

A mining research report

JULY 1988

**RESEARCH AND  
EVALUATION METHODS  
FOR MEASURING  
NONROUTINE MINE  
HEALTH AND SAFETY  
SKILLS:  
BIBLIOGRAPHY**

Contract HO348040  
University of Kentucky

BUREAU OF MINES  
UNITED STATES DEPARTMENT OF THE INTERIOR

**Disclaimer Notice**

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies or recommendations of the Interior Department's Bureau of Mines or of the U. S. Government.

<b>REPORT DOCUMENTATION PAGE</b>	1. REPORT NO. BRASH/R85-2	2.	3. Recipient's Accession No.
4. Title and Subtitle Research and Evaluation Methods for Measuring Nonroutine Mine Health and Safety Skills: Bibliography		5. Report Date June 1988	
7. Author(s) Henry P. Cole, Philip K. Berger, Charles Vaught, Warren G. Lacefield, Ronald D. Wasielewski, John V. Haley, Shannon L. Price		6.	
9. Performing Organization Name and Address Behavioral Research Aspects of Safety and Health (BRASH) Group Institute for Mining and Minerals Research University of Kentucky 201 Porter Building Lexington, Kentucky 40506-0205		8. Performing Organization Rept. No.	
12. Sponsoring Organization Name and Address U.S. Bureau of Mines Columbia Plaza 2401 E Street NW Washington, DC 20241		10. Project/Task/Work Unit No.	
15. Supplementary Notes This is a comprehensive bibliography of research reviewed in the course of completing the project work.		11. Contract(C) or Grant(G) No. (C) USBM H0348040 (G)	
		13. Type of Report & Period Covered Phase I 10/84-6/87	
		14.	
16. Abstract (Limit: 200 words) A comprehensive review of published research was carried out to identify methods for teaching and assessing critical but nonroutine skills needed for coping with emergency situations. Computerized searches of the relevant data bases were carried out, along with identification of relevant articles and materials by personal contact with experts in many fields. The citations listed in this bibliography resulted from this systematic literature search and review. The computer searches and an analysis of this literature are described in technical report 1. Specific methods for assessing critical skills proficiency in aviation, medicine, organization management, the military, and other industrial/technical workplaces were described. The potential application of these methods for teaching and assessing (1) critical first aid and (2) self-rescue and escape skills to underground coal miners in annual refresher training was explored. Research and development activities that may improve mine health and safety training were suggested. Most of the entries in this bibliography were assembled in 1984 through 1985. Study of these materials contributed to the completion of the project research that followed. This later work is reported in the project technical report 2 and the final report. This bibliography is most useful when combined with examination of technical reports 1 and 2 and the final project report.			
17. Document Analysis a. Descriptors Mining Evaluation Decision Making Safety Coal Mining Assessment Judgment Accident Prevention Underground Mining Measurement Problem Solving Industrial Accidents Performance Evaluation Thinking First Aid  b. Identifiers/Open-Ended Terms Mine Emergencies Critical Skills Refresher Training Simulation Training Self Rescue and Escape  c. COSATI Field/Group			
18. Availability Statement		19. Security Class (This Report) unclassified	21. No. of Pages 71
		20. Security Class (This Page) unclassified	22. Price

## FOREWORD

This report was prepared by the Behavioral Research Aspect of Safety and Health Working Group (BRASH), Institute for Mining and Minerals Research (IMMR), University of Kentucky under USBM Contract number HO348040. The contract was initiated under the Coal Mine Health and Safety Program. It was administered under the technical direction of the Pittsburgh Research Center with William J. Wiehagen acting as Technical Project Officer. Michael L. Nowicki was the contract administrator for the Bureau of Mines. This report is a summary of the work recently completed as a part of this contract during the period of October 1, 1984 to May 31, 1988. This report was submitted by the authors on July 1, 1988.

## BIBLIOGRAPHY

This bibliography is intended to assist researchers by bringing together literature from across many fields in order to present empirical, theoretical, and practical knowledge needed to identify, define, teach, and assess emergency first aid and self-rescue/escape skills. It also offers many other less specialized references that deal with the conceptual and methodological issues and techniques involved in defining, sampling, teaching, and measuring human proficiency in these critical but nonroutine areas.

### Sources of Literature Identified

The citations contained herein are the product of systematic strategies developed and executed in computer searches of published literature from nineteen of the world's foremost technical databases, augmented by extensive library research (see Chapter 2 of the project first technical report (Cole, Berger, Vaught, Lacefield, Wasielewski, Haley, & Price, 1987a). The focus of the search was suggested by two broad categories. The first category concerns first aid skills needed by all miners for immediate treatment of self and co-workers who are accident victims. The second category deals with procedures, judgments, decisions, and strategies required to escape, prevent, or minimize injury to self and co-workers in mine emergency situations such as ventilation failure, fire, or explosion.

### Content Areas Included

There have been few studies concerning the proficiency of miners in these critical nonroutine skills. Therefore, research dealing with human performance in similar emergency skill areas was examined. These related research efforts include the training and assessment of critical skills needed by aviation crews to cope with inflight emergencies, by medical personnel to deal with trauma and illness, by military personnel to cope with a variety of emergencies, by industrial and business managers to deal with disasters or potential disaster situations, and studies of people's behavior in escaping from complex structures in fires.

A variety of specific measurement methodologies, primarily based on criterion referenced performance assessment procedures, are also cited. These include skill teaching and assessment exercises constructed by the Gilbert simulation method, the simulated management problem (SMP) approach, judgment and decision-making problems, adaptive testing procedures, and mental exercises designed to foster retention of complex motor skill performance. Each of these approaches has been applied to teach and assess proficiency of critical nonroutine skills in fields other than mining. Examples of how these and similar methods can be applied to underground coal mine emergencies comprise a major portion of this report.

### Current Version of the Bibliography

This bibliography was continually updated, and grew through the

life of the project. The current version includes literature references in the following areas: 1) first aid; 2) self-rescue and escape including emergency breathing apparatus instruction and use; 3) cognitive psychology, instructional design and training materials; 4) accident analysis and prevention; 5) criterion referenced performance assessment; 6) judgment and decision-making; 7) adaptive testing; and 8) readability analysis, scripts, and story grammar. No further attempt has been made to classify the bibliography into categories. Many articles overlap among categories. Articles and reports are arranged in alphabetic order to ensure easy access to referenced authors. This bibliography can most easily be used in conjunction with the project final report and two earlier technical reports.

#### BIBLIOGRAPHY

- AAAS Commission on Science Education. (1967). Science -- A Process Approach (Parts A-F). New York: Xerox Corp.
- Aaron, J. E., Bridges, A. F., & Ritzel, D. O. (1972). First aid and emergency care. New York: Macmillan.
- Adams, N. L., & Hartwell, N. M. (1977). Accident-reporting systems: A basic problem area in industrial society. Journal of Occupational Psychology, 50(4), 285-298.
- Adkins, J., Akeley, R., Chase, P., Marrus, L., Prince, W., Redick, R., Rogne, C., Saalberg, J., & Szempruch, L. (1975). Review and evaluation of current training programs found in various mining environments (Vols. 1-2). In J. E. Rankin (Comp.), Bibliography: Human factors in mine safety (pp. 53-54). Beckley, WV: National Mine Health and Safety Academy, Office of Research and Planning.
- Allen, M., Cameron, F., Fortner, M., & Nair, M. (1983). A pilot study to evaluate coal miners' attitude change toward mine safety as a result of taking the mandated 16-hour annual re-training program. Unpublished manuscript, University of Kentucky, Lexington.

- 
- Allister, C., & Hamilton, G. M. (1983). Cardowan coal mine explosion: Experience of a mass burns incident. Medical Practice, 287(6389), 403-405.
- Allodi, F., & Montgomery, R. (1979). Psychosocial aspects of occupational injury. Social Psychiatry, 14, 25-29.
- Alvares, K. M., & Hullin, C. L. (1972). Two explanations of temporal changes in ability-skill relationships: A literature review and theoretical analysis. Human Factors, 14(4), 295-308.
- Amandus, H. (1982). The Appalachian coal miner mortality study: 14-year follow-up. Morgantown, WV: National Institute for Occupational Safety and Health. (NTIS No. PB 83-235 556).
- Ambrose, D. H. (1984). Mine power system analysis-design computer programs (Information Circular No. 8970). Washington, DC: U. S. Bureau of Mines.
- American Academy of Orthopaedic Surgeons Committee on Allied Health. (1977). Workbook for emergency care and transportation of the sick and injured. Menasha, WI: George Banta Co.
- American Academy of Orthopaedic Surgeons. (1981). Emergency care and transportation of the sick and injured (3rd ed.). Chicago, IL: Author.
- American Red Cross. (1981). Standard first aid & personal safety (2nd ed.). Garden City, NY: Doubleday.
- Anglin, G. A., & Cole, H. P. (1983). Potentials and problems of systematic instructional design. Viewpoints in Teaching and Learning, 59(2), 1-12.
- Anzai, Y. (1984). Cognitive control of real-time event-driven systems. Cognitive Science, 8, 221-254.
- Applegate, J., & Krupp, K. (1983). Front-end loader training system (Bureau of Mines Contract No. HO308034). Cleveland, OH: Woodward Associates.
- Appleton, I. (1980). The requirements of research into the behaviour of people in fires. In D. Canter, (Ed.), Fires and human behaviour (pp. 13-30). Chichester: Wiley.
- Applied Science Associates, Inc., & Gates Engineering Company. (undated). A training program for fighting small fires in underground mines. Pittsburgh, PA: U. S. Bureau of Mines.
- Arizona Occupational Research Coordinating Unit. (1982). Competency-based common-core curriculum for emergency medical technician education. Phoenix, AZ: Author. (ERIC Document Reproduction Service No. ED 231 949).



- 
- Ayers, A. L. (1981). Developing criterion-referenced courses based on valid performance analysis. Beckley, WV: National Mine Health and Safety Academy.
- Ayers, A. L. (1983). Course recommendations for underground coal mine ventilation and air contaminants (UCVAC) course for on-the-job training. Beckley, WV: National Mine Health and Safety Academy.
- Ayers, A. L., & Hartsoy, D. (undated). Underground coal mine explosives and blasting for on-the-job training. Washington, DC: Mine Safety and Health Administration.
- Babbott, D., & Halter, W. D. (1983). Clinical problem-solving skills of internists trained in the problem-oriented system. Journal of Medical Education, 58(12), 947-953.
- Babbs, C. F. (1980). Knowledge gaps in CPR: Synopsis of a panel discussion. Critical Care Medicine, 8(3), 181-190.
- Bachman, J. W. (1983). The good neighbor rescue program: Utilizing volunteers to perform cardiopulmonary resuscitation in a rural community. The Journal of Family Practice, 16(3), 561-566.
- Bailey, M. E., & Bailey, F. A. (1975). Study of worker acceptance and attitudes toward mining equipment modifications. Cited in J. E. Rankin (Comp.), (1979). Bibliography: Human factors in mine safety (pp. 43-44). Beckley, WV: National Mine Health and Safety Academy, Office of Research and Planning.
- Bailey, M. E., Bailey, F. A., Brown, C. H., & Malesky, J. S. (1977). Worker attitudes toward modified mine equipment. Mining Congress Journal, 12, 55-57.
- Baker, F. B. (1977). Advances in item analysis. Review of Educational Research, 47, 151-178.
- Baker, R. A., & Winograd, E. (1957). Retention of basic combat skills by active duty personnel. Alexandria, VA: Human Resources Research Organization. (NTIS No. AD-A034127).
- Barber, L. C., Adderley, K. J., & Randall, M. (1981). Integrating evaluation with learning of cashiering skills: Problems and procedures. In A. J. Trott (Ed.), Aspects of educational technology: Vol. XV. Distance learning and evaluation (pp. 182-186). London: Kogan Page.
- Barrett, G. V., et al. (1981). Concurrent and predictive validity designs: A critical reanalysis. Journal of Applied Psychology, 6(1), 1-6.

- Baumann, A., & Bourbonnais, F. (1982). Nursing decision making in critical care areas. Journal of Advanced Nursing, 7(5), 435-446.
- Beach, H. D., & Lucas, R. A. (Eds.). (1960). Individual and group behavior in a coal mine disaster. Monographs of the Disaster Research Group, 13 (Publication No. 834).
- Begland, R. R. (1979). The analysis of "soft skills": An implementation strategy. Proceedings of the 21st Annual Conference of the Military Testing Association (pp. 328-336). (ERIC Document Reproduction Service No. ED 190 648).
- Beith, B., & Sanders, M. (1979). Experiments on personal equipment for low seam coal miners: V. Effect of reflectorized outer garments on detection and conspicuity of miners (Contract No. JO387213). Pittsburgh, PA: Bureau of Mines.
- Bell, B. & Rostan, J. (1982). Pregnant and mining: A handbook for pregnant miners. Oak Ridge, TN: Coal Employment project.
- Benatar, S. R., Mets, J. T. & Elmes, P. C., (1983). Occupational health and safety in South Africa. South African Medical Journal, 63(25). 952-954.
- Bennett, J. D., & Passmore, D. L. (1984). Correlates of coal mine accidents and injuries: A literature review. Accident Analysis & Prevention, 16(1), 37-45.
- Bennett, J. D., & Passmore, D. L. (1984). Probability of death, disability, and restricted work activity in United States underground bituminous coal mines, 1975-1981. Journal of Safety Research, 15(2), 69-76.
- Berger, L. B., & Schrenk, H. H. (1948). Sampling and analysis of mine atmospheres. Washington, DC: U. S. Government Printing Office.
- Bergeron, H. P., & Hinton, D. A. (1985). Aircraft automation: The problem of the pilot interface. Aviation, Space, and Environmental Medicine, 56(2), 144-148.
- Bergeron, J. D. (1982). First responder. Bowie, MD: Robert J. Brady Co.
- Berlin, J. I., Gruber, E. V., Holmes, C. W., Jensen, P. K., Lau, J. R., Mills, J. W., & O'Kane, J. M. (1982). Pilot judgment training and evaluation (Vol. 1). Daytona Beach, FL: Embry-Riddle Aeronautical University. (NTIS No. AD-All7 508).
- Berner, E. S. (1984). Paradigms and problem-solving: A literature review. Journal of Medical Education, 59(8), 625-633.

