

Conation As An Important Factor of Mind

Source: Huitt, W. (1999). Conation as an important factor of mind. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved [date], from <http://www.edpsycinteractive.org/topics/conation/conation.html>

Return to: | [Conative Domain](#) | [EdPsyc Interactive](#) | [pdf format](#) | [more in-depth paper](#) |

Psychology has traditionally identified and studied three components of mind: cognition, affect, and conation ([Huitt](#), 1996; Tallon, 1997). Cognition refers to the process of coming to know and understand; the process of encoding, storing, processing, and retrieving information. It is generally associated with the question of "what" (e.g., what happened, what is going on now, what is the meaning of that information.)

Affect refers to the emotional interpretation of perceptions, information, or knowledge. It is generally associated with one's attachment (positive or negative) to people, objects, ideas, etc. and asks the question "How do I feel about this knowledge or information?"

Conation refers to the connection of knowledge and affect to behavior and is associated with the issue of "why." It is the personal, intentional, planful, deliberate, goal-oriented, or striving component of motivation, the proactive (as opposed to reactive or habitual) aspect of behavior (Baumeister, Bratslavsky, Muraven & Tice, 1998; Emmons, 1986). It is closely associated with the concept of volition, defined as the use of will, or the freedom to make choices about what to do (Kane, 1985; Mischel, 1996). It is absolutely critical if an individual is to successfully engage in self-direction and self-regulation.

Some of the conative issues one faces daily are:

- what are my intentions and goals;
- what am I going to do;
- what are my plans and commitments?

Bagozzi (1992) proposes that conation is necessary to explain how knowledge and emotion are translated into behavior in human beings. He suggests one reason researchers studying the factors of thinking/intentions and values/attitudes have not demonstrated a strong ability to predict behavior is because the construct of conation has been omitted. At the beginning of modern psychology, both emotion and conation were considered central to the field; however, interest in these topics declined as overt behavior and cognition received more attention (Amsel, 1992; Ford, 1987). While goals associated with these latter paradigms are deeply enmeshed in schools today (e.g., basic skills, critical thinking), [Barell](#) (1995) proposes that helping students develop the conative attitudes and skills associated with self-direction and personal efficacy is one of the most critical tasks presently facing parents and educators.

The purpose of this presentation is to briefly review some of the research in the area of conation and volition, giving examples of how these issues can be addressed in the learning process.

Overview

Conation refers to the intentional and personal motivation of behavior (e.g., the proactive direction, energizing, and persistence of behavior.) Many researchers believe volition or will or freedom of choice is an essential element of voluntary human behavior and that human behavior cannot be explained fully without it (e.g., Bandura, 1997; Campbell, 1999; Donagan, 1987; Hershberger, 1988). Miller (1991) concurs, suggesting that conation is especially important when addressing issues of human learning.

The study of intentionality is common to the behavior of both animals and human beings. However, Frankfurt (1982) proposes that human intentionality is different from animal intentionality in that human beings can desire to contravene their conditioning. Bandura (1997) believes this is possible because of the singularly human ability of self-reflective evaluation. More recent literature has focused on the concept of self-regulation as an aspect of conation (e.g., Bandura, 1991; Schunk & Zimmerman, 1994), adding an additional dimension to the study of self (e.g., self-concept, self-esteem, self-reflection, self-determination).

One reason that the study of conation has lagged behind the study of cognition, emotion, and behavior is that it is intertwined with the study of these other domains and often difficult to separate (Snow, 1989). For example, conative components are often considered when measuring cognition or emotion. The Wechsler scales of intelligence include a conative component (Cooper, 1997; Gregory, 1998); Goleman's (1995) construct of emotional intelligence includes both affective (e.g., empathy, optimism, managing emotions) and conative (e.g., setting goals, self-regulation) components. Likewise, conation has cognitive and affective, as well as volitional, components (e.g., Gollwitzer, 1990; Snow & Swanson, 1992).

