

BIBLIOGRAPHY

- Aiken, L. R. (1970). Nonintellective variables and mathematics achievement: Directions for research. Journal of School Psychology, 8, 28-36.
- Aiken, L. R. (1976). Update on attitudes and other affective variables in learning mathematics. Review of Educational Research, 46, 293-311.
- Alexander, P. A., Kulikowich, J. M., & Schulze, S. K. (1994). How subject matter knowledge affects recall and interest. American Educational Research Journal, 31(2), 313-337.
- Amabile, T. (1983). The social psychology of creativity. New York: Springer-Verlag.
- Amabile, T. (1990). Within you, without you: The social psychology of creativity, and beyond. In M. A. Runco & R. S. Albert (Eds.), Theories of creativity. Newbury Park, CA: Sage Publications.
- Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. M. (1994). The work preference inventory: Assessing intrinsic and extrinsic motivational orientations. Journal of Personality and Social Psychology, 66(5), 950-967.
- Ames, C. (1984). Achievement attributions and self-instructions under competitive and individualistic goal structures. Journal of Educational Psychology, 76, 478-487.
- Ames, C. (1993). Classrooms: Goals, structures, and student motivation. Journal of Educational Psychology, 84(3), 261-271.
- Ames, C. & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. Journal of Educational Psychology, 80, 260-267.
- Aristotle. (1962). Nichomachean ethics. Book 1. M Ostwald (Trans.). New York: Macmillan.
- Atkinson, J. (1957). Motivational determinants of risk-taking behavior. Psychological Review, 64, 359-372.

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84, 191-215.
- Bahrlick, H., Fitts, P., & Rankin, R. (1952). Effects of incentive upon reactions to peripheral stimuli. Journal of Experimental Psychology, 44, 400-406.
- Benbow, C. P., & Minor, L. L. (1990). Cognitive profiles of verbally and mathematically precocious students: Implications for identification of the gifted. Gifted Child Quarterly, 34(10), 21-26.
- Bennett, W. J. (1988). American education: Making it work. Washington, D.C.: Author.
- Bergin, D. A. (1992). Leisure activity, motivation, and academic achievement in high school students. Journal of Leisure Research, 24(3), 225 - 239.
- Berliner, D. C. (1983). Developing conceptions of classroom environments: Some light on the T in classroom studies of ATI. Educational Psychologist, 18(1), 1-13.
- Berlyne, D. E. (1966). Exploration and curiosity. Science, 153, 25-333.
- Bloom, B. S. (1985). Developing talent in young people. New York: Ballantine Books.
- Bloom, B. S., Englehart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). Taxonomy of educational objectives: The classification of educational goals. Handbook 1, Cognitive Domain. New York: Longmans Green.
- Blumenfeld, P. C. (1992). Classroom learning and motivation: Clarifying and expanding goal theory. Journal of Educational Psychology, 84(3), 272-281.
- Braddock, J. H., & Slavin, R. E. (1993). Life in the slow lane: A longitudinal study of the effects of ability grouping on student achievement, attitudes, and perceptions. Baltimore: Johns Hopkins University.
- Brophy, J. E. (1983). Conceptualizing student motivation. Educational Psychologist, 18, 200-215.
- Bruner, J. (1977). The process of education. Cambridge: Harvard University Press.
- Burns, R. B. (1984). How time is used in elementary schools: The activity structure of classrooms. In L. W. Anderson (Ed.), Time and school learning. London: Croom Helm.

- Butler, R. (1987). Task-involving and ego-involving properties of evaluation: Effects of different feedback conditions on motivational perceptions, interest, and performance. Journal of Educational Psychology, 79, 474-482.
- Butler, R. (1993). Effects of task- and ego-achievement goals on information seeking during task engagement. Journal of Personality and Social Psychology, 65(1), 18-31.
- Calder, B. & Staw, B. (1975). Self-perception of intrinsic and extrinsic motivation. Journal of Personality and Social Psychology, 31, 599-605.
- Carli, M., Delle Fave, A., & Massimini, F. (1988). Experience in flow channels: Italian and U.S. students. In Csikszentmihalyi, M. & Csikszentmihalyi, I. (1988). Optimal experience: Psychological studies of flow in consciousness. Cambridge: Cambridge University Press.
- Carver, C. S., & Scheier, M. F. (1981). Attention and self-regulation: A control-theory approach to human behavior. New York: Springer-Verlag.
- Cobb, P., Wood, T., Yackel, E., & McNeal, B. (1992). Characteristics of classroom mathematics traditions: An interactional analysis. American Educational Research Journal, 29(3), 573-604.
- Cognition and Technology Group, The. (1990). Anchored instruction and its relationship to situated cognition. Educational Researcher, 19, 2-10.
- Cofer, C. N. & Appley, M. H. (1964). Motivation: Theory and research. New York: John Wiley and Sons.
- Covington, M. V. (1984a). The motive for self worth. In C. Ames & R. Ames (Eds.), Research on motivation in education (Vol. 1, pp. 77-113). San Diego, CA: Academic Press.
- Covington, M. V. (1984b). The self-worth theory of achievement. The Elementary School Journal, 85(1), 5-20.
- Csikszentmihalyi, M. (1975). Beyond boredom and anxiety. San Francisco: Jossey-Bass.
- Csikszentmihalyi, M. (1988a). Motivation and creativity: Towards a synthesis of structural and energistic approaches to cognition. New Ideas in Psychology, 6, 159-176.