- 
- Bernhard, W. N., Urndorf, H., Cottrell, J. F., Veal, F., & Basak, A. (1979). Impact of cardiopulmonary resuscitation training on resuscitation. Critical Care Medicine, 7(6), 257-262.
- Berry, D. R., Billar, J. E., Boghani, A. B., Burnett, M., Hoadley, D., Maser, K. R., & Trent, R. J. (1976). Development of emergency escape systems guidelines for underground metal and nonmetal mines (Contract No. J0255017). Washington, DC: U. S. Bureau of Mines. (NTIS No. PB-273051) (Bumines OFR-134-77).
- Berry, D. R., et al. (1976). Final report for emergency systems guidelines for underground metal and nonmetal mines (Contract No. J0255017). Pittsburgh, PA: Bureau of Mines.
- Best, G. A. (1970). Direction-finding in large buildings. In D. V. Canter (Ed.), Architectural Psychology (pp. 72-75). London: RIBA Publications Ltd.
- Best, R. L. (1977). Reconstruction of a tragedy. The Beverly Hills Supper Club Fire. Washington, DC: National Fire Prevention and Control Administration. (NFPA No. LS-2).
- Betz, N. E., McBride, J. R., Sympson, J. B., Vale, C. D., Bock, R. D., Linn, R. L., & Weiss, D. J. (Ed.). (1975). Computerized adaptive trait measurement: Problems and prospects. Psychological Documents, 6, 3. (MS 1306).
- Betz, N. E., & Weiss, D. J. (1976). Effects of immediate knowledge of results and adaptive testing on ability test performance. Psychological Documents, 6(4), 118. (MS 1379).
- Betz, N. E., & Weiss, D. J. (1976). Psychological effects of immediate knowledge of results and adaptive ability testing. Psychological Documents, 6(4), 117. (MS 1378).
- Biggs, J. B. (1968). Information and human learning. North Melbourne, Victoria: Cassell Australia, Ltd.
- Billings, C. E., & Reynard, W. D. (1984). Human factors in aircraft incidents: Results of a 7-year study. Aviation, Space, and Environmental Medicine, 55(10), 960-965.
- Blignaut, C. J. H. (1979). The perception of hazard. I. Hazard analysis and the contribution of visual search to hazard perception. Ergonomics, 22(9), 991-999.
- Blignaut, C. J. H. (1979). The perception of hazard. II. The contribution of signal detection to hazard perception. Ergonomics, 22(11), 1177-1183.
- Blunt, J. (1975). History and development of the mines rescue service in Britain. Colliery Guardian, 223(8), 336-341.

- Bock, R. D. (1972). Estimating item parameters and latent ability when responses are scored in two or more nominal categories. Psychometrika, 37, 29-51.
- Bock, R. D., & Lieberman, M. L. (1970). Fitting a response model for N dichotomously scored items. Psychometrika, 35, 179-197.
- Boghani, A. B. (1978). Improving mine evacuation through computer simulation. Mining Magazine, 138(4), 354-359.
- Bonnet, A. (1985). Artificial intelligence: Promise and performance. Englewood Cliffs, NJ: Prentice-Hall.
- Boreham, N. C. (1978). Test-skill interaction errors in the assessment of nurses' clinical proficiency. Journal of Occupational Psychology, 51(3), 249-258.
- Borgman, C. L. (1984). Psychological research in human-computer interaction. In M. E. Williams (Ed.), Annual review of information science and technology, 19, 33-64.
- Borrello, M. A. (1983). Compressed oxygen one-hour self-rescuer. (Vol. 1) (Bureau of Mines OFR 178-83). Santa Ana, CA: U.S.D. Corporation, Survivair Division. (NTIS No. PB 84-105 337).
- Boswick, J. A. (1981). Emergency Care. Philadelphia, PA: W. B. Saunders.
- Bourne, L. E., Dominsowski, R. L., Loftus, E. F., & Healy, A. F. (1986). Cognitive processes, second edition. Englewood Cliffs, NJ: Prentice-Hall.
- Bowen, M. (1983). Fighting fire. Nursing Mirror, 156(26), 18-19.
- Bower, G. H. (1978). Experiments in story comprehension and recall. Discourse Processes, 1, 211-231.
- Bower, G. H. (Ed.). (1983). The psychology of learning and motivation. New York: Academic Press. V. 17, 1983.
- Bowers, E., Fishburn, T., Kerkering, C., & McWilliams, P. (1982). A user's guide to the ADA program (Accident Data Analysis). Spokane, WA: U. S. Bureau of Mines Spokane Research Center.
- Boyer, R. F. (1964). Coal mine disasters: Frequency by month. Science, 144, 1447-1449.
- Boyle, A. J. (1980). Found experiments in accident research: Report of a study of accident rates and implications for future research. Journal of Occupational Psychology, 53(1), 53-64.

- 
- Brabyn, L. A., & Brabyn, J. A. (1983). An evaluation of talking signs for the blind. Human Factors, 25(1), 49-53.
- Brandsford, J., Sherwood, R., Vye, N., & Rieser, J. (1986). Teaching, thinking and problem solving: Research Foundations. American Psychologist, 41, 1978-1089.
- Brant, R. A. (1983). Coal resources of the southwestern district, Kentucky. Lexington, KY: Institute for Mining and Minerals Research.
- Braune, R. J., & Trollip, S. R. (1982). Towards an internal model in pilot training. Aviation, Space and Environmental Medicine, 53(10), 996-999.
- Brecke, F. H. (1982). Instructional design for aircrew judgment training. Aviation, Space and Environmental Medicine, 53(10), 951-957.
- Breivik, H., Ulvik, N. M., Blikra, G., & Lind, B. (1980). Life-supporting first aid self-training. Critical Care Medicine, 8(11), 654-658.
- Breznitz, S. (1984). Cry Wolf: The psychology of false alarms. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Brooks, F. R., & Ebner, D. G. (1983). Psychological reactions during chemical warfare training. Military Medicine, 148(3), 232-235.
- Brown, C. G., Sander, A. B., Gurley, H. T., Stair, T. O., Morkovin, V., & Jayne, H. A. (1984). Curriculum for undergraduate education in emergency medicine. Journal of Medical Education, 59(5), 427-429.
- Brown, I. D. (1962). Measuring the spare mental capacity of car drivers by a subsidiary auditory task. Ergonomics, 5, 247-250.
- Brown, I. D. (1965). A comparison of two subsidiary tasks used to measure fatigue in car drivers. Ergonomics, 8, 467-473.
- Brown, I. D., & Poulton, E. C. (1961). Measuring the spare "mental capacity" of car drivers by a subsidiary task. Ergonomics, 4, 35-40.
- Brown, I. D., Tickner, A. H., & Simmonds, D. C. V. (1969). Interference between concurrent tasks of driving and telephoning. Journal of Applied Psychology, 53, 419-424.

- Brumback, G., & Howell, M. (1972). Rating the clinical effectiveness of employed physicians. Journal of Applied Psychology, 56, 241-244.
- Brumback, G., & Vincent, J. (1970). Factor analysis of work performance data for a sample of administrative, professional, and scientific positions. Personnel Psychology, 23, 101-107.
- Bruner, J. S., Olver, R. R., & Greenfield, P. M. (1966). Studies in cognitive growth. New York: Wiley.
- Bryan, J. L. (1977). Smoke as a determinant of human behavior in fire situations (Project People) (Report No. NBS-GCR-77-94). Washington, DC: National Bureau of Standards, Center for Fire Research.
- Bryan, J. L. (1978). Human behavior in fire - A bibliography (Report No. NBS-GCR-78-138). Washington, DC: Center for Fire Research, National Bureau of Standards.
- Bryan, J. L. (1983). A review of the examination and dynamics of human behavior in the fire at the MGM Grand Hotel, Clark County, Nevada, as determined from a selected questionnaire population. Fire Safety Journal, 5, 233-240.
- Buch, G., & Diehl, A. (1984). An investigation of the effectiveness of pilot judgment training. Human Factors, 26(5), 557-564.
- Buck, L. S. (1975). Use of criterion-referenced tests in personnel selection: A summary status report. Psychological Documents, 6(2), 50. (MS 1258).
- Burckes, M. E. (undated). Burckes emergency care knowledge test II (Revised). Unpublished manuscript.
- Burckes, M. E. (1982). The Burckes emergency care knowledge test. Journal of the American College Health Association, 30(4), 185-186.
- Burckes, M. E., & Shao, K. P. P. (1984). Retention of emergency care knowledge. Journal of School Health, 54(9), 355-357.
- Bureau of Alcohol, Tobacco, and Firearms. (1982). ATF: Explosives law and regulations. Washington, DC: Author.
- Bureau of Mines. (undated). A miner's guide to the mine rescue system. Washington, DC: Author.
- Bureau of Mines. (1948). Sampling and analysis of mine atmospheres (Miners' Circular No. 34 revised). Washington, DC: Department of the Interior.

- 
- Bureau of Mines. (1955). Accidents from hoisting and haulage in bituminous-coal mines (Miners' Circular No. 49). Washington, DC: U. S. Government Printing Office.
- Bureau of Mines. (1958). Accidents from falls of roof and coal in bituminous-coal mines (Miners' Circular No. 48). Washington, DC: U. S. Government Printing Office.
- Bureau of Mines. (1972). MSA W-65 self rescuer. Pittsburgh, PA: U. S. Bureau of Mines, Office of Education and Training.
- Bureau of Mines. (1981). Design guidelines for improved water spray systems - a manual (Contract No. JO308017). Washington, DC: Author.
- Bureau of Mines. (1981). Ergonomics - human factors in mining (Information Circular No. 8866). Pittsburgh, PA: Author.
- Bureau of Mines. (1982). Postdisaster survival and rescue research (Information Circular No. 8907). In Proceedings: Bureau of Mines Technology Transfer Seminar. Washington, DC: Author. (NTIS No. PB 83-156 026).
- Business and industry training problems/solutions [Agenda]. (1982) Proceedings of the Computer-based Training Executive Seminar. Minneapolis, MN.
- Butcher, E., et al. (1984). Validation of a standardized simulation for assessment of competence in mental health counseling. American Mental Health Counselors Association Journal, 6(4), 162-172.
- Buttaravoli, P. M., & Stair, T. O. (1985). Common simple emergencies. Bowie, MD: Brady Communications Company, Inc.
- Caddell, D. K., Selan, J. L. Smith, J. L. & Ayoub, M. M. (1982). Mining in low coal: Volume III. Clothing design study. Pittsburgh, PA: Bureau of Mines.
- Caldwell, E., & Trimarco, J. (1975). On the scene. Journal of Practical Nursing, 25(9), 32-33, 37.
- California Educational Advisory Committee for the Roofing Industry, & California State Department of Education. (1982). Roofing: Workbook and tests. First aid training. Sacramento, CA: California State Department of Education. (ERIC Document Reproduction Services No. ED 219 596).
- Cameron, F. (Ed.). (1985). Kentucky underground coal mine guide-book. Lexington, KY: Kentucky Mining Institute.

- Campbell, J. E. (1985). Basic trauma life support: advanced pre-hospital Care. Bowie, MD: Brady Communications Company, Inc.
- Canfield, A. B. (1982). Controversy over clinical competencies. Heart and Lung, 11(3), 197-199.
- Canter, D. (Ed.). (1980). Fires and human behaviour. Chichester: Wiley.
- Canter, D., Breaux, J., & Sime, J. (1980). Domestic, multiple occupancy, and hospital fires. In D. Canter (Ed.), Fires and human behaviour (pp. 117-136). Chichester: Wiley.
- Caramazza, A., McCloskey, M., and Green, B. (1981). Naive beliefs in "sophisticated" subjects: Misconceptions about trajectories of objects. Cognition 9, 117-123.
- Carey, S. (1986). Cognitive science and science education. American Psychologist, 41, 1123-1130.
- Case, R. (1975). Gearing the demands of instruction to the developmental capacities of the learner. Review of Educational Research, 45(1), 59-87.
- Casey, F. (1979). Soft skill analysis in the military police corps. In Proceedings of the 21st Annual Conference of the Military Testing Association (pp. 321-322). San Diego, CA. (ERIC Document Reproduction Service No. ED 190 648).
- Center for Occupational Research and Development. (1981). First response to medical emergencies. Module SH-04. Safety and health. Waco, TX: Author. (ERIC Document Reproduction Service No. ED 213 838).
- Center for Occupational Research and Development. (1981). Structural egress and emergency procedures. Module SH-10. Safety and health. Waco, TX: Author. (ERIC Document Reproduction Service No. ED 213 844).
- Center for Occupational Research and Development. (1986). Technical Communications. Waco, TX: Author.
- Chalupsky, A. B., Danoff, M. N., Shaycoft, M. F., Appleby, J. A., Weisgerber, R. A., & Armijo, L. A. (1982). Development and evaluation of vocational competency measures (Final Report). Palo Alto, CA: American Institutes for Research. (ED 228 474).
- Champagne, A. B., Klopfer, L. E., & Gunstone, R. F. (1982). Cognitive research and the design of instruction. Educational Psychologist, 17(1), 31-53.