[Kolbe](#) (1990) suggests that human beings have a conative style or a preferred method of putting thought into action or interacting with the environment. This might be compared to differences of temperament or personality type (e.g., [Huit](#), 1988; [Keirse](#), 1998; Myers, 1980) that purports to identify general approaches to thinking, feeling, and behavior or to learning style (e.g., [McFarland](#), 1997) that identifies general approaches to encoding and processing information.

Kolbe identifies four action or conative modes:

1. **Fact Finder** (instincts to probe, refine and simplify);
2. **Follow Thru** (instincts to organize, reform and adapt);
3. **Quick Start** (instincts to improvise, revise and stabilize); and
4. **Implementor** (instincts to construct, renovate and envision).

In Kolbe's formulation, it is the combination of the striving instinct, reason, and targeted goals that results in different levels of commitment and action.

The following discussion presents research findings on conation and volition related to each of the three aspects of motivation: direction, energizing, and persistence.

Direction

There are at least five separate aspects of the direction subcomponent of conation that are identified in the research: becoming aware of human needs, visions and dreams of possibilities, making choices, setting goals, and making plans.

One of the first aspects of successful self-direction is to become aware of our human needs (Franken, 1997). [Maslow's](#) (1954) hierarchy of human needs is probably one of the most well-known approaches, although other human needs such as the need for optimal arousal (flow, Csikszentmihali, 1991), the need for achievement (McClelland, 1992), the need for cognitive balance (Festinger, 1957), and the need to find meaning in life (Frankl, 1997, 1998), the need for power (Murray, 1938), and the need for social affiliation (Sullivan, 1968) have also been suggested. It would appear that exercises designed to help the individual identify what is important to him or her would be one of the first steps in the development of conation.

A second aspect is to become aware of the "possible self." Markus & Nurius (1986) suggest that this possible self provides the bridge to action; without something being considered as possible for the individual, goals will not be set and plans will not be made. Levenson (1978) suggests that dreams and visions expand and define the possible self. However, the long-term, vague statements represented by dreams and visions must be turned into goals (short-term, specific, personal statements) if they are to impact immediate behavior (Markus & Nurius). Additionally, Epstein (1990) states that dreams and goals must have visual and emotional components in order to be effective.

A third aspect is the exercise of volition or the freedom to choose and control one's thoughts and behavior (Kivinen, 1997). While volition is important it cannot be studied independently of cognitive and affective factors. Volition has two subcomponents:

- 1) **Covert** -- referring to the controlling of one's own actions and
- 2) **Overt** -- referring to the controlling of the environment that impacts one's actions (Corno, 1986, 1993).

A variety of researchers (e.g., Ford, 1987; Hershberger, 1987; Howard & Conway, 1987) believe that volition ought to be the cornerstone of the psychological study of human behavior. Their rationale is that while animals are controlled mainly by instincts and reflexes, these processes are greatly reduced in human beings. Learning and choice replace these biological processes, allowing human beings to be both greater than and less than animals in their behavior. This situation elevates the importance of volition, especially in an increasingly chaotic social and cultural milieu ([Huitt](#), 1995/1999). Lacking the restraints of widely accepted social mores, individual choice becomes the chief protection against social and cultural degradation.

A fourth aspect of the direction component of conation is the setting of goals for the directions that have been chosen. Dweck (1991) differentiates two types of goals:

- 1) **Mastery goals** that focus on developing competence or on the process of learning, and
- 2) **Performance goals** that focus on the outcome, winning, or attaining credentials.

Urduan and Maehr (1995) suggest a third alternative:

3) **Social goals** that focus on performance of the group or the individual fitting in with others.

Prawat (1985) demonstrates that in elementary classrooms **affective goals** are also important.