- Csikszentmihalyi, M. (1988b). The flow experience and its significance for human psychology. In M. Csikszentmihalyi & I. Csikszentmihalyi (Eds.), Optimal experience: Psychological studies of flow in consciousness. Cambridge: Cambridge University Press.
- Csikszentmihalyi, M. (1990a). Flow: The psychology of optimal experience. New York: Harper & Row.
- Csikszentmihalyi, M. (1990b). Literacy and intrinsic motivation. Dædalus, 119(2), 115-140.
- Csikszentmihalyi, M. (1993). The evolving self. New York: Harper Collins.
- Csikszentmihalyi, M. (1996). Creativity: Flow and the psychology of discovery and invention. New York: Harper Collins.
- Csikszentmihalyi, M. & Csikszentmihalyi, I. (1988). Optimal experience: Psychological studies of flow in consciousness. Cambridge: Cambridge University Press.
- Csikszentmihalyi, M. & Larson, R. (1984). Being adolescent: conflict and growth in the teenage years. New York: Basic Books.
- Csikszentmihalyi, M. & Nakamura, J. (1989). The dynamics of intrinsic motivation: A study of adolescents. In C. Ames & R. Ames (Eds.), Research on motivation in education (Vol. 3, Goals and cognitions). San Diego, CA: Academic Press.
- Csikszentmihalyi, M. Rathunde, K. & Whalen, S. (1993). Talented teenagers: A longitudinal study of their development. Cambridge: Cambridge University Press.
- Csikszentmihalyi, M. & Robinson, R. E. (1986). Culture, time, and the development of talent. In R. Sternberg & J. L. Davidson (Eds.), Conceptions of giftedness. New York: Cambridge University Press.
- Csikszentmihalyi, M. & Schiefele, U. (1992). The arts and quality of experience. In G. Reimer and R.A. Smith (Eds.), Arts in Education: The 91st yearbook of the Society for the Study of Education (169-191). Chicago: University of Chicago Press.
- Davis, P. J. & Hersh, R. (1981). The mathematical experience. Boston: Houghton-Mifflin.
- deCharms, R. (1968). Personal causation: The internal affective determinants of behavior. New York: Academic Press.

- deCharms, R. (1976). Enhancing motivation: Change in the classroom. New York: Irvington Publishers, Inc.
- Deci, E. L. (1971). The effects of externally mediated rewards on intrinsic motivation. Journal of Personality and Social Psychology, 18, 113-120.
- Deci, E. L. (1972). Intrinsic motivation, extrinsic reinforcement, and inequity. Journal of Personality and Social Psychology, 22, 113-120.
- Deci, E. L. (1995). Why we do what we do. New York: G. P. Putnam's Sons.
- Deci, E. L., Nezlec, J., & Sheinman, L. (1981). Characteristics of the rewarder and intrinsic motivation of the rewardee. Journal of Personality and Social Psychology, 40, 1-10.
- Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. New York: Plenum Press.
- Deci, E. L., Schwartz, A. J., Sheinman, L., & Ryan, R. M. (1981). An instrument to assess adults' orientations toward control versus autonomy with children: Reflections on intrinsic motivation and perceived competence. Journal of Educational Psychology, 73, 642-650.
- Dewey, J. (1902). The child and the curriculum. Chicago: University of Chicago Press.
- Dewey, J. (1913). Interest and effort in education. Boston: Riverside Press.
- Dollard, J., & Miller, N. E. (1950). Personality and psychotherapy. New York: McGraw-Hill.
- Doyle, W. (1978). Paradigms for research on teacher effectiveness. In L. S. Shulman (Ed.), Review of Research in Education (5). Itasca, IL: F. E. Peacock.
- Doyle, W. (1983). Academic work. Review of Educational Research, 53, 159-200.
- Dweck, C. S. (1985). Intrinsic motivation, perceived control, and self-evaluation maintenance: An achievement goal analysis. In C. Ames & R.E. Ames (Eds.), Research on motivation in education: The classroom milieu (pp. 289-305). San Diego, CA: Academic Press.
- Dweck, C. S., & Elliot, E. S. (1983). Achievement motivation. In E. M. Hetherington (Ed.), P. H. Mussen (Series Ed.), Handbook of child psychology: Vol. 4. Socialization, personality, and social development. New York: Wiley.