- 
- Champion, A. (1980). Perception of danger. Catalog of Selected Documents in Psychology, 10, 79. (MS 2115).
- Chapanis, A. (undated). Human factors engineering for safety. Unpublished manuscript, Johns Hopkins University, Department of Psychology, Baltimore.
- Charles, P. (1984). Normal accidents: Living with high-risk technologies. New York, NY: Basic Books, Inc.
- Chase, W. G., & Chi, M. T. H. (1980). Cognitive skill: Implications for spatial skill in large-scale environments. In J. Harvey (Ed.), Cognition, social behavior, and the environment. Potomac, MD: Lawrence Erlbaum Associates.
- Chekan, G. J. (1985). Design of bulkheads for controlling water in underground mines (Information Circular No. 9020). Washington, DC: U. S. Bureau of Mines.
- Chipman, S. F., Segal, J. W., & Glaser, R. (Eds.). (1985). Thinking and Learning Skills: Volume 2: Research and Open Questions. Hillsdale, NJ: Erlbaum.
- Chironis, N. P. (1977). Oxygen-generating self-rescuers. Coal Age, 82(5), 51-56.
- Chironis, N. P. (Ed.). (1980). Training manual for miners: Vol. 1. Underground mining. New York: McGraw Hill.
- Clark, C. L. (Ed.). (1976, June). Proceedings of the First Conference on Computerized Adaptive Testing, Washington, DC.
- Clark, R. E. (1983). Reconsidering research on learning from media. Review of Educational Research, 53, 445-449.
- Clarke, F. B., & Birky, M. M. (1981). Fire safety in dwellings and public buildings. Bulletin of the New York Academy of Medicine, 57(10), 1047-1060.
- Claudy, J. G., & Appleby, J. A. (1982). Validating competency tests and using test results (Module 20). Palo Alto, CA: American Institutes for Research in the Behavioral Sciences. (ERIC Document Reproduction Service No. ED 227 356).
- Clisby, C. (1980). Experiencing fires. In D. Canter (Ed.), Fires and human behaviour (pp. 323-332). Chichester: Wiley.
- Coal mining issue. (1984). Mine Safety & Health, 9(1).
- Cobb, L. A., & Hallstrom, A. P. (1982). Community-based cardio-pulmonary resuscitation: What have we learned? Annals of the New York Academy of Sciences, 382, 330-341.

- 
- Cobb, L. A., Hallstrom, A. P., Thompson, R. G., Mandel, L. P., & Compass, M. K. (1980). Community cardiopulmonary resuscitation. Annual Review of Medicine, 31, 453, 462.
- Code of federal regulations: Title 30 mineral resources. (Revised July 1, 1984). Washington, DC: Office of the Federal Register, National Archives and Records Service.
- Cohen, A., Colligan, M., & Berger, P. K. (1985). Psychology in health risk messages for workers. Journal of Occupational Medicine, 27(8), 543-551.
- Cohen, H. H., & Jensen, R. C. (1984). Measuring the effectiveness of an industrial lift truck safety training program. Journal of Safety Research, 15(3), 125-135.
- Cohen, J. (1980). A coefficient of agreement for nominal scales. Educational and Psychological Measurement, 20, 37-46.
- Cohen, S. G., & Lacefield, W. E. (1981). An overview of readability analysis. Unpublished manuscript, University of Kentucky, Office of Educational Research and Development, Lexington, KY.
- Cole, H. P. (1971). Process education. Englewood Cliffs: Educational Technology Publications.
- Cole, H. P. (1986). SCSR training: Research on miners' donning proficiency and development of more effective training procedures. Presentation at the Coal Mine and Safety and Health Mine Emergency Responsiveness Development Seminar, National Mine Health and Safety Academy, Beckley, WV, August 12-14.
- Cole, H. P. (1987). Design and application of latent image training exercises. Paper presented at Illinois Mine Trainers Association, Bituminous Coal Operators Association, Oak Meadow Lodge and Conference Center, Evansville, IN, June 5, 1987.
- Cole, H. P. (1987). Self-contained self-rescuers in America: New legislation and training. Address presented to the Group Environmental Department (Mine Life Support Section), GENCOR Mining Corporation, Springs, South Africa, October 1, 1987.
- Cole, H. P. (1987). Simulation exercises for problem-solving in mine emergency situations. Paper presented to the staff of the Chamber of Mines, Human Resources Laboratory, Johannesburg, South Africa, October 13, 1987.
- Cole, H. P., Berger, P. K., Garrity, T. F., Auvenshine, C. D., Szwilski, A. B., Hernandez, M., Blythe, D. K., & Lacefield, W. E. (1985). Generalization of medical and health compliance research to coal mine safety (Contract No. PO333468). Pittsburgh, PA: Bureau of Mines.

- 
- Cole, H. P., Berger, P. K., Haley, J. V., Blythe, D. K., Kifer, E. W., Wasielewski, R. D., Jack, R. F., Szwilski, A., Worth, J., & Lacefield, W. E. (1984). Exercises for teaching and assessing nonroutine mine health and safety skills (Proposal, USBM RFP HO348040). Lexington, KY: University of Kentucky.
- Cole, H. P., Berger, P. K., Vaught, C., Haley, J. V., Lacefield, W. E., Wasielewski, R. D., & Mallett, L. G. (1988b). Measuring critical mine health and safety skills (Technical Report #2 USBM Contract No. HO348040). Pittsburgh, PA: Bureau of Mines.
- Cole, H. P., Berger, P. K., Vaught, C., Lacefield, W. E., Wasielewski, R. D., Haley, J. V., & Price, S. L. (1985). Progress in identifying critical nonroutine mine health and safety skills. Vol. 1. Methods and findings (Quarterly Technical Report #3, USBM Contract No. HO348040). Pittsburgh, PA: Bureau of Mines.
- Cole, H. P., Berger, P. K., Vaught, C., Lacefield, W. E., Wasielewski, R. D., Haley, J. V., & Price, S. L. (1988a). Methods for assessing critical nonroutine mine health and safety skills: Review of research (Technical Report No. 1, USBM Project HO348040). Pittsburgh, PA: Bureau of Mines.
- Cole, H. P., Berger, P. K., & Wasielewski, R. D. (1985). Targeting and teaching critical first aid skills for underground coal miners: Findings from interviews of primary care emergency medical personnel in five coal producing states. Presentation to Mine Safety and Health Administration, U. S. Bureau of Mines, and coal industry officials, National Mine Health and Safety Academy, Beckley, WV, October 31.
- Cole, H. P., Garrity, T. F., & Berger, P. K. (in press). Analogs between medical and industrial safety research on compliance behavior. In D. S. Gochmen (Ed.), Health Behavior: Emerging Research Perspectives. New York: Plenum.
- Cole, H. P., Haley, J. V., Vaught, C., & Lacefield, W. E. (1985). Critical skills in donning the self-contained self-rescuer: Results of miners' performance studies and recommendations. Presented to Mine Safety and Health Administration, National Institute of Occupational Safety and Health, and U. S. Bureau of Mines officials, National Mine Health and Safety Academy, Beckley, WV, December 2-3.
- Cole, H. P., & Lacefield, W. E. (1982). Theories of learning, development, and psychoeducational design: Origins and applications in nonschool settings. Viewpoints in Teaching and Learning, 58(3), 6-16.

- 
- Cole, H. P., Lineberry, G. T. & Mallett, L. G. (1987). A new technique for teaching and testing mining engineering concepts. In Proceedings of 5th annual collegiate association of mining educators (pp. 153-174), Beckley, WV.
- Cole, H. P., & Mallett, L. (1986). Simulation exercise for coping with underground mine emergencies: A demonstration. Presentation to the Kentucky Department of Mines and Minerals Annual Instructor and Safety Analysts Workshops, Prestonsburg, KY, June 18-19.
- Cole, H. P., & Mallett, L. G. (1987). Role play and latent image simulations that teach critical skills for coping with mine emergencies. Presentation at the National Mine Instructor Conference, National Mine Health and Safety Academy, Beckley, WV, February 18-20.
- Cole, H. P., Mallett, L. G., & Vaught, C. (in press). Developing miners' judgment and decision-making skills with latent image exercises. In 14th annual proceedings of training resources applied to mining. University Park, PA: The Pennsylvania State University.
- Cole, H. P., Moss, J., Gohs, F. X., Lacefield, W. E., Barfield, B. J., & Blythe, D. K. (1984). Measuring learning in continuing education for engineers and scientists. Phoenix, AZ: Oryx Press.
- Cole, H., & Raven, R. (1969). Principle learning as a function of instruction on excluding irrelevant variables. Journal of Research in Science Teaching. 6(3), 234-241.
- Cole, H. P., & Staff, University of Kentucky (1988). Miner and trainer responses to simulated miner emergency problems. In Mine Safety Education and Training Seminar Proceedings: Bureau of Mines Technology Transfer Seminar (pp. 56-77). (Bureau of Mines Information Circular No. 9185). Washington, DC: U. S. Government Printing Office (I28.27:9185).
- Cole, H. P., & Vaught, C. (1987). Training in the use of the self-contained self-rescuer. In Mining applications of life support technology (pp. 51-56). (Bureau of Mines Information Circular No. 9134). Washington, DC: U. S. Government Printing Office (60501760033).
- Cole, H. P., Wala, A. M., Haley, J. V., & Vaught, C. (1987). Simulations that teach and test mine emergency skills. In G. J. Faulkner, W. H. Sutherland, D. R. Forshey, & J. R. Lucas (Eds.), Proceedings of the eighteenth annual institute on coal mine health, safety, and research (pp. 167-168). Blacksburg, VA Department of Mining and Minerals Engineering, Virginia Polytechnical Institute and State University.

- 
- Cole, H. P., Wasielewski, R. D., Haley, J. V., & Berger, P. K. (1988). First aid role play simulations for miners. In Mine Safety Education and Training Seminar Proceedings: Bureau of Mines Technology Transfer Seminar (pp. 78-124). (Bureau of Mines Information Circular No. 9185). Washington, DC: U. S. Government Printing Office (I28.27:9185).
- Collins, B. L. (1983). Use of hazard pictorial/symbols in the minerals industry (NBSIR 83-2732). Washington, DC: National Bureau of Standards, Department of Commerce. (NTIS No. PB 84-165 877).
- Collins, T., Gover, N., Clingan, M., Smith, M., Peluchetter, R. C., & Klishis, M. (1984). Common sense electrical safety (Contract No. JO320845). Morgantown, WV: West Virginia University, Mining Extension Service.
- Committee on Allied Health. (1977). Workbook for emergency care and transportation of the sick and injured. Chicago: American Academy of Orthopaedic Surgeons.
- Committee on Fire Research. (1977). Fire detection for Life Safety. (Proceedings of a Symposium, March 31 and April 1, 1975). Washington, DC: National Academy of Sciences.
- Committee on Mine Rescue and Survival Techniques (1970). Mine rescue and survival. (Contract No. 5190606). Washington, DC: National Academy of Engineering. (NTIS No. PB 191691).
- Committee on Underground Coal Mine Safety. (1982). Toward safer underground coal mines. Washington, DC: National Academy Press.
- Committee on Underground Coal Mine Safety. (1983). Fatalities in small underground coal mines. Washington, DC: National Research Council.
- Composite readability analysis program user's guide (Version 1.0). (1979). Lexington, KY: University of Kentucky, Office of Educational Research and Development.
- Connelly, D. J., & Forte, J. V. (1984). Safety tips for underground coal mining (Safety Manual No. 17). Washington, DC: Mine Safety and Health Administration.
- Cook, J. N. (1983). First aid at work. The Safety Practitioner, 1(11), 11-14.
- Cosgriff, R. L. (1974). Mine survey and rescue vehicle (Bureau of Mines OFR-27-75). Washington, DC: U. S. Bureau of Mines. (NTIS No. PB 241 214/6).

- Costello, M., & Habel, M. (1984). Teaching fire safety: Practice beats preaching. Nursing Management, 15(8), 11-12.
- Crickmer, D. F., & Zegeer, D. A. (1981). Elements of practical coal mining (2nd ed.). New York: The American Institute of Mining, Metallurgical, and Petroleum Engineers.
- Croll, P. R. (1981). Computerized adaptive testing design: Preliminary design consideration. Navy Personnel Research and Development Center. (ERIC Document Reproduction Service No. ED 222 577).
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16, 297-334.
- CSE Corporation. (undated). CSE AU-9A1. One hour rated compressed oxygen self-rescuer. Instruction handbook. Monroeville, PA: Author.
- Cunningham, J. B., & Ramsay, G. H. P. (1980). Simulating a disaster. Group & Organization Studies, 5(4), 478-490.
- Curry, L., & Gass, D. A. (1984). Effects of CPR training: Participant competence and patient outcomes. In Proceedings of the Twenty-Third Annual Conference of Research in Medical Education, (pp. 243-248). Washington, DC: Association of American Medical Colleges.
- Dailey, J. T., & Moore, J. I. (1979). Criterion development for air traffic controller training. In Proceedings of the 21st Annual Conference of the Military Testing Association (pp. 42-52). (ERIC Document Reproduction Service No. ED 190 648).
- Dale, E., & Chall, J. S. (1948). A formula for predicting readability: Instructions. Educational Research Bulletin, 27, 11-20, 37-54.
- Davidson, R. G. (1982). Paramedic at work: 2. Trauma victims. Nursing Times, 78(4), 142-145.
- Davidson, R. G. (1982). Paramedic at work: 4. Learning the job. Nursing Times, 78(6), 252-255.
- Davis, J. E., & Milam, R. W. (1984). Report of investigation underground coal mine): Fatal electrical accident. Washington, DC: Mine Safety and Health Administration.
- Davis, P. R., & Knight, A. A. (1972). Ergonomics of mining. In J. M. Rogan (Ed.), Medicine in the mining industries (pp. 322-332). Philadelphia, PA: F. A. Davis.