Ames (1988, 1992) showed that in school settings students with mastery goals outperform students with performance goals. However, it must be considered that in the highly-structured school setting, goals are largely chosen by the system. It is the individual's adoption of the importance of those goals that is reflected in a mastery orientation. In the less structured environment outside the school, it is likely that one must focus on both process (mastery) and outcome (performance) goals if one is to be successful. Additionally, because of the importance in working in groups in the modern era (e.g., Bridges, 1994; Toffler & Toffler, 1995), the ability to set and achieve social goals becomes increasingly important. Likewise, Goleman (1995) cites an extensive literature that the ability to manage one's emotions is as important, or perhaps even more important, than one's cognitive ability to acquire and process information quickly.

There are several important issues to consider when setting goals. First, goals must be difficult, but attainable (Franken, 1997). Following the Yerkes-Dodson law (Yerkes & Dodson, 1908), moderate amounts of difficulty lead to optimal performance. Setting goals that are perceived as too easy or too difficult does not increase behavior. Second, the emotional state of an individual can influence the setting of goals. Higher goals are set when the individual is emotionally aroused (Lazarus, 1991) and lower goals are set when the individual is depressed (Beck, 1967). Likewise, individuals with increased levels of optimism (which grow out of a person's explanatory style) set higher goals (Seligman, 1990). Finally, individuals with increased levels of self-efficacy set higher goals (Franken, 1997). When the goals are met it leads to even higher levels of self-efficacy. Like the setting of goals, self-efficacy can be impacted by mood (Kavanaugh & Bower, 1985).

A fifth aspect of successful self-direction is to develop plans that can turn visions and goals into reality (Herman, 1990). Plans must be written and specific, starting with a clear description of desired outcomes. Two processes can be employed: backwards planning and task analysis (see [Huitt](#), 1992). In backwards planning, one starts with the desired end results and then identifies the most immediate state and required procedures to meet that result (i.e., if I am here and do this, then these results will be obtained.) To be successful, backwards planning must be accompanied by a task analysis that will identify the skills and knowledge required to learn or perform a specific task. By systematically completing a task analysis as one works backwards from the desired end results, one arrives at the starting point with a clearly delineated plan for obtaining them.

Energizing

Emotions are an essential element of the energizing component of conation. Our minds and bodies have a natural tendency towards equilibrium or homeostasis. This process has been studied as it applies to emotion (e.g., Solomon, 1980) as well as to a variety of other conditions (e.g., cognitive consistency, Festinger, 1957; the development of intelligence, Piaget, 1972; and

eating, Spitzer & Rodin, 1981). In general, the potential for pleasure resulting from striving and obtaining dreams, desires, and goals must outweigh the discomfort of change or fear of failure if action is to be taken. Goals that are in one's self interest (e.g., Sansone & Harackiewicz, 1996) or ones that are congruent with self-identified personal convictions (e.g., Brunstein & Gollwitzer, 1996) will have the strongest impact because these are most integral to a definition of self.

McCombs and Whisler (1989) propose another factor in energizing behavior: a natural need for self-development and self-determination. This need can be enhanced or thwarted by one's self-concept and self-esteem, or as Markus & Nurius (1986) describe it, one's possible self. It is therefore important to consider developmental and environmental factors that can enhance, or at least not inhibit, this natural predisposition.

Persistence

Persistence is increasingly recognized as an important component of success. For example, Goodyear (1997), in a review of literature regarding the success of professional psychologists, found that while there are "threshold levels" of intellectual and interpersonal skills, motivation and persistence were even more important in predicting levels of expertise in professional psychology.

While it is true that certain student characteristics such as level of achievement motivation (McClelland, 1985), expectations for success (Atkinson & Birch, 1978; Hayamizu & Weiner, 1991), and level of self-esteem (Tafarodi & Vu, 1997) as well as environmental factors such as amount of failure experiences (Miller & Hom, 1990), being praised for effort rather than ability (Mueller & Dweck, 1998), the public display of summative, but not formative, assessments (Seijts, Meertens & Kok, 1997), and the use of variable reinforcement schedules (Plaud, Plaud & von Duvillard, 1999) can impact task persistence, the student's use of self-regulation processes can mediate these influences when the learner is not in a conducive environment (Bandura, 1991; Koonce, 1996). For example, learners who matched goals to enduring interests and values (Sheldon & Elliott, 1999) or who perceived tasks to be important (Seijts, Meertens & Kok, 1997) persisted longer. Miller, Greene, Montalvo, Ravindran and Nichols (1996) reported that student who had learning goals, desires to obtain future consequences, and wanted to please the teacher persisted longer in academic work. Students who were able to produce well-elaborated, specific, vivid pictures of possible future selves persisted more and had higher levels of achievement than those who did not (Leondari, Syngollitou & Kiosseoglou, 1998).