- Early, D. & Barrett, M. (1991). Predicting learned helplessness and achievement: The role of locus on control and motivational orientation. Paper presented at the Biennial Meeting of the Society for Research in Child Development (Seattle, WA, April 18-20, 1991).
- Eccles, J. S. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), Achievement and achievement motives (pp. 75-146). San Francisco: Freeman.
- Eccles, J. S. & Midgley, C. (1989). Stage--environment fit: Developmentally appropriate classrooms for young adolescents. In C. Ames & R. Ames (Eds.), Research on motivation in education (Vol. 3, Goals and cognitions). San Diego, CA: Academic Press.
- Eccles, J. S., Wigfield, A. Reuman, D., & Mac Iver, D. (1987, April). Changes in students' beliefs about four activity domains: The influence of the transition to junior high school. Paper presented at the annual meeting of the American Educational Research Association, Washington, D.C.
- Elliott, E. S., & Dweck, C. S. (1988). Goals: An approach to motivation and achievement. Journal of Personality and Social Psychology, 54, 5-12.
- Enzle, M. E., Roggeveen, J. P., & Look, S. C. (1991). Self- versus other-reward administration and intrinsic motivation. Journal of Experimental Social Psychology, 27, 468-479.
- Feldhusen, J. F. (1989). Synthesis of research on gifted youth. Educational Leadership, 46, 6-11.
- Feldman, D. H. (1979). The mysterious case of extreme giftedness. In A. H. Passow (Ed.), The gifted and talented: Their education and development. The Seventy-eighth Yearbook of the National Society for the Study of Education (pp. 335-351). Chicago: University of Chicago Press.
- Fey, J. T. (1982). Status and prospects. In S. Hill (Ed.), Education in the 80's: Mathematics. Washington, D.C.: National Education Association.
- Flink, C., Boggiano, A. K., & Barrett, M. (1990). Controlling teaching strategies: Undermining children's self-determination and performance. Journal of Personality and Social Psychology, 59(5), 916-924.
- Flink, C., Boggiano, A. K., Main, D. S., Barrett, M., & Katz, P. A. (1992). Children's achievement-related behaviors: The role of extrinsic and intrinsic motivational orientations. In A. K. Boggiano & T. S. Pittman (Eds.), Achievement and motivation:

- A social-developmental perspective (pp. 189-214). New York: Cambridge University Press.
- Flora, S. R. (1990). Undermining intrinsic interest from the standpoint of a behaviorist. The Psychological Record, 40, 323-346.
- Garbarino, J. (1975). The impact of anticipated reward upon cross-age tutoring. Journal of Personality and Social Psychology, 32, 421-428.
- Gardner, H. (1993). Creating minds. New York: Basic Books.
- Geen, R. G., Beatty, W. M., & Arkin, R. M. (1984). Human motivation: Physiological, behavioral, and social approaches. Boston: Allyn and Bacon, Inc.
- Getzels, J. W. (1964). Creative thinking, problem-solving, and instruction. In E. R. Hilgard (Ed.), Theories of learning and instruction, 63rd Yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press.
- Getzels, J. W., & Csikszentmihalyi, M. (1976). The creative vision: A longitudinal study of problem finding in art. New York: Wiley Interscience.
- Ginsburg, G. S., & Bronstein, P. (1993). Family factors related to children's intrinsic/extrinsic motivational orientation and academic performance. Child Development, 64, 1461-1474.
- Glucksberg, S. (1962). The influence of strength of drive on functional fixedness and perceptual recognition. Journal of Experimental Psychology, 63, 36-41.
- Goodlad, J. I. (1984). A place called school. New York: McGraw-Hill.
- Gottfried, J. I. (1981). Measuring children's academic intrinsic motivation: A psychometric approach. Paper presented at the meeting of the American Psychological Association, Los Angeles, CA.
- Gottfried, A. E. (1985). Academic intrinsic motivation in elementary and junior high school students. Journal of Educational Psychology, 77(6), 631-645.
- Gottfried, A. E., & Gottfried, A. W. (1991). Parents' reward strategies and children's academic intrinsic motivation and school performance. Paper presented at the Biennial Meeting of the Society for Research in Child Development, Seattle, WA, April 18-20, 1991).

