regional Educational Laboratory. Retrieved December 1999, from <http://www.ncrel.org/sdrs/areas/issues/students/learning/lr200.htm>
- Baker, J. (1992). *Paradigm: The business of discovering the future*. New York: HarperBusiness.
- Bandura, A. (1997). *Self-efficacy : The exercise of self-control*. New York: W. H. Freeman & Co.
- Bridges, W. (1994). *JobShift: How to prosper in a workplace without jobs*. Reading, MA: Addison-Wesley.
- Butler, D., & Winne, P. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research*, 65(3), 245-281.
- Elliott, E., & Dweck, C. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology*, 54, 5-12.

- Forrester, J. (ed.). (1996). *Road maps: A guide to learning system dynamics*. Cambridge, MA: Systems Dynamics in Education Project, Massachusetts Institute of Technology. Retrieved December 1999, from <http://sysdyn.mit.edu/road-maps/home.html>
- Huitt, W. (1995). *Success in the information age: A paradigm shift*. Background paper developed for a workshop presentation at the Georgia Independent School Association, Atlanta, Georgia, November 6. Retrieved December 1999, from <http://www.edpsycinteractive/topics/context/infoage.pdf>
- Huitt, W. (1999). *Becoming a Brilliant Star*. Paper presented at the Tenth Annual Youth-At-Risk Conference, Savannah, GA, March 1. Update available at <http://www.edpsycinteractive.org/brilstar/brilstar.html>
- Hummel, J., & Huitt, W. (1994, February). What you measure is what you get. *GaASCD Newsletter: The Reporter*, 10-11. Retrieved December 1999, from <http://www.edpsycinteractive.org/papers/wymiwyg.pdf>
- Imel, S. (1990). *Jobs in the future*. ERIC Digest. (ERIC NO.: ED318913). Retrieved December 1999, from <http://www.edpsycinteractive.org/files/jobsfutr.html>
- Maehr, M. (1984). Meaning and motivation: Toward a theory of personal investment. In R. Ames & C. Ames (Eds.). *Research on motivation and education: Vol. 1: Student motivation*. (pp. 115-144). Orlando: Academic.
- Maehr, M., & Braskamp, L. (1984). *The motivation factor: A theory of personal investment*. Lexington, MA: Lexington.
- Marzano, R. (1994, March). Lessons from the field about outcome-based performance assessments. *Educational Leadership*, 51, 44-50.
- McInerney, D., Roche, L., McInerney, V., & Marsh, H. (1997). Cultural perspectives on school motivation: The relevance and application of goal theory. *American Educational Research Journal*, 34(1), 207-236.
- Naisbitt, J. (1982). *Megatrends*. New York: Warner Books, Inc.
- Naisbitt, J., & Aburdene, O. (1990). *Megatrends 2000*. New York: William Morrow & Company.
- Packer, A. (1992, March). Taking action on the SCANS report. *Educational Leadership*, 49, 27-31.
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543-578.
- Pilzer, P. (1990). *Unlimited wealth*. New York: Crown Publishing Group.
- Rifkin, J. (1995). *The end of work*. New York: G. P. Putnam's Sons.
- Schunk, D. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, 26, 207-231.
- Seligman, M. (1990). *Learned optimism*. New York: Knopf.
- Seligman, M. (1995a, September). Building optimism. *Parents*, 709, 108-114.
- Seligman, M. (1995b). *The optimistic child*. Boston: Houghton-Mifflin.
- Sexton, D., & Smilor, R.(Eds.). (1997). *Entrepreneurship 2000*. New York: Upstart Publishing Company.
- Shefsky, L. (1996). *Entrepreneurs are made not born*. Cambridge, MA: Harvard Business School Press.
- The Secretary's Commission on Achieving Necessary Skills. (1991). *What work requires of schools: A SCANS report for America 2000*. Washington DC: U.S. Department of Labor. Retrieved December 1999, from <http://wdr.doleta.gov/SCANS/whatwork/>

The Secretary's Commission on Achieving Necessary Skills. (1993). *Teaching the SCANS competencies. A SCANS report for America 2000*. Washington, DC: U.S. Department of Labor.

Toffler, A. (1990). *Powershift*. New York: Bantam Books.

Toffler, A., & Toffler, H. (1994). *Creating a new civilization*. Atlanta: Turner Publishing.
Retrieved December 1999, from <http://www.wired.com/wired/1.5/features/toffler.html>

Urduan, T., & Maehr, M. (1995). Beyond a two-goal theory of motivation and achievement: A case for social goals. *Review of Educational Research*, 65, 213-243.

Whetzel, D. (1992, March). *The Secretary of Labor's Commission on Achieving Necessary Skills*. ERIC Digest. [ERIC Document: ED 339749]. Retrieved December 1999, from <http://www.edpsycinteractive.org/files/scansrpt.html>

APPENDIX A

THE SCANS REPORT: Essential Workplace Skills for the 21st Century

THE FOUNDATION -- competence requires:

- Basic Skills reading, writing, arithmetic and mathematics, speaking, and listening
- Thinking Skills thinking creatively, making decisions, solving problems, visualizing things in the mind's eye, knowing how to learn, and reasoning
- Personal Qualities individual responsibility, self-esteem, sociability, self-management, and integrity

COMPETENCIES -- effective workers can productively use:

- Resources allocating time, money, materials, space, and staff
- Interpersonal working on teams, teaching others, serving customers, leading, negotiating, and working well with people from culturally diverse backgrounds
- Information acquiring and evaluating data, organizing and maintaining files, interpreting and communicating, and using computers to process information
- Systems understanding social, organizational, and technological systems, monitoring and correcting performance, and designing or improving systems
- Technology selecting equipment and tools, applying technology to specific tasks, and maintaining and troubleshooting technologies

Adapted from: Secretary's Commission on Achieving Necessary Skills. (1991). *What work requires of schools*. Washington, DC: U.S. Department of Labor.