Impacting Conation

Specific cognitive, affective, and volitional components of goal-oriented motivation have developmental aspects and can be impacted via the social environment (Heckhausen & Dweck, 1998). It is important that parents, educators, and other individuals concerned with the development of children and youth work towards developing the conative components of mind that enhance self-direction, self-determination, and self-regulation. Specifically, young people need to imagine possibilities in their lives, set attainable goals, plan routes to those goals, systematically and consistently put goals and plans into actions, practice self-observation, reflect

on results, and manage emotions. These need to be addressed in a spiraled curriculum because of the developmental aspects of their successful utilization.

Bandura's (1986, 1997) theory of [social cognition](#) suggests that helping students to be successful is one of the best ways to assist the learner. These mastery experiences are the most profound influence on self-efficacy, which subsequently predicts future success in that domain. Parents and educators can also use social persuasion, being careful to praise the effort and striving, not the learner's ability (see Mueller & Dweck, 1998). Providing opportunities for learners to experience success vicariously through the success of others is also important, as it can impact a learner's perceptions of what is possible.

Covey, Merrill & Merrill (1994) suggest that everyone needs to develop a [mission statement](#) as one way to help think about one's priorities. This statement provides an opportunity for the individual to explicitly consider and state important values and beliefs. In addition, Waitley (1996) advises imagining what your life would be like if time and money were not a limiting factor in your life. That is, what would you do this week, this month, next month, if you had all the money and time you needed and were secure that both would be available again next year. Developing vivid, specific images of these and then relating them back to the important values in one's mission statement can impact one's commitment and persistence toward those desired end results.

Seligman (1995) suggests that we teach children to "capture" their automatic thoughts, which are often negative, evaluate them for accuracy, and replace them with more positive and optimistic thoughts (similar to Cognitive Therapy, e.g., Alford & Beck, 1998). Ziglar (1994) and [Helmstetter](#) (1995) propose we adopt a more proactive approach and teach the use of self-talk techniques. In this approach, statements are developed specifically for an individual and/or situation and the learner recites the self-talk statement at regular intervals.

Shapiro (1997) provides additional ideas regarding activities and games that parents can use to improve their children's emotional, conative, and social skills; Corno (1992) provides additional recommendations for teachers.

Baumeister, et al. (1998) suggest that we need to be careful regarding how much volition we require individuals to use—expending energy for volitional activities depletes the resources necessary to make those decisions. For example, resisting the temptation to eat a piece of chocolate reduces the energy available to make similar decisions. Considering this research, it may be important to balance [constructive](#) and [direct instruction](#) activities during the learning process.

Summary and Conclusions

In today's unstructured and chaotic environment, children and youth will need the conative skills discussed in this presentation if they are to be successful as adults. Recognizing that there is limited time in the school day, educators must stack activities that can develop these attitudes and skills into an already crowded curriculum. While this may be a Herculean task, to not attempt to do so is to send our youth into the 21st century woefully ill-prepared.