- Grannis, J. C. (1978). Task engagement and the consistency of pedagogical controls: An ecological study of differently structured classroom settings. Curriculum Inquiry, 8(1), 3-36.
- Green, L. & Foster, D. (1986). Classroom intrinsic motivation: Effects of scholastic level, teacher orientation, and gender. Journal of Educational Research, 80(1), 34-39.
- Gump, P. V. (1967). The classroom behavior setting: Its nature and relation to student behavior. Final Report, U.S. Office of Education project no. 2453. Lawrence, KS: University of Kansas Press.
- Gustin, W. (1985). The development of exceptional research mathematicians. In B. S. Bloom (Ed.), Developing talent in young people. New York: Ballantine.
- Gustin, W. (1987). Talented research mathematicians: A retrospective study of exceptional cognitive development. Unpublished doctoral dissertation. Chicago: University of Chicago Press.
- Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: Motivational and informational components. Developmental Psychology, 17, 300-312.
- Harter, S. & Connell, J. P. (1984). A model of children's achievement and related self-perceptions of competence, control, and motivational orientations. In J. Nicholls (Ed.), The development of achievement-related cognitions and behavior. Greenwich, CT: JAI.
- Heider, F. (1958). The psychology of interpersonal relations. New York: Wiley & Sons.
- Heine, C. A. (1989). Compelling instruction: A pilot study of instructional practices in religious education. Unpublished manuscript. University of Chicago, Department of Education, Chicago.
- Hennessey, B., & Amabile, T. (1988). Conditions of creativity. In R. Sternberg (Ed.), The nature of creativity. Cambridge: Cambridge University Press.
- Hoyles, C. (1982). The pupil's view of mathematics learning. Educational Studies in Mathematics, 13, 349-372.
- Hughes, T., & McCullough, F. (Eds.). (1982). The journals of Sylvia Plath. New York: Dial.
- Hull, C. L. (1943). Principles of behavior. New York: Appleton-Century-Crofts.

- Hunt, J. (1965). Intrinsic motivation and its role in psychological development. In D. Levine (Ed.), Nebraska symposium on motivation (Vol. 12, pp. 189-282). Lincoln: University of Nebraska Press.
- Jackson, P. W. (1986). The practice of teaching. New York: Teachers College Press.
- Jagacinski, C., & Nicholls, J. G. (1987). Competence and affect in task involvement and ego involvement: The impact of social comparison information. Journal of Educational Psychology, 79, 107-114.
- James, W. (1890). Principles of psychology. Vol. 1. New York: Henry Holt.
- Jellin, H. G., & Verduin, J. R. (1986). Handbook for differential education of the gifted. Carbondale, IL: Southern Illinois University Press.
- Jones, L. V. (1988). School achievement trends in mathematics and science, and what can be done to improve them. In E. E. Rothkopf (Ed.), Review of research in education (Vol. 15, pp. 307-341). Washington, D.C.: American Educational Research Association.
- Kamii, C., Clark, F. B., & Dominick, A. (1994). The six national goals: A road to disappointment. Phi Delta Kappan, 75(9), 672-677.
- Koestner, R., Zuckerman, M., & Koestner, J. (1987). Praise, involvement, and intrinsic motivation. Journal of Personality and Social Psychology, 53, 383-390.
- Krutetskii, V. A. (1976). The psychology of mathematical abilities in school children. Chicago, IL: University of Chicago Press.
- LaPointe, A. E., Mead, N. A., & Phillips, G. W. (1989). A world of differences: An international assessment of mathematics and science. Princeton, NJ: ETS.
- LeFevre, J. (1988). Flow and the quality of experience during work and leisure. In M. Csikszentmihalyi & I. Csikszentmihalyi (eds.), Optimal experience: Psychological studies of flow in consciousness. Cambridge: Cambridge University Press.
- Lepper, M. R., & Greene, D. (1978). The hidden costs of rewards. Hillsdale, NJ: Erlbaum.
- Lepper, M.R., Greene, D., & Nisbett, R. E. (1973). Undermining children's intrinsic interest with extrinsic reward: A test of the "overjustification" hypothesis. Journal of Personality and Social Psychology, 28(1), 129-137.