- 
- Davis, R. (1986). Amplifying expertise with expert systems. In P. H. Winston & K. A. Prendergast (Eds.), The AI business: Commercial uses of artificial intelligence (pp. 17-40). Cambridge: MIT Press.
- Death in the mines. (1985). United Mine Worker's Journal, 96(2), 3-9.
- Dekkers, J., & Donatti, S. (1981). The integration of research studies on the use of simulation as an instructional strategy. Journal of Educational Research, 74(3), 424-427.
- Demers, R. Y., & Wall, S. J. (1983). Occupational history-taking in a family practice academic setting. Journal of Medical Education, 58(2), 151-153.
- DeMichieil, J. M., Langton, J. F., Bullock, K. A., & Wiles, T. C. (1982). Factors associated with disabling injuries in underground coal mines. Arlington, VA: Mine Safety and Health Administration.
- Dillon, R. F., & Sternberg, R. J. (1986). Cognition and instruction. New York: Academic Press.
- Dinman, B. D. (1980). Occupational health and the reality of risk - an eternal dilemma of tragic choices. Journal of Occupational Medicine, 22(3), 153-157.
- di Sessa, A. A. (1983). Phenomenology and the evolution of intuition. In D. Gentner & A. L. Stevens (Eds.), Mental Models (pp. 15-33). Hillsdale, NJ: Erlbaum.
- Distlehorst, L. H., & Barrows, H. S. (1982). A new tool for problem-based, self-directed learning. Journal of Medical Education, 57(6), 486-488.
- Dodd, L. (1984). Organising a major multi-contractor site. The Safety Practitioner, 2(1), 4-7.
- Donnelly, M. B., Fleisher, D. S., Schwenker, J., & Chen, C. (1982). Problem solving within a limited content area. In 1982 Proceedings of the Twenty-First Annual Conference of Research in Medical Education (pp. 151-156). Washington, DC: Association of American Medical Colleges.
- Don't just stand there - do something! (1979). Occupational Health & Safety, 48(7), 36-38.
- Downey, R. G., & Duffy, P. J. (1979). Review of peer evaluation research. Catalog of Selected Documents in Psychology, 9, 49-50. (MS 1902).

- 
- Downs, S., & Roberts, A. (1977). The training of underground train guards - a case study with a field experiment. Journal of Occupational Psychology, 50(2), 111-120.
- Drouillard, R. F., & Holub, R. F. (1985). Continuous radiation working level detectors (Information Circular No. 9029). Washington, DC: U. S. Bureau of Mines.
- Dugdale, A. E., Chandler, D., & Best, G. (1982). Teaching the management of medical emergencies using an interactive computer terminal. Medical Education, 16(1), 27-30.
- Duncan, J. K., & Hough, J. B. (1966). Technical review of the Teaching Situation Reaction Test. Unpublished manuscript, Temple University, Philadelphia, PA.
- Duncan, J. K., Hough, J. B., & Thompson, J. R. (1966, February). Exploratory studies of the Teaching Situation Reaction Test (revised edition). Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.
- Duncan, K. D. (1971). Long-term retention and transfer of an industrial search skill. British Journal of Psychology, 62(4), 439-448.
- Duncan, K. D. (1974). Analytical techniques in training design. In E. Edwards & F. P. Lees (Eds.), The human operator in process control (pp. 283-319). London: Taylor & Francis Ltd.
- Duplinsky, J., Nevralis, J., & Picalkova, H. (1982). Effects of some demographic factors on accident rate among miners. Uhli, 30(4), 155-158.
- Du Pont. (undated). Emergency response to transportation incidents involving hazardous materials: A check list. Wilmington, DE: Du Pont, Transportation & Distribution Department.
- Du Pont. (undated). Transportation emergency reporting procedure. Wilmington, DE: Du Pont, Transportation & Distribution Department.
- Eckstein, W. (1973). Planned safety - for maintaining filter self-rescuers in a state of readiness. Draeger Review, 31, 8-18.
- Edelman, P., Herz, E., & Bickman, L. (1980). A model of behaviour in fires applied to a nursing home fire. In D. Canter (Ed.), Fires and human behaviour (pp. 181-203). Chichester: Wiley.
- Edelsack, P., Eller, S., Mazzocchi, A., & Nelson, M. (1983). A labor perspective on occupational health. In B. S. Levy & D. H. Wegman (Eds.), Occupational health: Recognizing and preventing work-related disease (pp. 393-402). Boston: Little, Brown & Co.



- 
- Educational Materials Search System. (1984). User's guide. Washington, DC: Mine Safety and Health Administration.
- Edwards, J. C. (1985). Mathematical simulation of automated metabolic breathing simulator and self-contained self-rescuer. (Report of Investigations 8926). Washington, DC: U. S. Bureau of Mines.
- An Efficient Method for Donning the SCSR Instructor's Guide and Video Tape (Draeger) (1987). Beckley, WV; U. S. Department of Labor, Mine Safety and Health Administration, National Mine Health and Safety Academy.
- An Efficient Method for Donning the SCSR Instructor's Guide and Video Tape (CSE) (1987). Beckley, WV; U. S. Department of Labor, Mine Safety and Health Administration, National Mine Health and Safety Academy.
- An Efficient Method for Donning the SCSR Instructor's Guide and Video Tape (MSA) (1987). Beckley, WV; U. S. Department of Labor, Mine Safety and Health Administration, National Mine Health and Safety Academy.
- An Efficient Method for Donning the SCSR Instructor's Guide and Video Tape (Ocenco) (1987). Beckley, WV; U. S. Department of Labor, Mine Safety and Health Administration, National Mine Health and Safety Academy.
- Eisenberg, M. S., Hallstrom, A. P., Carter, W. B., Cummins, R. O., Bergner, L., & Pierce, J. (1985). Emergency CPR instruction via telephone. American Journal of Public Health, 75(1), 47-50.
- Elstein, A. S., Shulman, L. S., & Sprafka, S. A. (1981). Medical problem-solving [Letter to the editor]. Journal of Medical Education, 56(1), 75-76.
- Enterline, P. E., & Jacobsen, M. (1972). Epidemiology. In J. M. Rogan (Ed.), Medicine in the mining industries (pp. 364-379). Philadelphia, PA: F. A. Davis.
- Eurich, N. P. (1985). Corporate classrooms: The learning business. Princeton, NJ: The Carnegie Foundation for the Advancement of Teaching.
- Evans, L. (1985). Human behavior feedback and traffic safety. Human Factors, 27(5), 555-576.
- Factory Mutual Engineering Corporation. (1967). Handbook of industrial loss prevention (2nd ed.). New York: McGraw-Hill.
- Farr, R., & Roser, N. (1979). Teaching a child to read. New York: Harcourt, Brace, Jovanovich.

- Farrand, L. L., Holzemer, W. L., & Schleutermann, J. A. (1982). A study of construct validity: Simulations as a measure of nurse practitioners' problem-solving skills. Nursing Research, 31(1), 37-42.
- Farstad, A. J., Fisher, C., Jr., Linfield, R. F., Maes, R. O., & Lindeman, B. (1973). Development and testing of an electromagnetic location system (OFR 41-1-74). Baltimore, MD: Westinghouse Electric Corporation.
- Feletti, G. I., & Gillies, A. H. B. (1982). Developing oral and written formats for evaluating clinical problem-solving by medical undergraduates. Journal of Medical Education, 57(11), 874-876.
- Ferber, B. I., & Wieser, A. H. (1972). Instruments for detecting gas in underground mines and tunnels (Information Circular No. 8548). Washington, DC: U. S. Bureau of Mines.
- Fergus, C. (1982). Probing the psychology of helping. Occupational Health & Safety, 51(2), 39-40.
- Ferguson, E. W., Sengbusch, C. H., Cowan, M. L., & Curiale, A. M. (1983). Establishment of a military training network for basic and advanced cardiac life support. Military Medicine, 148(11), 864-866.
- Fire Protection Association. (1984). Fire booklist: Compendium of fire safety data. London: Author.
- Fire Protection Association, & Industrial Fire Protection Association. (1980). Planning fire safety in industry. London: Fire Protection Association.
- First Aid and Personal Safety Course of the American Red Cross. (1981). Garden City, NY: Doubleday & Co.
- Fitzpatrick, J. S. (1975). Underground mining: A case study of an occupational subculture of danger (Doctoral dissertation, The Ohio State University, 1974). (University Microfilms No. 75-3066).
- Fitzpatrick, J. S. (1980). Adapting to danger. Sociology of Work and Occupations, 7(2), 131-158.
- Flanagan, J. C. (1954). The critical incident technique. Psychological Bulletin, 51, 327-358.
- Flathers, G. W., II. (1980). A study of decision-making behavior of aircraft pilots deviating from a planned flight. Unpublished master's thesis, The Ohio State University, Columbus, OH.

- Flathers, G. W., Jr., Giffin, W. C., & Rockwell, T. H. (1982). A study of decision making behavior of pilots deviating from a planned flight. Aviation, Space and Environmental Medicine, 53(10), 958-963.
- Fleisher, D. S., Schwenker, J., & Donnelly, M. (1982). Isomorphic patient management problems: A counterpart to parallel multiple choice tests. In Proceedings of the Twenty-First Annual Conference on Research in Medical Education (pp. 143-148). Washington, DC: Association of American Medical Colleges.
- Fleming, M., & Levie, W. H. (1984). Instructional message design, principles from the behavioral sciences. Englewood Cliffs, NJ: Educational Technology Publications.
- Fodor, J. A. (1979). The language of thought. Cambridge: Harvard University Press.
- Forbes, J. J., & Grove, G. W. (1954). Protection against mine gases (Miner's Circular No. 35). Washington, DC: U. S. Government Printing Office.
- Forbes, J. J., & Owings, C. W. (1939). Some information on timbering bituminous coal mines. Washington, DC: U. S. Government Printing Office.
- Foregger, R. (July, 1974). Development of mine rescue and underwater breathing apparatus: Appliances of Henry Fluess. Journal of the History of Medicine, 317-330.
- Fortner, G. S., Oreskovich, M. R., Copass, M. K., & Carrico, C. J. (1983). The effects of prehospital trauma care on survival from a 50-meter fall. The Journal of Trauma, 23(11), 976-981.
- Fossel, M., Kiskaddon, R. T., & Sternbach, G. L. (1983). Retention of cardiopulmonary resuscitation skills by medical students. Journal of Medical Education, 58(7), 568-575.
- Foushee, H. C. (1984). Dyads and triads at 35,000 feet: Factors affecting group process and aircrew performance. American Psychologist, 39(8), 885-893.
- Frank, A. L. (1983). The occupational history and examination. In W. N. Rom (Ed.), Environmental and occupational medicine (pp. 21-26). Boston, MA: Little, Brown, & Co.
- Friedman, L., Howell, W. C. & Jensen, C. R. (1985). Diagnostic judgment as a function of the preprocessing of evidence. Human Factors, 27(6), 665-674.

- Friesen, L., & Strotts, N. A. (1984). Retention of basic cardiac life support content: The effect of two teaching methods. Journal of Nursing Education, 23(5), 184-191.
- Fry, E. (1977). Fry's readability graph: Clarifications, validity and extension to level 17. Journal of Reading, 21, 242-251.
- Gagne, R. M. (Ed.). (1962). Psychological principles in system development. New York: Holt, Rinehart and Winston.
- Gagne, R. M. (1977). The conditions of learning. New York: Holt, Rinehart and Winston.
- Gagne, R. M., & Briggs, L. J. (1979). Principles of instructional design (2nd ed.). New York: Holt, Rinehart and Winston.
- Gardner, A. W. (1981). The contribution of occupational health services to safety. In R. S. F. Schilling (Ed.), Occupational health practice, 2nd ed. (pp. 529-540). London: Butterworths.
- Garling, T., Book, A., & Lindberg, E. (1984). Cognitive mapping of large-scale environments: The interrelationship of action plans, acquisition, and orientation. Environment and Behavior, 16(1), 3-34.
- Gentner, D., & Stevens, A. L. (Eds.). (1983). Mental models. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Gerkin, J. P. (1981, November). Work instructions for safety and efficiency (WISE): An integrated mine training system. In F. L. Misagi (Comp.), Proceedings of the Second International Symposium on Training in the Prevention of Occupational Risks in the Mining Industry (pp. 219-234). Washington, DC.
- Giffin, W. C., & Rockwell, T. H. (1984). Computer-aided testing of pilot response to critical in-flight events. Human Factors, 26(5), 573-581.
- Gilbert, A. C., & Downey, R. G. (1978). Validity of peer ratings obtained during Ranger training. Army Research Institute for the Behavioral & Social Sciences (TP344).
- Gilbert, G. G. (1975). The evaluation of simulation for skill testing in the American National Red Cross First Aid and Personal Safety Course. (Doctoral dissertation, Ohio State University). (University Microfilms No. 76-9974).
- Gilbert, G. G. (1981). Teaching first aid and emergency care. Dubuque, IA: Kendall/Hunt.