References

- Alford, B., & Beck, A. (1998). *The integrative power of cognitive therapy*. New York: Guilford Press.
- Ames, C. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology*; 80(3), 260-267.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84(3), 261-271.
- Amsel, A. (1992). Confessions of a neobehaviorist. *Integrative Physiological and Behavioral Science*, 27(4), 336-346.
- Atkinson, J., & Birch, D. (1978). *An introduction to motivation* (Rev. ed.). New York: Van Nostrand.
- Bagozzi, R. (1992). The self-regulation of attitudes, intentions, and behavior. *Social Psychology Quarterly*, 55(2), 178-204.
- Bandura, A. (1986). *Social foundations of thought and action: A social-cognitive theory*. Upper Saddle River, NJ: Prentice-Hall.
- Bandura, A. (1991). Self-regulation of motivation through anticipatory and self reactive mechanisms. In R. A. Dienstbier (Ed.), *Perspectives on motivation*. Nebraska Symposium on Motivation. Lincoln University of Nebraska Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman.
- 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 May 1999, from <http://www.ncrel.org/ncrel/sdrs/areas/issues/students/learning/lr200.htm>
- Baumeister, R., Bratslavsky, E., Muraven, M., & Tice, D. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, 74(5), 1252-1265.
- Beck, A. (1976). *Cognitive theory and emotional disorders*. New York: International Universities Press.
- Bridges, W. (1994). *JobShift: How to prosper in a workplace without jobs*. Reading, MA: Addison-Wesley.
- Brunstein, J., & Gollwitzer, P. (1996). Effects of failure on subsequent performance: The importance of self-defining goals. *Journal of Personality and Social Psychology*, 70, 395-407.
- Cooper, S. (1997). *The clinical use and interpretation of the Wechsler Intelligence Scale for children* (3rd ed.). Springfield, IL: Charles C. Thomas Publisher.
- Corno, L. (1989) Self-regulated learning: A volitional analysis. In J. Zimmerman and D. Schunk (Eds.), *Self-regulated learning and academic achievement: Theory, research and practice*. New York: Springer-Verlag.
- Corno, L. (1992). Encouraging students to take responsibility for learning and performance. *Elementary School Journal*, 93(1), 69-83.
- Corno, L. (1993). The best-laid plans: Modern conceptions of volition and educational research. *Educational Researcher*, 22, 14-22.

- Covey, S., Merrill, & Merrill. (1994). *First things first*. New York: Simon & Schuster.
- Csikszentmihalyi, M. (1991). *Flow: The psychology of optimal experience*. New York: HarperCollins.
- Donagan, A. (1987). *Choice, the essential element in human action*. London: Routledge & Kegan Paul.
- Dweck, C. (1991). Self-theories and goals: Their role in motivation, personality, and development. In R. A. Dienstbier (Ed.), *Perspectives on motivation*. Nebraska Symposium on Motivation. Lincoln University of Nebraska Press.
- Emmons, R. (1986). Personal strivings: An approach to personality and subjective well-being. *Journal of Personality and Social Psychology*, 51, 1058-1068.
- Epstein, S. (1990). Cognitive-experiential self-theory. In L. Pervin (Ed.), *Handbook of personality: Theory and research* (165-191). New York: Guilford Press.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row, Peterson.
- Ford, J. (1987, November). Whither volition? *American Psychologist*, 1030-1032.
- Franken, R. (1997). *Human motivation* (4th ed.). Pacific Grove, CA: Brooks/Cole.
- Frankfurt, H. (1982). Freedom of the will and the concept of a person. In G. Watson (Ed.), *Free will* pp. 96-110. Oxford: Oxford University Press.
- Frankl, V. (1997). *Man's search for ultimate meaning*. New York: Insight Books.
- Frankl, V. (1998). *Man's search for meaning* (Rev. ed.). New York: Washington Square Press.
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement*. New York: Bantam.
- Gollwitzer, P. (1990). Action phases and mind-sets. In E. Higgins & R. Sorrentino (Eds.), *Handbook of motivation and cognition* (Vol 2, pp. 53-92). New York: Guilford Press.
- Goodyear, R. (1997). Psychological expertise and the role of individual differences: An exploration of issues. *Educational Psychology Review*, 9(3), 251-265.
- Gregory, R. (1998). *Foundations of intellectual assessment: The Wais-III and other tests in clinical practice*. Boston: Allyn & Bacon.
- Hayamizu, T. & Weiner, B. (1991) A test of Dweck's model of achievement goals as related to perceptions of ability. *Journal of Experimental Education*, 59, 226-234.
- Heckhausen, J., & Dweck, C. (Eds.). (1998). *Motivation and self-regulation across the life span*. New York: Cambridge University Press.
- Helmstetter, S. (1995). *What is self-talk*. The Self-Talk Solution. Retrieved May 1999, from <http://www.selftalk.com/index.html>
- Herman, J. (1990). Action plans to make your vision a reality. *NASSP Bulletin*, 74(523). 14-17.
- Hershberger, W. (1987, November). Of course there can be an empirical science of volitional action. *American Psychologist*, 42, 1032-1033.
- Hershberger, W. (1988). Psychology as a conative science. *American Psychologist*, 43(10), 823-824.
- Howard, G., & Conway, C. (1987, November). The next step toward a science of agency. *American Psychologist*, 1034-1036.
- Huitt, W. (1988). Personality differences between Navajo and non-Indian college students: Implications for instruction. *Equity & Excellence*, 24(1), 71-74. Retrieved May 1999, from <http://www.edpsycinteractive.org/papers/mbtina.html>