- Lepper, M. R., & Hodell, M. (1988). When learning is fun: Instructional consequences of enhancing students' intrinsic motivation. Unpublished manuscript, Stanford University.
- Lepper, M. R., & Hodell, M. (1989). Intrinsic motivation in the classroom. In C. Ames & R. Ames (Eds.), Research on motivation in education (Vol. 3, Goals and cognitions). San Diego, CA: Academic Press.
- Lepper, M. R., & Malone, T. W. (1987). Intrinsic motivation and instructional effectiveness in computer-based education. In R. E. Snow & M. J. Farr (Eds.), Aptitude, learning, and instruction: Vol. III. Conative and affective process analyses. Hillsdale, NJ: Erlbaum.
- Lord, F. M., & Novick, M. R. (1968). Statistical theories of mental test scores. Reading, MA: Addison-Wesley.
- MacIver, D. J., Stipek, D. J., & Daniels, D. H. (1991). Explaining within-semester changes in student effort in junior high school and senior high school courses. Journal of Educational Psychology, *83*(2), 201-211.
- Maehr, M. L., & Nicholls, J. G. (1980). Culture and achievement motivation: A second look. In N. Warren (Ed.), Studies in cross cultural psychology. San Diego, CA: Academic Press.
- Malone, T. W. (1981). Toward a theory of intrinsically motivating instruction. Cognitive Science, *4*, 333-369.
- Massimini, F. & Carli, M. (1988). The systematic assessment of flow in daily experience. In M. Csikszentmihalyi & I. Csikszentmihalyi (eds.), Optimal experience: Psychological studies of flow in consciousness. Cambridge: Cambridge University Press.
- Mayers, P. (1978). Flow in adolescence and its relation to school experience. Unpublished doctoral dissertation, University of Chicago.
- McArdle, J. J., & McDonald, R. P. (1984). Some algebraic properties of the Reticular Action Model for moment structures. British Journal of Mathematical and Statistical Psychology, *37*, 234-251.
- McCombs, B. L. (1991). Overview: Where have we been and where are we going in understanding human motivation? Journal of Experimental Education, *60*(1), 5-14.
- McCullers, J. C., & Martin, J. A. G. (1971). A reexamination of the role of incentive in children's discrimination learning. Child Development, *42*, 827-837.

- McGraw, K., & McCullers, J. C. (1979). Evidence of a detrimental effect of extrinsic incentives on breaking a mental set. Journal of Experimental Social Psychology, 15, 285-294.
- McKnight, C., Crosswhite, F., Dossey, J., Kifer, E., Swafford, J., Travers, K., & Cooney, T. (1987). The underachieving curriculum. Champaign, IL: Stipes Publishing Co.
- McLeod, D. B. (1990). Information-processing theories and mathematics learning: The role of affect. International Journal of Educational Research, 14, 13-29.
- Meece, J. L. (1991). The classroom context and students' motivational goals. In M. Maehr and P. Pintrich (Eds.), Advances in motivation and achievement (Vol. 7, pp. 261-286). Greenwich, CT: JAI Press.
- Meece, J. L., Blumenfeld, P. C., & Hoyle, R. H. (1988). Students' goal orientations and cognitive engagement in classroom activities. Journal of Educational Psychology, 80, 514-523.
- Middleton, J. A., Littlefield, J., & Lehrer, R. (1992). Gifted students' conceptions of academic fun: An examination of a critical construct for gifted education. Gifted Child Quarterly, 36(1), 38-44.
- Mitchell, J. V. (1992). Interrelationships and predictive validity for indices of intrinsic, extrinsic, and self-assessed motivation for learning. Journal of Research and Development in Learning, 25(3), 149-155.
- Mullis, I. V. S., Owen, E. H., Phillips, G. W. (1990). Accelerating academic achievement: A summary of findings from 20 years of NAEP. Princeton, NJ: ETS.
- Murray, H. A. (1938). Explorations in personality. New York: Oxford University Press.
- Nakamura, J. (1988). Optimal experience and the uses of talent. In Csikszentmihaly, M. & Csikszentmihalyi, I. (Eds.), Optimal experience: Psychological studies of flow in consciousness. Cambridge: Cambridge University Press.
- National Assessment of Educational Progress. (1994). Trends in academic progress: Achievement of U.S. students in Science 1969-1992, Mathematics 1973-1992, Reading, 1971-1992, Writing 1984-1992. Washington, D.C.: Author.
- National Center for Educational Statistics. (1994a). Digest of educational statistics, the condition of education, and youth indicators. Washington, D.C.: Author.