- Girdley, F. M., Stone, H. L., Birnbaum, M. L., & Raabe, K. (1983). A comparison of cognitive achievement: An interdisciplinary approach to emergency medical care. Journal of Allied Health, 12(1), 56-63.
- Glanzer, M. (1958). Diagnostic (trouble-shooting) skills and their evaluation. Occupational Psychology, 32(4), 236-244.
- Godden, D., & Baddeley, A. (1979). The commercial diver. In W. T. Singleton (Ed.), The study of real skills: Vol. 2. Compliance and excellence (pp. 157-177). Baltimore, MD: University Park Press.
- Goldin, S. E., & Thorndyke, P. W. (1981). An analysis of cognitive mapping skill (Report No. N-1664-ARMY). Santa Monica, CA: Rand Corporation.
- Goldin, S. E., & Thorndyke, P. W. (1981). Simulating navigation for spatial knowledge acquisition (Report No. N-1675-ARMY). Santa Monica, CA: Rand Corporation.
- Goldin, S. E., & Thorndyke, P. W. (1981). Spatial learning and reasoning skill (Report No. R-2805-ARMY). Santa Monica, CA: Rand Corporation.
- Goldin, S. E., & Thorndyke, P. W. (1982). Simulating navigation for spatial knowledge acquisition. Human Factors, 24(4), 457-471.
- Goldin, S. E., & Thorndyke, P. W. (1982). Simulating navigation for spatial knowledge acquisition. (Report No. N-1675-ARMY). Santa Monica, CA: Rand Corporation.
- Golledge, R. G., & Rayner, J. N. (Eds.). (1982). Proximity and preference: Problems in the multidimensional analysis of large data sets. Minneapolis, MN: University of Minnesota Press.
- Gombeski, W. R., Efron, D. M., Ramirez, A. G., & Moore, T. J. (1982). Impact on retention: Comparison of two CPR training programs. American Journal of Public Health, 72, 849-852.
- Goodey, B. (1974). Images of places: Essays on environmental perception, communications, and education. Birmingham, England: The University of Birmingham, Centre for Urban and Regional Studies.
- Gordon, M. (1984). Initial care of burn victim often a matter of life or death. Occupational Health & Safety, 53(1), 34-37.
- Government reviews Sunshine disaster. (1972). Engineering and Mining Journal, 173(10), 92-95.

- 
- Grant, B. F., & Friedman, D. F. (1973). Proceedings of the symposium on the use of diesel-powered equipment in underground mining (Information Circular No. 8666). Washington, DC: U. S. Department of the Interior.
- Grant, H. D., Murray, R. H., & Bergeron, J. D. (1982). Emergency care (3rd ed.). Englewood Cliffs, NJ: Robert J. Brady Co.
- Green, B. F. (1983, March). Adaptive testing by computer: New directions for testing and measurement. In Measurement, Technology and Individuality in Education: Proceedings of the 1982 ETS Invitational Conference, nl7, 5-12.
- Green, B. F., Bock, R. D., Humphreys, L. G., Linn, R. L., & Reckase, M. D. (1982). Evaluation plan for the computerized adaptive vocational aptitude battery. Baltimore, MD: The Johns Hopkins University, Department of Psychology. (ED 220 497).
- Green, C. H. (1980). Risk: Beliefs and attitudes. In D. Canter (Ed.), Fires and human behaviour. Chichester: Wiley.
- Green, F. H., Y. Althouse, R., Frost, J. L., Wheeler, R. W., & Shores, S. K. (1986). Forensic investigation of coal mine fatalities. In R. W. Wheeler (Ed.), International Conference of the Health of Miners (pp. 117-124). Cincinnati, OH: American Conference of Governmental Industrial Hygienists.
- Gregory, R. D. (1979, April). The byte-size revolution: Computers and readability. Paper presented at the annual meeting of the Western College Reading Association, Honolulu, HI.
- Griffin, O. G. (1972). Mine rescue breathing apparatus. In J. M. Rogan (Ed.), Medicine in the mining industries (pp. 299-311). Philadelphia, PA: F. A. Davis.
- Guida, F. K. (1983). New programs keep CPR fresh in mind. Nursing Management, 14(4), 23-24.
- Gunning, R. (1952). The technique of clear writing. New York: McGraw Hill.
- Gustafson, H. W. (1976). Symbolic troubleshooting tests: A descriptive and methodological review. Psychological Documents, 6, 3. (MS 1311).
- Habeck, D. (1982). The current state of medical education in the Federal Republic of Germany and some of its problems. Medical Education, 16, 345-351.
- Haber, G. M. (1980). Human behaviour in fire in total institutions: A case study. In D. Canter (Ed.), Fires and human behaviour (pp. 137-154). Chichester: Wiley.

- Hagman, J. D., & Rose, A. M. (1983). Retention of military tasks: A review. Human Factors, 25(2), 199-213.
- Hajek, L. (1979). Czechoslovakia's mine rescue service. World Coal, 4(10), 10-11.
- Hale, A. (1982). Safety training 3: Are you getting what you pay for? Occupational Health, 34(5), 233-235.
- Halfff, H. M., Hollan, J. D., & Hutchins, E. L. (1986). Cognitive science and military training. American Psychologist, 41, 1131-1139.
- Hall, C. J., & Morris, T. (1975). How to save lives during fires by planning for evacuation at hardrock mines. Engineering and Mining Journal, 176(2), 74-77.
- Hall, C. J., Morris, T., & Patricio, J. (1973). Ventilation studies and escape plans for underground hardrock mines (OFR 24-74). Washington, DC: U. S. Bureau of Mines. (NTIS No. PB 232 304).
- Hall, J. (1980). Patient evacuation in hospitals. In D. Canter (Ed.), Fires and human behaviour (pp. 205-225). Chichester: Wiley.
- Halpren, D. F. (1984). Thought and Knowledge. An Introduction to Critical Thinking. Hillsdale, NJ: Erlbaum.
- Hambleton, R. K. (1976). Latent trait models and their applications: Vol. 4. New directions for testing and measurement. San Francisco, CA: Jossey-Bass.
- Hambleton, R. K., Mills, C. N., & Simon, R. (1983). Determining the lengths for criterion-referenced tests. Journal of Educational Measurement, 20(1), 27-38.
- Harmon, P., & Evans, K. (1984). When to use cognitive modeling. Training & Development Journal, 38(3), 67-68.
- Harris, N. D. C., & Bell, C. D. (1981). An evaluation resource pack: Issues and implications. In A. J. Trott (Ed.), Aspects of Educational technology: Vol. 15. Distance learning and evaluation (pp. 192-198). London: Kogan Page.
- Harris, W. P., & Rodgers, R. E. (1975). Lincoln Laboratory LTS-35 Training System: Application to teaching essential mining skills. Cited in J. E. Rankin (Comp.), (1979). Bibliography: Human factors in mine safety (p. 52). Beckley, WV: National Mine Health and Safety Academy, Office of Research and Development.
- Hartman, H. L., Mutmansky, J. M., & Wang, J. (Eds.). (1982). Mine ventilation and air conditioning (2nd ed.). New York: Wiley.

- Hartunian, P. (1981). Simulating excitement in first aid training. Occupational Health & Safety, 50(12), 18-22.
- Hayes, J. R. (1981). The Complete Problem Solver. Philadelphia: Franklin Institute.
- Health and Safety Analysis Center. (undated). Metal/nonmetal mine injury statistics 1979-1983. Denver, CO: Author.
- Hebein, J. M., & Dawson, R. G. (1981). Evaluation for revision: A case study of a training programme. In A. J. Trott (Ed.), Aspects of educational technology: Vol. XV. Distance learning and evaluation (pp. 187-192). London: Kogan Page.
- Hedge, A., & Lawson, B. R. (1979). Creative thinking. In W. T. Singleton (Ed.), The study of real skills: Vol. 2. Compliance and excellence (pp. 280-305). Baltimore, MD: University Park Press.
- Heinold, W. D. (1982). Helping responses in ambiguous and unambiguous emergencies as a function of training in first aid. (Doctoral dissertation, Pennsylvania State University). Dissertation Abstracts International, 43, 3-A.
- Helmreich, R. L. (1984). Cockpit management attitudes. Human Factors, 26(5), 583-589.
- Hennen, B. K. (1984). Measuring the complexity of clinical problems. Journal of Medical Education, 59(6), 487-493.
- Herrin, T. J., Norman, P. F., Hill, C., & Crosby, R. (1980). Modular approach to CPR training. Southern Medical Journal, 73(6), 742-744.
- Himel, V., & Hansberry, E. V. (1982). Mine rescue team's protective ensemble, (Vol. 1) (Bureau of Mines OFR-1(1)-83). Bethpage, NY: Grumman Aerospace Corporation, Advanced Development Department. (NTIS No. PB 83-162 826).
- Himel, V., & Hansberry, E. V. (1982). Mine rescue team's protective ensemble. (Vol. 2) (Bureau of Mines OFR-1(2)-83). Bethpage, NY: Grumman Aerospace Corporation, Advanced Development Department. (NTIS No. PB 83-162 818).
- Hinds, C. J., Ingram, D., & Dickinson, C. J. (1982). Self-instruction and assessment in techniques of intensive care using a computer model of the respiratory system. Intensive Care Medicine, 8(3), 115-123.



- 
- Hoban, J. D., & Casberque, J. P. (1978). Simulation: A technique for instruction and evaluation. In C. W. Ford (Ed.), Clinical education for the allied health professions (pp. 145-157). St. Louis, MO: C. V. Mosby.
- Holland, W. D. (1976). Surveying inhalation contaminants in above ground coal mining and processing work areas (for company safety officers) (Bureau of Mines OFR-99-77). Richmond, CA: LFE Environmental Analysis Laboratories. (NTIS No. PB 267 213).
- Holling, C. S. (1978). Myths of ecological stability: Resilience and the problem of failure. In C. F. Smart, & W. T. Stanbury (Eds.), Studies on crisis management (pp. 97-109). Toronto: Butterworth & Co.
- Holsti, O. R. (1978). Limitations of cognitive abilities in the face of crisis. In C. F. Smart, & W. T. Stanbury (Eds.), Studies on crisis management (pp. 39-55). Toronto: Butterworth & Co.
- Hopkins, A. (1984). Blood money? The effect of bonus pay on safety in coal mines. Australian & New Zealand Journal of Sociology, 20(1), 23-46.
- Hosler, C. L. (1948). Atmospheric surface pressure related to coal mine explosions. Transactions American Geophysical Union, 29(5), 607-612.
- Howard, A. (1983). Work samples and simulations in competency evaluation. Professional Psychology: Research and Practice, 14, 780-796.
- Howard, G. S., et al. (1983). Linked, raters' judgments: Combating problems of statistical conclusion validity. Applied Psychological Measurement, 7(1), 57-62.
- Howard, J. H., Jr., & Kerst, S. M. (1981). Memory and perception of cartographic information for familiar and unfamiliar environments. Human Factors, 23(4), 495-504.
- Humphrey, H. B. (1959). Historical summary of coal-mine explosions in the United States. Washington, DC: U. S. Government Printing Office.
- Hunt, M. (1984). Environmental learning without being there. Environment & Behavior, 16(3), 307-334.
- Hunt, P. E. (1984). Report of nonfatal fire accident. Washington, DC: Mine Safety and Health Administration.
- Hunt, R. M., & Rouse, W. B. (1981). Problem-solving skills of maintenance trainees in diagnosing faults in simulated powerplants. Human Factors, 23(3), 317-328.

- 
- Hunter, D. R. (1982). A comparison of live and simulated adaptive tests (Doctoral dissertation, University of Texas). Dissertation Abstracts International, 43, 03-B.
- Hutchison, C. A. (undated). Chemical health hazards: General information on chemical health hazards in metal and nonmetal mining and milling. Washington, DC: Mining Enforcement and Safety Administration. U. S. Department of Interior.
- Iacobell, F. P., & Schodowski, L. (1980). Fire reaction training that really works. Hospitals, 54(3), 64-66.
- INCO, Ltd. (1985). Four hour first aid module. Copper Cliff, Ontario, Canada: INCO Limited, Ontario Division, Occupational Health and Safety Academy.
- International Labor Office. (1983). Essential publications on occupational safety and health. Geneva, Switzerland: Author.
- Jackson, L. J. (1983). Coal research projects - North and South America. London: IEA Coal Research, Technical Information Service.
- Jackson, L. J. (1983). Coal research projects - Western Europe. London: IEA Coal Research, Technical Information Service.
- Jackson, L. J. (1983). Coal research projects - Western Pacific, India and South Africa. London: IEA Coal Research, Technical Information Service.
- Jamieson, D. M. (1973). Underground fires. Mining Magazine, 128(6), 430-439.
- Janis, I., & Mann, L. (1976). Coping with decisional conflict. American Scientist, 64(6), 657-667.
- Janis, I., & Mann, L. (1977). Decision making: A psychological analysis of conflict, choice, and commitment. New York: Free Press.
- Jarl, T. (1980). Fatal occupational accidents in Sweden: Personal Safety equipment and rescuing. Accident Analysis & Prevention, 12, 185-188.
- Jarmul, David (1984). Working on the outer continental shelf: maintaining safety on offshore drilling rigs, News Report, 34(5).
- Jarry, J. J. (1972). Rehabilitation of mine workers. In J. M. Rogan (Ed.), Medicine in the mining industries (pp. 357-363). Philadelphia, PA: F. A. Davis.