- Huitt, W. (1992). Problem solving and decision making: Consideration of individual differences using the Myers-Briggs Type Indicator. *Journal of Psychological Type*, 24, 33-44. Retrieved May 1999, from <http://www.edpsycinteractive.org/papers/prbsmbti.html>
- Huitt, W. (1999). Success in the information age: A paradigm shift (rev. ed.). *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved May 1999, from <http://www.edpsycinteractive.org/topics/context/infoage.html>
- Huitt, W. (1996). The mind. *Educational Psychology Interactive*. Valdosta, GA: Valdosta State University. Retrieved May 1999, from <http://www.edpsycinteractive.org/topics/summary/mind.html>
- Lazarus, A. (1991). Cognition and motivation in emotion. *American Psychologist*, 46, 352-367.
- Kane, R. (1985). *Free will and values*. Albany: State University of New York Press.
- Kavanaugh, D., & Bower, G. (1985). Mood and self-efficacy: Impact of job and sadness on perceived capabilities. *Cognitive Therapy and Research*, 9, 507-525.
- Keirse, D. (1998). *Please understand me II: Temperament, character, intelligence*. Del Mar, CA: Prometheus Books. Retrieved May 1999, from <http://www.keirse.com/>
- Kivinen, K. (1997). Volitional processes and strategies. Tampere, Finland: University of Tampere. Retrieved May 1999, from <http://www.uta.fi/~kk16628/academ.html>.
- Kolbe, K. (1990). *The conative connection*. Reading, MA: Addison-Wesley Publishing Company, Inc. Retrieved May 1999, from <http://www.kolbe.com/>.
- Koonce, R. (1996). Emotional IQ, a new secret of success? *Training & Development*, 50(2), 19. Retrieved May 1999, from <http://www.edpsycinteractive.org/files/emotiq.html>
- Leondari, A., Syngollitou, E., & Kiosseoglou, G. (1998). Academic achievement, motivation and future selves. *Educational Studies*, 24(2), 153-163.
- Levenson, D. (1978). *The seasons of a man's life*. New York: Ballantine.
- Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist*, 41, 954-969.
- Maslow, A. (1954). *Motivation and personality*. New York: Harper.
- McClelland, D. (1985). *Human motivation*. Glenview, IL: Scott, Foresman.
- McClelland, D. (1992). *Achievement motive*. New York: Irvington Publishers.
- McCombs, B., & Whisler, J. (1989). The role of affective variables in autonomous learning. *Educational Psychologist*, 24(3), 277-306.
- McFarland, R. (1997). An overview of the adult technology-based learning environment. *InterEd*, 7(2).
- Miller, A. (1991). Personality types, learning styles and educational goals. *Educational Psychology*, 11(3-4), 217-238.
- Miller, A., & Hom, H., Jr. (1990). Influence of extrinsic and ego incentive value on persistence after failure and continuing motivation. *Journal of Educational Psychology*, 82(3), 539-545.
- Miller, R., Greene, B., Montalvo, G., Ravindran, B., & Nichols, J. (1996). Engagement in academic work: The role of learning goals, future consequences, pleasing others, and perceived ability. *Contemporary Educational Psychology*, 21(4), 388-422.
- Mischel, W. (1996). From good intentions to willpower. In P. Gollwitzer & J. Bargh (Eds.), *The psychology of action* (pp. 197-218). New York: Guilford Press.
- Mueller, C., & Dweck, C. (1998). Praise for intelligence can undermine children's motivation and performance. *Journal of Personality & Social Psychology*, 75(1), 33-52.
- Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.