- National Center for Educational Statistics. (1994b). Indicator of the month: Mathematics and science course-taking patterns. Washington, D.C.: Author.
- National Commission on Excellence in Education. (1983). A nation at risk: The imperative for educational reform. Washington, D.C.: U.S. Government Printing Office.
- National Council of Teachers of Mathematics. (1989). Curriculum and evaluation standards for school mathematics. Reston, VA: Author.
- National Council of Teachers of Mathematics. (1996). Curriculum standards for grades 5-8. [Http://www.enc.org/online/NCTM/28065.html#over](http://www.enc.org/online/NCTM/28065.html#over).
- National Educational Goals Panel. (1992) Handbook for local goals reports, 1992: Building a community of learners. Washington, D.C.: Author.
- National Education Goals Report. (1993). The national report: Building a nation of learners, Volume 1. Washington, D.C.: U.S. Government Printing Office.
- National Science Foundation. (1996). The learning curve: What we are discovering about U.S. science and mathematics education. Washington, D.C.: National Science Foundation
- Nicholls, J. G. (1972). Conceptions of ability and achievement motivation: A theory and its implications for education. In S. G. Paris, G. M. Olson, & H. W. Stevenson (Eds.), Learning and motivation in the classroom. Hillsdale, NJ: Lawrence Erlbaum.
- Nicholls, J. G. (1976). Effort is virtuous but it's better to have ability: Evaluative responses to perceptions of effort and ability. Journal of Research in Personality, 10, 306-315.
- Nicholls, J. G. (1984a). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. Psychological Review, 91, 328-346.
- Nicholls, J. G. (1984b). Conceptions of ability and achievement motivation. In R. E. Ames & C. Ames (Eds.), Research on motivation in education. Vol. 1, Student motivation. Orlando: Academic Press.
- Nicholls, J. G. (1989). The competitive ethos and democratic education. Cambridge, MA: Harvard University Press.
- Nicholls, J. G., & Hazzard, S. (1993). Education as adventure. New York: Teachers College Press.

- Oakes, J. (1985). Keeping track: How schools structure inequality. New Haven CT: Yale University Press.
- Olszewski-Kubilius P., Shaw, B., Kulieke, M., & Willis, G. (1990). Predictors of achievement in mathematics for gifted males and females. Gifted Child Quarterly, *35*, 64-71.
- Piaget, J. (1970). Science of education and the psychology of the child. New York: Orion.
- Piirto, J. (1991). Encouraging creativity and talent in adolescents. In M. Bireley & J. Genshaft (Eds.), Understanding the gifted adolescent. New York: Teachers College Press.
- Pintrich, P. R., & DeGroot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. Journal of Educational Psychology, *82*(10), 33-40.
- Pintrich, P. R., Roeser, R. W., & DeGroot, E. A. M. (1994). Classroom and individual differences in early adolescents' motivation and self-regulated learning. Journal of early adolescence, *14*(2), 139-161.
- Plato. (1956). Protagoras and Meno (W. Guthrie, Trans.). New York: Viking Penguin.
- Poincarè, H. (1952). Science and method (F. Maitland, Trans.). New York: Dover.
- Posner, G. (1982). A cognitive science conception of curriculum and instruction. In P. H. Taylor, et al., (Eds.), Journal of curriculum studies, (Vol. 14, #4). London: Taylor and Francis, Ltd.
- Rathunde, K. R. (1988). Optimal experience and the family context. In M. Csikszentmihalyi & I. Csikszentmihalyi (eds.), Optimal experience: Psychological studies of flow in consciousness. Cambridge: Cambridge University Press.
- Rathunde, K. R. (1989). Family context and optimal experience in the development of talent. Unpublished doctoral dissertation, University of Chicago.
- Raynor, J. O., & Smith, C. P. (1966). Achievement-related motives and risk-taking in games of skill and chance. Journal of Personality, *34*, 176-198.
- Renninger, K. A., Hidi, S., & Krapp, A. (1992). The role of interest in learning and development. Hillsdale, NJ: Erlbaum.