- 
- Jenaway, W. F. (1984). Elements of an effective plant first-aid program. Plant Engineering, 38(3), 47-49.
- Jensen, R. S. (1982). Pilot judgment: Training and evaluation. Human Factors, 24(1), 61-73.
- Jensen, R. S., & Benel, R. A. (1977). Judgment evaluation and instruction in civil pilot training (Report No. FAA-RD-78-24). Champaign, IL: University of Illinois. (NTIS No. AD-A057-440).
- Jennings, D. D., et al. (1980). Development and evaluation of a videotape simulation performance test. Psychological Documents, 10, 93. (MS 2145).
- Johnson, D. A. (1980). Emergency safety instructions: Who attends and why? In D. J. Osborne & J. A. Levis (Eds.), Human factors in transport research Vol. 1 (pp. 310-318). New York: Academic Press.
- Johnson, J. E., & Hopper, F. H. (1982). Piagetian structuralism and learning: Reflections on two decades of educational application. Contemporary Educational Psychology, 7, 217-237.
- Johnson, S. L. (1981). Effect of training device on retention & transfer of a procedural task. Human Factors, 23(3), 257-272.
- Jones, G. L., & Keith, K. D. (1983). Computer clinical simulations in health sciences. Journal of Computer-Based Instruction, 9(3), 108-114.
- Jones, I. H. (1980). First aid first. Nursing Times, 76(28), 1236.
- Jones, K. H. (1984). Don't learn to parachute in a cognitive mode. Training & Development Journal, 38(3), 55-56.
- Jones, R. T., et al. (1981). A follow-up to training emergency skills. Behavior Therapy, 12(5), 716-722.
- Jones, R. T., Kazdin, A. E., & Haney, J. I. (1981). Social validation and training of emergency fire-safety skills for potential injury prevention and life saving. Journal of Applied Behavior Analysis, 14(3), 249-260.
- Jones, R. T., Sisson, L. A., & Van Hasselt, V. B. (1984). Emergency fire-safety skills for blind children and adolescents. Behavior Modification, 8(2), 267-286.
- Joy Manufacturing Company. (undated). Joy axial fans. New Philadelphia, Ohio: Author.

- 
- Kamon, E., Doyle, D., & Kovac, J. (1983). The oxygen cost of an escape from an underground coal mine. American Industrial Hygiene Association Journal, 44(7), 552-555.
- Karwowski, W. (1986). Proceedings of the Annual International Industrial Ergonomics and Safety Conference (Parts A and B). Amsterdam: Elsevier.
- Kasl, S. V., & Cobb, S. (1983). Psychological and social stresses in the workplace. In B. S. Levy & D. H. Wegman (Eds.), Occupational health: Recognizing and preventing work-related disease (pp. 251-263). Boston: Little, Brown & Co.
- Katz, D. S. & Oglesby, E. H. (1979). A manual of competency matched instructional materials for developing coal mining curricula (Final Project Report RD1-C9-170). Raleigh, NC: Conserva, Inc.
- Kawenski, E. M., Murphy, E. M., & Stahl, R. W. (1963). Float dust deposits in return airways in American coal mines (Information Circular No. 8150). Washington, DC: U. S. Bureau of Mines.
- Kay, B. J., & Myrick, J. A. (1982). An evaluation of program implementation strategies for a rural first-responder system. Journal of Community Health, 8(2), 57-68.
- Kearney, J. T., Shapiro, R., & Blow, C. (1986). The biomedical and metabolic assessment of the demands of selected materials handling tasks in low-seam miners (Final Report). Lexington, KY: University of Kentucky, Department of Health, Physical Education and Recreation, Human Performance Laboratories, and the Institute for Mining and Minerals Research.
- Keenan, C. M. (1963). Historical documentation of major coal-mine disasters in the United States not classified as explosions of gas or dust: 1846-1962 (Bulletin 616). Washington, DC.: U. S. Government Printing Office.
- Keenan, V., Kerr, W., & Sherman, W. (1951). Psychological climate and accidents in an automotive plant. Journal of Applied Psychology, 25, 108-111.
- Kelley, T. M., & Kennedy, D. B. (1982). Assessing and predicting the competency of juvenile court volunteer probation officers. Journal of Criminal Justice, 10(2), 123-130.
- Kennedy, T. P., & Rankin, J. E. (1984). Personal protective equipment (Safety manual No. 14). Washington, DC: Mine Safety and Health Administration.
- Kenneweg, W. J. (1983). Evolution of self-rescuers for miners. World Coal, 9, 62-63.

- Kenneweg, W. J., Warncke, E. (1983) Evolution of self-rescuers for miners. World Coal (United States) 9(2) 62-63.
- Kentucky Labor Cabinet. (1984). Injury/Illness Summary. Frankfort, KY: Kentucky Occupational Safety and Health Program, Division of Education and Training.
- Kentucky State Department of Education. (1979). Mining careers and safety curriculum guide. Frankfort, KY: Author. (ERIC Document Reproduction Service No. ED 183 794).
- Kentucky State Department of Education. (1981). Kentucky mine safety training program. Training handbook - underground. Frankfort, KY: Author. (ERIC Document Reproduction Service No. ED 210 446).
- Kerr, R. (1982). Psychomotor learning. Philadelphia, PA: Saunder College Publishing.
- Keyserling, W. M. (1983). Safety hazards and physical trauma. In B. S. Levy & D. H. Wegman (Eds.), Occupational health: Recognizing and preventing work related disease (pp. 177-187). Boston, MA: Little, Brown & Co.
- Khandwalla, P. N. (1978). Crisis response of competing versus noncompeting organizations. In C. F. Smart, & W. T. Stanbury (Eds.), Studies on crisis management (pp. 151-178). Toronto, CA: Butterworth & Co.
- Kieras, D. E., & Bovair, S. (1984). The role of a mental model in learning to operate a device. Cognitive Science, 8, 255-273.
- King, R. W., & Magid, J. (1980). Industrial hazard and safety handbook. London: Butterworths.
- Kyriazi, N., Kovac, J., Duerr, W., & Shubilla, J. (1983). Laboratory testing of compressed-oxygen self-rescuers for ruggedness and reliability (Bureau of Mines Report of Investigations 8839). Washington, DC: U. S. Bureau of Mines.
- Lacefield, W. E. (1980). The evaluation of competence: Theoretical and empirical perspectives. (Doctoral dissertation, The University of Kentucky).
- Lainhart, W. S., Doyle, H. N., Enterline, P. E., Henschel, A., and Kendrick, M. A. (1969). Pneumoconiosis in Appalachian bituminous coal miners. Washington, DC: U. S. Government Printing Office.
- Lammlein, S. E., & Borman, W. C. (1979). Peer rating research: Annotated bibliography. (US AFHRL Technical Report No. 79-9).

- Langer, G. Organisation & Facilities for self-rescue in underground coal mines. Gluckauf, 120(7), 104-105.
- Larimore, D. L., Musser, L. S., & Sagan, E. L. (1973, February). Personality, attitude, and professional knowledge of teachers in experiential and conventional preparatory programs. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.
- Lerup, L., Cronrath, D., & Liu, J. K. C. (1980). Fires in nursing facilities. In D. Canter (Ed.), Fires and human behaviour (pp. 155-180). Chichester: Wiley.
- Levenson, H., Hirschfeld, M. L., & Hirschfeld, A. H. (1980). industrial accidents and recent life events. Journal of Occupational Medicine, 22(1), 53-57.
- Levie, W. H., & Lentz, R. (1982). Effects of text illustrations: A review of research. Educational Communication and Technology Journal, 30(4), 195-232.
- Levy, B. S. (1983). Occupational health in the United States: Its relevance to the health professional. In B. S. Levy & D. H. Wegman (Eds.), Occupational health: Recognizing and preventing work-related disease (pp. 3-13). Boston: Little, Brown & Co.
- Lewin, A. Y., & Layman, S. S. (1979). Information processing models of peer nominations. Personnel Psychology, 32(1), 63-82.
- Lewis, C., & Cheyovich, T. (1976). Who is the nurse practitioner? Medical Care, 14, 365-371.
- Lewis, C., Resnik, B., Schmidt, G., & Wasman, D. (1969). Activities, events, and outcomes in ambulatory patient care. New England Journal of Medicine, 280, 645-649.
- Lindstrom, R. A., Grover, P. L., Clark, W. R. (1978). Prehospital burn care for emergency medical technicians. The Journal of Biocommunication, 5(2), 12-17.
- Lineberry, G. T. (1984). A novel approach to the first course in mining engineering. Unpublished manuscript, University of Kentucky, Lexington, KY.
- Livingston, S. A., & Zieky, M. J. (1982). Passing scores: A manual for setting standards of performance on educational and occupational tests. Princeton, NJ: Educational Testing Service. (ERIC Document Reproduction Service No. ED 227 113).
- Lo, B., & Steinbrook, R. L. (1983). Deciding whether to resuscitate. Archives of Internal Medicine, 143(8), 1561-1563.

- Lockhead, J. & Clement, J. (Eds.). (1979). Cognitive process instruction: Research on teaching thinking skills. Philadelphia: Franklin Institute.
- Loftus, E. F., & Palmer, J. C. (1982). Reconstruction of automobile destruction. In U. Neisser (Ed.), Memory observed: Remembering in natural contexts (pp. 109-115). San Francisco: Freeman.
- Loftus, G. R., Dark, V. J., & Williams, D. (1979). Short-term memory factors in ground controller/pilot communication. Human Factors, 21(2), 169-181.
- Longo, A. (1983). Teaching parents CPR. Pediatric Nursing, 9(6), 445-447.
- Lord, F. M. (1970). Some test theory for tailored testing. In W. H. Holtzman (Ed.), Computer-assisted instruction, testing, and guidance. New York: Harper and Row.
- Lord, F. M., & Novick, M. R. (1968). Statistical theories of mental test scores. Reading, MA: Addison-Wesley.
- Loustaunau, P. E., Wetherby, C., & Rosenblatt, R. (1983). Improvement of on-the-job training procedures through utilization of modeling, imitative, and other learning techniques (Contract No. HO308028). Washington, DC: U. S. Bureau of Mines. (NTIS No. PB 84-180199).
- Love, K. (1983). Empirical recommendations for the use of peer rankings in the evaluation of police officer performance. Public Personnel Management, 12(1), 25-32.
- Ludwiczak, J. T. (1984). The blasting primer: A study guide for students of explosives engineering. Owensboro, KY: Blasting and Mining Consultants, Inc.
- Maatsch, J. L., Huang, R. R., Downing, S., Barker, D., & Munger, B. (1984). The predictive validity of test formats and a psychometric theory of clinical competence. In Proceedings of the Twenty-Third Annual Conference of Research in Medical Education (pp. 76-82). Washington, DC: Association of American Medical Colleges.
- MacEachron, E., & Janicki, M. P. (1983). Self-preservation ability and residential fire emergencies. American Journal of Mental Deficiency, 88(2), 157-163.
- Main, J. (1983). Health and safety improvements needed for underground coal mining. In M. Karmis, J. L. Patrick, J. R. Lucas, W. H. Sutherland, & G. J. Faulkner (Eds.), Proceedings of the 14th Annual Institute on Coal Mining Health, Safety and Research, (pp. 95-100). Blacksburg, VA: Virginia Polytechnic Institute and State University, Department of Mining and Minerals Engineering.

- Mallory, W. J., & Elliot, T. F. (1978). Measuring troubleshooting shells using hardware-free simulation. (USAFHRL Technical Report, No. 78-47).
- Mannon, J. M. (1981). Emergency encounters: A study of an urban ambulance service. Port Washington, NY: National University Publications.
- Maratuza, V. R. (1977). Applying norm referenced and criterion referenced measurement in education. Boston: Allyn and Bacon.
- Marchant, E. W. (1980). Modelling fire safety and risk. In D. Canter (Ed.), Fires and human behavior (pp. 293-314). Chichester: Wiley.
- Marovelli, R. L. (1979). Bureau of Mines health and safety research. Mining Engineering, 31(11), 1557-1562.
- Marros, W. S., & Kroemer, K. H. E. (1980). A method to evaluate human factors/ergonomic design variables of distress signals. Human Factors, 22(4), 389-399.
- Martin County Coal Company. (1985). Underground mining operations safety pocketbook. Inez, KY: Author.
- Martin, J. T., McBride, J. R., & Weiss, D. J. (1983). Reliability and validity of adaptive and conventional tests in a military recruit population. Minneapolis, MN: University of Minnesota, Department of Psychology. (ERIC Document Reproduction Service No. ED 230 627).
- Martin, M. T., & Hanson, A. E. (1981). Internal conductors: How to assess burn severity. Occupational Health & Safety, 50(12), 31-35.
- Martin, W. J., Loomis, J. H., & Lloyd, C. W. (1983). CPR skills: Achievement and retention under stringent and relaxed criteria. American Journal of Public Health, 73, 1310-1312.
- Mason, R. H. (1977). Kessler Coals institutes a training program that is second to none. Coal Mining and Processing, 14(1), 62-63, 84.
- Mast, T. A., Colliver, J. A., Anderson, M. B., & Soler, N. G. (1982). The validation of problem solving measures: Multitrait-multimethod matrix analysis. In Proceedings of the Twenty-First Annual Conference of Research in Medical Education (pp. 157-162). Washington, DC: Association of American Medical Colleges.
- Mayer, R. E. (1981). The promise of cognitive psychology. San Francisco: Freeman.