- Myers, I. (1980). *Gifts differing*. Palo Alto, CA: Consulting Psychologists Press.
- Piaget, J. (1972). *The psychology of intelligence*. Totowa, NJ: Littlefield, Adams.
- Plaud, J., Plaud, D., & von Duvillard, S. (1999). Human behavioral momentum in a sample of older adults. *Journal of General Psychology*, 126(2), 165-175.
- Prawat, R. (1985). Affective versus cognitive goal orientations in elementary teachers. *American Educational Research Journal*, 22(4), 587-604.
- Sansone, C., & Harackiewicz, J. (1996). "I don't feel like it"; The function of self interest in self-regulation. In L. Martin & A. Tesser (Eds.), *Striving and feeling: Interactions among goals, affect, and self regulation* (2-3-228). Mahwah, NJ: Erlbaum.
- Schunk, D., & Zimmerman, B. (Ed.). (1994). *Self-regulation of learning and performance: Issues and educational applications*. Hillsdale, NJ: Erlbaum.
- Seijts, G., Meertens, R., & Kok, G. (1997). The effects of task importance and publicness on the relation between goal difficulty and performance. *Canadian Journal of Behavioural Science*, 29(1), 54-62.
- Seligman, M. (1990). *Learned optimism*. New York: Alfred A. Knopf.
- Seligman, M. (1995). *The optimistic child*. Boston: Houghton Mifflin.
- Shapiro, L. (1997). *How to raise a child with a high EQ: A parent's guide to emotional intelligence*. New York: Harpercollins.
- Sheldon, K., & Elliot, A. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology*, 76(3), 482-497.
- Snow, R. (1989). Toward assessment of cognitive and conative structures in learning. *Educational Researcher*, 18(9), 8-14.
- Snow, R., & Swanson, J. (1992). Instructional psychology: Aptitude, adaptation, and assessment. *Annual Review of Psychology*, 43, 583-626.
- Solomon, R. (1980). The opponent-process theory of acquired motivation: The costs of pleasure and the benefits of pain. *American Psychologist*, 8, 691-712.
- Sullivan, H. S. (1968). *The interpersonal theory of psychiatry*. New York: W. W. Norton.
- Tafari, R., & Vu, C. (1997). Two-dimensional self-esteem and reaction to success and failure. *Personality & Social Psychology Bulletin*, 23(6), 626-635.
- Tallon, A. (1997). *Head and heart: Affection, cognition, volition as triune consciousness*. New York: Fordham University.
- Toffler, A., & Toffler, H. (1995). *Creating a new civilization*. New York: Turner Publishing.
- Urdan, T., & Maehr, M. (1995). Beyond a two-goal theory of motivation and achievement: A case for social goals. *Review of Educational Research*, 65(3), 213-243.
- Waitley, D. (1996). *The new dynamics of goal setting: Flex tactics for a fast-changing world*. New York: William Morrow.
- Yerkes, R., & Dodson, J. (1908). The relation of strength of stimulus to rapidity of habit formation. *Journal of Comparative Neurology and Psychology*, 18, 459-482.
- Ziglar, Z. (1994). *Over the top: Moving from survival to stability, from stability to success, from success to significance*. Nashville, TN: Thomas Nelson Publishers.