- Reuman, D. A. (1986). Motivational implications of ability grouping in sixth-grade mathematics: A strong inference approach to theories of achievement motivation. (Doctoral Dissertation, University of Michigan, 1986). Dissertation Abstracts International, 47, 1315B.
- Reynolds, A. J., & Walberg, H. J. (1991). A structural model of science achievement. Journal of Educational Psychology, 83, 97-107.
- Reynolds, A. J., & Walberg, H. J. (1992a). A structural model of science achievement and attitude: An extension to high school. Journal of Educational Psychology, 84(3), 371-382.
- Reynolds, A. J., & Walberg, H. J. (1992b). A structural model of high school mathematics outcomes. Journal of Educational Research, 85, 150-158.
- Rhoad, R., Milauskas, G., & Whipple, R. (1991). Geometry for enjoyment and challenge. Evanston, IL: McDougal, Littel & Company.
- Richert, E. S. (1991). Patterns of underachievement among gifted students. In M. Bireley & J. Genshaft (Eds.), Understanding the gifted adolescent. New York: Teachers College Press.
- Roe, A. (1953). The making of a scientist. New York: Dodd, Mead.
- Rollett, B. A. (1985). Achievement motivation versus effort avoidance motivation. In J. T. Spence & C. E. Izard (Eds.), Motivation, emotion and personality. North-Holland: Elsevier Science Publishers B. V.
- Rosenholtz, S. J. & Simpson, C. (1984). The formation of ability conceptions: Developmental trend or social construction? Review of Educational Research, 54, 31-63.
- Rousseau, J. (1979). Emile (A. Bloom, Trans.). New York: Basic Books.
- Ryan, R. M. (1982). Control and information in intrapersonal sphere: An extension of cognitive evaluation theory. Journal of Personality and Social Psychology, 43, 328-346.
- Ryan, R. M., Connell, J. P., & Deci, E. L. (1985). A motivational analysis of self-determination and self-regulation in education. In C. Ames & R. Ames (Eds.), Research on motivation in education, (Vol. 2: The classroom milieu). London: Academic Press.

- Ryan, R. M. & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. Journal of Personality and Social Psychology, 57, 749-761.
- Ryan, R. M., & Grolnick, W. S. (1986). Origins and pawns in the classroom: Self-report and projective assessments of individual differences in children's self-perceptions. Journal of Personality and Social Psychology, 50, 550-558.
- Ryan, R. M., & Powelson, C. L. (1991). Autonomy and relatedness as fundamental to motivation and education. Journal of Experimental Education, 60(1), 49-66.
- Salomon, G. (1991). Transcending the qualitative-quantitative debate: The analytic and systemic approaches to educational research. Educational Researcher, 20, 10-18.
- Schiefele, U. (1991). Interest, learning, and motivation. Educational Psychologist, 26, 299-323.
- Schiefele, U. & Csikszentmihalyi, M. (1994). Interest and the quality of experience in classrooms. European Journal of Psychology of Education, 9, 251-269.
- Schiefele, U. & Csikszentmihalyi, M. (1995). Motivation and ability as factors in mathematics experience and achievement. Journal for Research in Mathematics Education, 26, (2), 163-181.
- Schiefele, U., Krapp, A., & Winteler, A. (1992). Interest as a predictor of academic achievement: A meta-analysis of research. In K. A. Renninger, S. Hidi, & A. Krapp (Eds.), The role of interest in learning and development Hillsdale, NJ: Erlbaum.
- Schlick, M. (1934). Über das Fundament der Erkenntnis. Erkenntnis 4. English translation in A. J. Ayer (Ed.), Logical positivism. New York: Free Press.
- Schneider, W., & Bös, K. (1985). Exploratorische Analysen zu Komponenten des Schulerfolgs. Zeitschrift für Entwicklungspsychologie und Pädagogische Psychologie, 17, 325-340.
- Seegers, G. & Boekaerts, M. (1993). Task motivation and mathematics achievement in actual task situations. Learning and Instruction, 3, 133-150.
- Shore, B. M., Cornell, D. G., Robinson, A., & Ward, V. S. (1991). Recommended practices in gifted education. New York: Teachers College Press.
- Simonton, D. K. (1988). Scientific genius: A psychology of science. Cambridge: Cambridge University Press.

- Slade, L. A., & Rush, M. C. (1991). Achievement motivation and the dynamics of task difficulty choices. Journal of Personality and Social Psychology, 60(1), 165-172.
- Slavin, R. E. (1984). Students motivating students to excel: Cooperative incentives, cooperative tasks, and student achievement. Elementary School Journal, 85, 53-63.
- Sowell, E., Zeigler, A., Bergwall, L., & Cartwright, R. (1990). Identification and description of mathematically gifted students: A review of empirical research. Gifted Child Quarterly, 34(4), 147-153.
- Spaulding, C. L. (1992). Motivation in the classroom. New York: McGraw-Hill.
- Spence, J. T. (1985). Achievement and achievement motivation: A cultural perspective. In J. T. Spence & C. E. Izard (Eds.), Motivation, emotion and personality (Vol. 5). Amsterdam: North-Holland
- Spence, K. W. (1956). Behavior theory and conditioning. New Haven, CT: Yale University Press.
- Stanley, J. C. (1991). An academic model for educating the mathematically talented. Gifted Child Quarterly, 35(1), 1991.
- Stanley, J. C., & Benbow, C. P. (1986). Youths who reason exceptionally well mathematically. In R. J. Sternberg (Ed.), Conceptions of giftedness. Cambridge: Cambridge University Press.
- Stanley, J. C., Keating, D. P., & Fox, L. H. (Eds.). (1974) Mathematical talent: Discovery, description, and development. Baltimore: Johns Hopkins University Press.
- Stark, J. S., Bentley, R. J., Lowther, M. A., & Shaw, K. M. (1991). The student goals exploration: Reliability and concurrent validity. Educational and Psychological Measurement, 51, 413-422.
- Steinkamp, M. W., & Maehr, M. L. (1983). Affect, ability, and science achievement: A quantitative synthesis of correlational research. Review of Educational Research, 53, 369-396.
- Stodolsky, S. (1988). The subject matters. Chicago: University of Chicago Press.
- Swiatek, M A., & Benbow, C. P. (1991). A 10-year longitudinal follow-up of participants in a fast-paced mathematics course. Journal for Research in Mathematics Education, 22(2), 138-150.