- Mayer, R. E. (1981). Thinking, problem solving, cognition. NY: Freeman.
- Mayes, A. (1984). Evaluation: Anatomy of an emergency plan. Dimensions in Health Service, 61(1), 13-15.
- Mazzuca, S. A., Cohen, S. J., & Clark, C. M., Jr. (1981). Evaluating clinical knowledge across years of medical training. Journal of Medical Education, 56(2), 83-90.
- McAteer, J. D., & Bethell, T. N. (Eds.). (1985). Miner's manual (3rd ed.). Washington, DC: Crossroads Press.
- McCloskey, M. (1983). Naive theories of motion. In D. Gentner & A. L. Stevens (Eds.), Mental Models (pp. 299-324). Hillsdale, NJ: Earlbaum.
- McCoy, D. F. (1985). Survey of safety sign usage in underground Kentucky coal mines. Lexington, KY: University of Kentucky.
- McDonald, L. B., & Baker, R. M. (1979). An annotated bibliography of coal mine fire reports (Vols. 1-3). (Contract No. JO275008). Denver, CO: U. S. Bureau of Mines.
- McEwen, Y. T. (1981). Emergency health care in the coalfields of Illinois. The Mining Engineer, 141(242), 259-261.
- McGaghie, W. C. (1980). Medical problem-solving: A reanalysis. Journal of Medical Education, 55(11), 912-921.
- McGhee, M. B., & Cheek, J. G. (1983). Competency test items for fundamentals of agribusiness and natural resource occupations: A report of research. Gainesville, FL: University of Florida, Agricultural and Extension Education. (ERIC Document Reproduction Service No. ED 230 768).
- McGraw-Hill Economics. (1985). 13th annual Mc-Graw Hill survey of investment in employee safety and health. New York: Author.
- McGuire, C. (1967). Simulation technique in the teaching and testing of problem solving skills. In Proceedings of the Annual Meeting of the National Association for Research in Science Teaching. Detroit, MI: NARST.
- McGuire, C. (1984). Medical problem-solving: A critique of the literature. In Research in Medical Education: 1984 Proceedings of the Twenty-Third Annual Conference (pp. 3-13). Washington, DC: Association of American Medical Colleges.
- McGuire, C. H., & Babbott, D. (1967). Simulation technique in the measurement of problem-solving skills. Journal of Educational Measurement, 4(1), 1-10.

- 
- McGuire, C. H., Solomon, L. M., & Bashook, P. G. (1976). Construction and use of written simulations. New York: Psychological Corporation.
- McIntosh, C. B. (1957). Atmospheric conditions and explosions in coal mines. The Geographical Review, 47(2), 155-174.
- McIntyre, H. M., McDonald, F. J., Bailey, J. T., & Claus, K. (1972). A simulated clinical nursing test. Nursing Research, 21(5), 429-435.
- McKenna, S. P., & Hale, A. R. (1982). Changing behavior towards danger: The effect of first aid training. Journal of Occupational Accidents, 4(1), 47-59.
- McKenna, S. P., Hunt, S. M., & McEwen, J. (1981). Mine rescue workers: Their perceived health and absence from work. Occupational Health, 33(2), 70-74.
- McLaughlin, F. E., Carr, J. W., & Delucchi, K. L. (1980). Selected psychometric properties of two clinical simulation tests. Journal of Medical Education, 55(4), 375-376.
- McLaughlin, H. G. (1969). SMOG-grading: A new readability formula. Journal of Reading, 12, 639-646.
- McRae, J. T., Beamer, W. C., & Griffin, A. M. (1985). Emergency medicine case studies: Vol. 1 (2nd ed.). New Hyde Park, NY: Medical Examination Publishing Co.
- McSwain, C., Mahan, J. M., & Herrin, T. J. (1979). The use of a criterion performance checklist to improve efficiency and effectiveness in a CPR self-teaching program. Journal of Medical Education, 54(9), 736-738.
- McVeigh, T. E. (1979). An optical fire safety plan. Dimensions in Health Service, 56(10), 38-39.
- McVey, J. R. (1982). In Mine personnel location & in-mine activity controller (pp. 84-91). (Bureau of Mines Information Circular No. 8907). Washington, DC: U. S. Bureau of Mines.
- McWhinney, I. R. (1979). Problem-solving and decision-making in family practice. Canadian Family Physician, 25, 1473-1477.
- Mead Johnson Pharmaceutical Division. (1979). Chronic obstructive pulmonary disease. Evansville, IN: Author.
- Meakin, W.D. (1979). Use of auxiliary fans for mining purposes. New Philadelphia, Ohio: Joy Manufacturing Company.

- Melton, C. M., & Johnson, K. (1984). Inspections, drills needed to prevent and deal with fires. Occupational Health & Safety, 53(1), 38, 42-43.
- Mengelkoch, R. F., Adams, J. A., & Gainer, C. A. (1971). The forgetting of instrument flying skills. Human Factors, 13(5), 397-405.
- Meredith, T. L., Worth, T. E., & Bethard, R. C. (1984). Report of investigation (underground coal mine): Noninjury methane gas ignition. Washington, DC: Mine Safety and Health Administration.
- Merrill, M. D. (1979). Transfer task analysis. In Proceedings of the 21st Annual Conference of the Military Testing Association (pp. 337-344). (ED 190 648).
- Merritt, P.C. (Ed.) (1978). Coal Age operating handbook of Coal preparation (Vol. 3-Coal Age Library of Operating Handbooks). New York: McGraw-Hill.
- Michael, J. D., Elam, R. A., & Compton, P. J. (1978). Report of investigation: Underground coal mine inundation (blackdamp). Washington, DC: Mine Safety and Health Administration.
- Michael, P. L., Saperstein, L. W. & Prout, J. H. (1973). A study of roof warning signals and the use of personal hearing protection in underground coal mines (Bureau of Mines OFR 46-74). University Park, PA: The Pennsylvania State University.
- Miehle, W. & Siegel, A. I. (1977). Development of performance evaluative measures--Personnel psychophysics: Quantification of malfunction detection probabilities. Catalog of Selected Documents in Psychology, 7, 101. (MS 1579).
- Mikulecky, L., & Diehl, W. (1979, June). An examination of work-related literacy and reading attitudes. Paper presented at the Functional Literacy Conference, Bloomington, IN.
- Miller, G., & Agnew, N. (1973). First aid training and accidents. Occupational Psychology, 47(3&4), 209-218.
- Miller, W. K., & McLellan, R. R. (1975). Analysis of disabling injuries related to roof bolting in underground bituminous coal mines - 1973 (Informational Report 1017). Washington, DC: Mining Enforcement and Safety Administration (MESA).
- Mine Safety Appliance Company. (undated). Self-rescuer: Respirator co-filter type W65. Pittsburgh, PA: Author.
- Mine Safety Associates. (1982). Control Manual. Price, UT: Castle Press.

- 
- Mine Safety Associates. (1985). Federal coal mine safety standards. 30CRF75. Pocket edition with index. For underground coal mines. Price, UT: Castle Press.
- Mine Safety and Health Administration. (undated). Longwall mining workbook. Washington, DC: Author.
- Mine Safety and Health Administration. (undated). Safety tips for underground coal mining. Washington, DC: Author.
- Mine Safety and Health Administration. (undated). Underground coal mine ventilation and air contaminants for on-the-job training (Vols. 3-14). Washington, DC: Author.
- Mine Safety and Health Administration. (1980). Coal mine roof and rib control (Safety manual No. 18). Washington, DC: Author.
- Mine Safety and Health Administration. (1980). First aid book. Washington, DC: U. S. Government Printing Office.
- Mine Safety and Health Administration. (1980). MSA W-65 self-rescuer (MSHA 0004). Washington, DC: Author.
- Mine Safety and Health Administration. (1980). Mine map, escapeways, emergency evacuation, and barricading (MSHA 0108). In Part 48 - training modules - coal - underground (Bureau of Mines Contract No. JO188069). Beckley, WV: National Mine Health and Safety Academy.
- Mine Safety and Health Administration. (1980). Part 48 - training modules - coal - underground (Bureau of Mines Contract No. JO188069). Beckley, WV: National Mine Health and Safety Academy.
- Mine Safety and Health Administration. (1980). Training module - coal mining surface - inexperienced: Escapeways, emergency evacuation, firewarning and firefighting (MSHA 0208). Washington, DC: U. S. Department of Labor.
- Mine Safety and Health Administration. (1980). Training module - coal mining underground and surface - inexperienced and experienced: Draeger 810 self-rescuer. (MSHA 0005). Washington, DC: U. S. Department of Labor.
- Mine Safety and Health Administration. (1981). Training module - initial mine rescue: Aerorlox self-contained breathing apparatus. Washington, DC: U. S. Department of Labor.
- Mine Safety and Health Administration. (1981). Training module - initial mine rescue: Chemox auxiliary self-contained breathing apparatus. Washington, DC: U. S. Department of Labor.

- 
- Mine Safety and Health Administration. (1981). Training module - initial mine rescue: Introduction to auxiliary apparatus. Washington, DC: U. S. Department of Labor.
- Mine Safety and Health Administration. (1981). Training module - initial mine rescue: Introduction to self-contained breathing apparatus. Washington, DC: U. S. Department of Labor.
- Mine Safety and Health Administration. (1981). Training module - initial mine rescue: Scott rescue-pak self-contained breathing apparatus (MSHA 2007). Washington, DC. U. S. Department of Labor.
- Mine Safety and Health Administration. (1981). Training module - mine rescue: Instructor's manual for mine rescue training (MSHA 2001). Washington, DC: U. S. Department of Labor.
- Mine Safety and Health Administration. (1981). Draeger OXY-SR 60B self-contained self-rescuer (Instruction Guide 39). Washington, DC: Author.
- Mine Safety and Health Administration. (1981). The explosion hazard in mining (Informational Report No. 1119). Washington, DC: Author.
- Mine Safety and Health Administration. (1981). MSA one hour SCSR self-contained self-rescuer (Instruction Guide 38). Washington, DC: Author.
- Mine Safety and Health Administration. (1982). Injury experience in coal mining. Washington, DC: Author.
- Mine Safety and Health Administration. (1982). Roof and rib control (Programmed Instruction Workbook No. 3). Washington, DC: Author.
- Mine Safety and Health Administration. (1983). Coal - surface fatalities - 1983. Washington, DC: Author.
- Mine Safety and Health Administration. (1983). Coal - underground - fatalities. Washington, DC: Author.
- Mine Safety and Health Administration. (1983). The CSE AU-9A1 self-contained self-rescuer (MSHA 0007). Washington, DC: Author.
- Mine Safety and Health Administration. (1983). How to tailor off-the-shelf training materials. Washington, DC: Author.
- Mine Safety and Health Administration. (1983). Metal/nonmetal - surface fatalities - 1983. Washington, DC: Author.
- Mine Safety and Health Administration. (1983). Mine injuries and worktime, quarterly. Washington, DC: Author.

- 
- Mine Safety and Health Administration. (1983). Mine injuries and worktime, quarterly: Closeout edition 1983. Washington, DC: Author.
- Mine Safety and Health Administration. (1983). The Ocenco EBA 6.5 self-contained self-rescuer (MSHA 0006). Washington, DC: Author
- Mine Safety and Health Administration. (1983). The Pass 700E self-contained self-rescuer (MSHA 0008). Washington, DC: Author
- Mine Safety and Health Administration. (1983). Structuring effective on-the-job training programs. Washington, DC: Author.
- Mine Safety and Health Administration. (1983). Underground coal mine mechanical safeguards for on-the-job training. Washington, DC: Author.
- Mine Safety and Health Administration. (1984). Coal - surface fatalities. Washington, DC: Author.
- Mine Safety and Health Administration. (1984). Coal - surface fatalities - third quarter 1984. Washington, DC: Author.
- Mine Safety and Health Administration. (1984). Coal - underground fatalities (first and second quarter). Washington, DC: Author.
- Mine Safety and Health Administration. (1984). Coal - underground fatalities (third quarter). Washington, DC: Author.
- Mine Safety and Health Administration. (1984). First aid. Washington, DC: U. S. Department of Labor.
- Mine Safety and Health Administration. (1984). Injury experience in coal mining, 1982 (Informational Report No. 1143). Washington, DC: Author.
- Mine Safety and Health Administration. (1984). Mine injuries and worktime, quarterly - January-December 1984. Washington, DC: Author.
- Mine Safety and Health Administration. (1985). MSHA administrative manual 30 CFR part 48 - Training and retraining of miners. Washington, DC: Author.
- Mining Enforcement and Safety Administration. (1974). Draeger 810 respirator for self rescue (MESA Instruction Guide No. 3). Pittsburgh, PA: Author.
- Mining Enforcement and Safety Administration. (1974). Mine emergency training (MESA Instruction Guide No. 19). Washington, DC: U. S. Department of Labor.