[\[Return\]](#)

APPENDIX B

A Reorganization of the SCANS Report: What is Suggested? What is Omitted?

Knowledge/Thinking (Cognition)

- Thinking skills--reasoning, making decisions, thinking creatively, solving problems, seeing things in the mind's eye, and knowing how to learn
- Information skills--acquiring and evaluating, organizing and maintaining, and interpreting and communicating information
- Systems skills--understanding systems

Attitudes/Values (Affect)

- Personal qualities--responsibility, self-esteem, sociability, integrity, and honesty

Committing/Connecting Knowledge & Attitudes to Action (Conation)

- Personal qualities--self-management

Skills/Action (Overt Behavior)

Personal

- Basic skills--reading, writing, speaking, listening, and knowing arithmetic and mathematical concepts
- Resource allocation--time and money

Social

- Interpersonal skills--negotiating, exercising leadership, working with diversity, teaching others new skills, serving clients and customers, and participating as a team member
- Systems skills--monitoring and correcting system performance, and improving and designing systems
- Resource allocation--time, money, materials, space, and staff

Technology

- Information skills--using computers to process information
- Technology utilization skills--selecting technology, applying technology to a task, and maintaining and troubleshooting technology

Adapted from: Secretary's Commission on Achieving Necessary Skills. (1991). *What work requires of schools*. Washington, DC: U.S. Department of Labor. [[Return](#)]

APPENDIX C**SUMMARY OF IMPORTANT EDUCATIONAL OUTCOMES
FOR THE INFORMATION AGE
BASED ON THE WRITINGS OF FUTURISTS AND BEHAVIORAL SCIENCE****Cognitive** (knowing, reasoning, thinking)

- abstract thinking
- aware of competitive pressures, cultural shifts
- creativity
- global thinking
- imagination
- implicit cultural understandings about time, dress, courtesy, money, causality, etc.
- informational skills (critical thinking, processing information)
- intelligence
- knowledge
- well educated and technically trained (post high school education)
- wisdom
- worldly

Volitional (connecting thoughts and feelings to action)

- adapt to change
- alert to new ideas and fashions, customer preferences, economic and political changes
- ambitious
- goal-setting
- go-getter
- plan strategically
- self-determination
- willingness to constantly upgrade skills

Attitudinal (dispositions, feelings, values)

- autonomous
- benevolence
- compassion
- courage
- courtesy
- honesty
- integrity
- optimism
- responsibility
- self-efficacy
- trustworthiness
- truthfulness

Behavioral (action and doing)

- can both think and do
- communication skills (reading, writing, listening, speaking)
- get and stay married
- good character
- self-regulation
- social skills
- time management

[\[Return\]](#)

Appendix C References

- Ames, C. (1992). Classroom goals, structure, and student motivation. *Journal of Educational Psychology*, 84, 261-271.
- Bandura, A. (1997). *Self-efficacy : The exercise of self-control*. New York: W. H. Freeman & Co.
- Bridges, W. (1994). *Jobshift: How to prosper in a workplace without jobs*. New York: Addison-Wesley.
- Covey, S. (1989). *The seven habits of highly effective people*. New York: Simon and Schuster.
- Covey, S., Merrill, A. R., Merrill, R. (1994). *First things first: To live, to love, to learn, to leave a legacy*. New York: Simon & Schuster.
- Dent, H., Jr. (1995). *Job shock: Four new principles transforming our work and business*. New York: St. Martins Press.
- Drucker, P. (1989). *The new realities*. New York: Harper & Row.
- Naisbitt, J. (1982). *Megatrends*. New York: Warner Books, Inc.
- Naisbitt, J., & Adurdene, P. (1990). *Megatrends 2000*. New York: William Morrow & Company, Inc.
- Ornstein, R., & Ehrlich, P. (1989). *New world, new mind*. New York: Simon & Schuster.
- Perelman, L. (1991). *School's out: Hyperlearning, the new technology, and the end of education*. New York: William Morrow.
- Pilzer, P. (1990). *Unlimited wealth*. New York: Crown Publishing Group.
- Popcorn, F. (1991). *The Popcorn report: Faith Popcorn on the future of your company, your world, your life*. New York: Doubleday.
- Seligman, M. (1990). *Learned optimism*. New York: Knopf.
- Seligman, M. (1995). *The optimistic child*. Boston: Houghton-Mifflin.
- Toffler, A. (1970). *Future shock*. New York: Bantam Books.
- Toffler, A. (1981). *The third wave*. New York: Bantam Books.
- Toffler, A. (1990). *Powershift*. New York: Bantam Books.
- Waitley, D. (1996). *The new dynamics of goal setting : Flex tactics for a fast-changing world*. New York: William Morrow.

Go to | [Internet Resources](#) | [Electronic Files](#) |

Return to:

- [Desired Student Outcomes](#)
- [EdPsyc Interactive: Courses](#)
- [Home Page](#)