- Tang, T. L. P. (1990). Factors affecting intrinsic motivation among university students in Taiwan. Journal of Social Psychology, 130, 219-230.
- Schmidt, W. H., McKnight, C. C., & Raizen, S. A. (1997). A splintered vision: An investigation of U.S. Science and Mathematics Education. [Http://ustimss.msu.edu/splintrd.html](http://ustimss.msu.edu/splintrd.html).
- Thompson, E. P., Chaiken, S., & Hazlewood, J. D. (1993). Need for cognition and desire for control as moderators of extrinsic reward effects: A person X situation approach to the study of intrinsic motivation. Journal of Personality and Social Psychology, 64(6), 987-999.
- Tomlinson, T. (1992). Hard work and high expectation: Motivating students to learn. Washington, D.C.: U. S. Government Printing Office.
- Torrance, E. P. (1965). Rewarding creative behavior. Englewood Cliffs, NJ: Prentice-Hall.
- Usiskin, Z. (1982, April). Motivation and the sequencing of mathematics content. Paper presented at the annual meeting of the National Council of Teachers of Mathematics, Toronto, Ontario.
- Usiskin, Z. (1994). Individual differences in the teaching and learning of mathematics. UCSMP Newsletter, 14, 7-14. Chicago: University of Chicago.
- Valås, H., & Sjøvik, N. (1993). Variables affecting students' intrinsic motivation for school mathematics: Two empirical studies based on Deci and Ryan's theory of motivation. Learning and Instruction, 3, 281-298.
- Valian, V. (1977). Learning to work. In S. Ruddick & P. Daniels (Eds.), Working it out. New York: Pantheon.
- Vallerand, R. J. & Bissonnette, R. (1992). Intrinsic, extrinsic and amotivational styles as predictors of behavior: A prospective study. Journal of Personality, 60(3), 599-620.
- Wallace, D. B., & Gruber, H. E. (1989). Creative people at work. New York: Oxford University Press.
- Wegner, D. M., & Vallacher, R. R. (1977). Implicit psychology: An introduction to social cognition. New York: Oxford University Press.
- Weiner, B. (1986). An attributional theory of motivation and emotion. New York: Springer-Verlag.

- Weiner, B. (1992). Motivation. In M. C. Aiken (Ed.), Encyclopedia of educational research (6th Edition, Vol. 3). New York: Macmillan.
- White, R. (1959). Motivation reconsidered: The concept of competence. Psychological Review, 66, 297-333.
- Whitmore, J. R. (1980). Giftedness, conflict and underachievement. Boston: Allyn & Bacon.
- Wiersma, U. J. (1991). Combined effects of intrinsic and extrinsic rewards on motivation. Psychological Reports, 68, 871-882.
- Wigfield, A. & Eccles, J. S. (1992). The development of achievement task values: A theoretical analysis. Developmental Review, 12(3), 265-310.
- Wigfield, A. & Eccles, J. S. (1994). Children's competence beliefs, achievement values and general self-esteem: Change across elementary and middle school. Journal of Early Adolescence, 14(2), 107-138.
- Willson, V. (1983). A meta-analysis of the relationship between science achievement and science attitude: Kindergarten through college. Journal of Research in Science Teaching, 20, 839-850.
- Wittrock, M. C. (1991). Generative teaching of comprehension. The Elementary School Journal, 92(2), 169-184.
- Wong, M. M., & Csikszentmihalyi, M. (1991). Motivation and academic achievement: The effects of personality traits and the quality of experience. Journal of Personality, 59(3), 539-574.
- Yamamoto, K., Thomas, E. C., & Karns, E. A. (1969). School-related attitudes in middle-aged students. American Educational Research Journal, 6, 191-206.