- 
- Mining Enforcement and Safety Administration. (1974). Permissible Draeger 810 respirator for self rescue (MESA Instruction Guide No. 3). Pittsburgh, PA: Author.
- Mining Enforcement and Safety Administration. (1975). Principles of mine rescue. Pittsburgh, PA: Author.
- Mining Enforcement and Safety Administration. (1977). Mining accident prevention. Pittsburgh, PA: Author.
- Mishkin, B. H., Holloran, S. D., & Burge, S. (1982). Simulated cardiopulmonary arrests in a hospital setting. Nurse Educator, 7(4), 13-18.
- Mitchell, D. W., & Burns, F. A. (1979). Interpreting the state of a mine fire (Informational Report No. 1103). Arlington, VA: Mine Safety and Health Administration.
- Mohler, S. R., Nicogossian, A., & Margerlies, A. R. (1980). Emergency medicine and the airline passenger. Aviation, Space and Environmental Medicine, 51(9), 918-922.
- Morrell, J. F. (1978). Safety education - its effective implementation. In W. E. Leckie (Comp.), Proceedings of the Third Institute on Coal Mine Health and Safety (pp. 80-83). Golden, CO: Colorado School of Mines Press.
- Morris, C. W., Conklin, E. H., & Bick, F. J. (1982). Development and fabrication of a continuous miner training system (Bureau of Mines Contract No. HO377025). Cleveland, OH: McDonnell Douglas Electronics Company.
- Morris, N. M., & Rouse, W. B. (1985). Review and evaluation of empirical research in troubleshooting. Human Factors, 27(5), 503-530.
- Morrow, A. E. (1959). Loss of life among wearers of oxygen breathing apparatus (Information Circular No. 7943). Washington, DC: U. S. Bureau of Mines.
- Morrow, A. E., Demkowicz, W. M., & Chastain, G. W. (1961). Mine rescue apparatus and auxiliary equipment: A handbook for miners. Washington, DC: U. S. Bureau of Mines. (TN297.U61 622.06173 GPO).
- Moser, W., Althouse, R., & Peay, J. M. (1981). Developing training resources to promote a high-performance human system response to underground mine disaster. In Ergonomics - human factors in mining (Information Circular No. 8866) (pp. 155-167). Pittsburgh, PA: Bureau of Mines.

- Moskowitz, D. S. & Schwarz, J. C. (1982). Validity comparisons of behavior counts and ratings by knowledge informants. Journal of Personality and Social Psychology, 42(3), 518-528.
- Mosteller, F. (1977). Assessing unknown numbers: Order of magnitude estimation. In W. B. Fairley, & F. Mosteller (Eds.), Statistics & public policy. Reading, MA: Addison-Wesley Publishing Co.
- Moulton, B. D. (1983). Oil rig medicine: Is 40 hours training enough? Canadian Medical Association Journal, 128(12), 1438-1441.
- Muir, S. (1978). Clearing the air of fog and SMOG. Reading Horizons, 18, 285-288.
- Murray, M. E. (1980). C.A.R.P.: A new way to learn. The Canadian Nurse, 76(6), 42-44.
- Nagy, J., & Portman, W. M. (1961). Explosibility of coal dust in an atmosphere containing a low percentage of methane (Investigation Report No. 5815). Washington, DC: U. S. Bureau of Mines.
- National Academy of Engineering. (1970). Mine rescue and survival. Washington, DC: Author.
- National Assessment of Educational Progress. (1975). Functional literacy, basic reading performances (A technical summary of in school 17-year-olds in 1974). Denver, CO: Author.
- National Center for Research in Vocational Education. (1977). Provide for the first aid needs of students. Module E-6 of category E - instructional management. Professional teacher education module series. Athens, GA: American Association for Vocational Instructional Materials (AAVIM). (ERIC Reproduction Service No. ED 149 105).
- National Coal Board. (1969). Medical memorandum: Medical supervision of mines rescue workers at incidents. London, England: Author.
- National Conference on Cardiopulmonary Resuscitation and Emergency Care. (1980). Standards and guidelines for cardiopulmonary resuscitation (CPR) and emergency cardiac care (ECC). Journal of the American Medical Association, 244(5), 453-509.
- National Fire Protection Association. (undated). Student performance manual to accompany handling hazardous materials transportation emergencies. Boston, MA: Author.
- National Fire Protection Association. (1975). Carpets, clothing, and furniture. NFPA publications No: SPP-34. Boston: National Fire Protection Association.



- 
- National Institute for Occupational Safety and Health. (1979). Criteria for a recommended standard ... working in confined spaces. Rockville, MD: Author. (NIOSH-80-106) (NTIS No. PB 80-183015).
- National Institute for Occupational Safety and Health (1981). Work practices guide for manual lifting. Cincinnati, OH: Author.
- National Mine Health and Safety Academy. (undated). Accident prevention techniques. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Accident prevention: Accident analysis, problem and solution identification. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Instructor training workbook. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Mine explosives and blasting. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Programmed instruction workbook No. 2: Mine gases. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). The psychology and response mechanisms of stress. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Small mines training: Complying with part 48. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Small mines training: Conducting your own training. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Small mines training: Developing a comprehensive safety program. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Small mines training: Elements of management planning. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Small mines training: Human relations skills at work. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Small mines training: Managing maintenance. Beckley, WV: Author.
- National Mine Health and Safety Academy. (undated). Small mines training: Managing a section. Beckley, WV: Author.
- National Mine Health and Safety Academy. (1975). Philosophical concepts of mine safety and health (Extracted from Occupational Hazards). Beckley, WV: Author.

- 
- National Mine Health and Safety Academy. (1976). First aid: Vol. 1. Workbook. Washington, DC: Mining Enforcement and Safety Administration.
- National Mine Health and Safety Academy. (1976). First aid: Vol. 2. Answer book. Washington, DC: Mining Enforcement and Safety Administration.
- National Mine Health and Safety Academy. (1977). Introduction to underground coal mining (CE-001). Beckley, WV: Author.
- National Mine Health and Safety Academy. (1983). Summary Proceedings of the Second Annual National Joint Mine Health and Safety Conference. Beckley, WV: Author.
- National Mine Health and Safety Academy. (1984). Coal mine ventilation awareness program. Beckley, WV: Author.
- National Mine Health and Safety Administration. (undated). Shuttle car operator training - background information (to be presented to trainees off the job site): Pre-operational check. Beckley, WV: Author.
- National Mine Health and Safety Administration. (undated). Shuttle car operator training: Instructions for the trainer. Beckley, WV: Author.
- National Mine Health and Safety Administration. (undated). Shuttle car operator training: Instructions for the trainer: End-of-shift activities. Beckley, WV: Author.
- National Mine Health and Safety Administration. (undated). Shuttle car operator training: Instructions for the trainer: Introduction to the shuttle car. Beckley, WV: Author.
- National Mine Health and Safety Administration. (undated). Shuttle car operator training: Instructions for the trainer: Loading and dumping. Beckley, WV: Author.
- National Mine Health and Safety Administration. (undated). Shuttle car operator training: Instructions for the trainer: Preoperational check. Beckley, WV: Author.
- National Mine Health and Safety Administration. (undated). Shuttle car operator training: Instructions for the trainer: Trammng the shuttle car. Beckley, WV: Author.
- The National Mine Rescue Association. (1964). Questions and answers on rescue and recovery operations following mine fires and explosions. Pittsburgh, PA: Mine Safety Appliances Company.

- 
- National Research Council. (1981). Underground mine disaster survival and rescue: An evaluation of research accomplishments and needs. Washington, DC: National Academy Press.
- National Technical Information Service (1983). Mine Safety: Communications and position finding systems. 1964-April, 1983. (Citations from the NTLs data base). Springfield, VA: Author (NTIS No. PB 83-805408).
- Naylor, J. C., & Briggs, G. E. (1961). Long-term retention of learned skills: A review of the literature (Technical Report 61-390). Wright Patterson Air Force Base, OH: Aerospace Medical Laboratory, Aeronautical Systems Division.
- Nealy, S., & Owen, T. (1970). Multitrait-multimethod analysis of predictors and criteria of nursing performance. Organization Behavior and Human Performance, 5, 432-435.
- Neiser, U. (1976). Cognition and reality, San Francisco: Freeman.
- Neiser, U. (1982). Memory observed: Remembering in natural contexts. San Francisco: Freeman.
- Nelson, M. (1982). A first aid and CPR course for first-year medical students. Medical Education, 16(1), 7-11.
- Nelson, M., & Brown, C. G. (1984). CPR instruction: Modular versus lecture course. Annals of Emergency Medicine, 13(2), 118-121.
- Neville, R. G. (1978). The Courrieres colliery disaster, 1906. Journal of Contemporary History, 13, 33-52.
- Nicholas, E. J. H. (1976). Underground explosions in coal mines. Medicine, Science, Law, 16(4), 240-243.
- Nixon, J. E., Houghton, G. R., & Duthie, R. B. (1984). Undergraduate education in the accident unit. Medical Education, 18(2), 101-105.
- Norcini, J. J., Swanson, D. B., Grosso, L. J., & Webster, G. D. (1983). A comparison of several methods for scoring patient management problems. In Research in Medical Education: 1983 Proceedings of the Twenty-Second Annual Conference (pp. 41-46). Washington, DC: Association of American Medical Colleges.
- Norcini, J. J., Swanson, D. B., & Webster, G. D. (1983). Reliability, validity and efficiency of various item formats in assessment of physician competence. In Research in Medical Education: 1983 Proceedings of the Twenty-Second Annual Conference (pp. 53-57). Washington, DC: Association of American Medical Colleges.
- Norman, D. A. (1981). Categorization of action slips. Psychological Review, 88(1), 1-15.

- Norman, G. R., Feightner, J. W., Tugwell, P., Muzzin, L. J., & Guyatt, G. (1983). The generalizability of measures of clinical problem-solving. In Research in Medical Education: 1983 Proceedings of the Twenty-Second Annual Conference (pp. 110-114). Washington, DC: Association of American Medical Colleges.
- Norman, G. R., Tugwell, P., & Feightner, J. W. (1982). A comparison of resident performance on real and simulated patients. Journal of Medical Education, 57(9), 708-715.
- Northcutt, H. (1975). Adult functional competency: A summary. Austin, TX: University of Texas, Division of Extension.
- Ohio State Department of Education. (1983). Emergency victim care. A training manual for emergency medical technicians. Modules 1-14 (Revised). Columbus, OH: Ohio State University, Vocational Instructional Materials Laboratory. (ERIC Document Reproduction Service No. ED 239 054-066).
- Ohio State Department of Education. (1983). Emergency victim care. A training manual for emergency medical technicians. Module 6. Bleeding control, wounds and bandaging, shock (Revised). Columbus, OH: Ohio State University, Vocational Instructional Materials Laboratory. (ERIC Document Reproduction Service No. ED 239 059).
- Ohio State Department of Education. (1983). Emergency victim care. A training manual for emergency medical technicians. Module 7. Medical emergencies (Revised). Columbus, OH: Ohio State University, Vocational Instructional Materials Laboratory. (ERIC Document Reproduction Service No. ED 239 060).
- Ohio State Department of Education. (1983). Emergency victim care. A training manual for emergency medical technicians. Module 9. Backboards, moving and handling the victim, fractures, dislocations (Revised). Columbus, OH: Ohio State University, Vocational Instructional Materials Laboratory. (ERIC Document Reproduction Service No. ED 239 062).
- Ohio State Department of Education. (1983). Emergency victim care. A training manual for emergency medical technicians. Module 12. Water accidents, electrical emergencies, hazardous materials and radiation accidents (Revised). Columbus, OH: Ohio State University, Vocational Instructional Materials Laboratory. (ERIC Document Reproduction Service No. ED 239 065).
- Ohio State Department of Education. (1983). Emergency victim care. A training manual for emergency medical technicians. Module 13. Extrication from automobiles (Revised). Columbus, OH: Ohio State University, Vocational Instructional Materials Laboratory. (ERIC Document Reproduction Service No. ED 239 065).

- Ohler, L. R. (1984). Report of investigation (surface coal mine): Fatal asphyxiation accident. Washington, DC: Mine Safety and Health Administration.
- O'Leary, T. J., & Gratz, J. M. (1981). Simulation of building evacuation. Simulation & Games, 12(4), 466-474.
- Olsen, W. C. (1979, December). Once upon a time (training for emergency situations). Paper presented at the Health Physics Society Meeting, Honolulu, HI. (NTIS No. CONF-79 1203-6).
- Orban, R. (1982). Three Mile Island (Special edition). Baltimore, MD: Muse Software, Inc. (A computer simulation program).
- Ornato, J. P. (1981). Training in cardiopulmonary resuscitation for hospital attending physicians. Annals of Emergency Medicine, 10(11), 571-574.
- Osborn, W. (1979, October). Analysis and classification of performance testing problems. In Proceedings of the 21st Annual Conference of the Military Testing Association (pp. 895-904). San Diego, CA: (ERIC Document Reproduction Service No. ED 190 648).
- Page, G. G., & Fielding, D. W. (1980). Performance on PMPs and performance in practice: Are they related? Journal of Medical Education, 55(6), 529-537.
- Papadopoulos, D. A. (1981). Cardiopulmonary resuscitation training in a family medicine residency. The Journal of Family Practice, 12(6), 1013-1016.
- Park, W. R. (undated). Mine fires and explosions [Speech]. Available from the National Mine Health and Safety Academy, Beckley, WV 25801.
- Pauls, J. L. (1980). Building evacuations: Research findings and recommendations. In D. Canter (Ed.), Fires and human behaviour (pp. 251-275). Chichester: Wiley.
- Pauls, J. L., & Jones, B. K. (1980). Building evacuation: Research methods and case studies. In D. Canter (Ed.), Fires and human behaviour (pp. 227-249). Chichester: Wiley.
- Pearn, J., Dawson, B., Leditschke, F., & Petrie, G. (1980). Who accepts first aid training? Australian Family Practice, 9(9), 602, 604-605.
- Pederson, J. R. (Ed.). (1984). Bureau of Mines research 1984: A summary of significant results in mineral technology and economics. Washington, DC: U. S. Government Printing Office 1984-456-603/20235.

- Peluso, R. G. (1981). Results from the field evaluation of self-contained self rescuers. In M. Karmis, W. H. Sutherland, J. L. Patrick, & J. R. Lucas (Eds.), Proceedings of the 12th Annual Institute on Coal Mining Health Safety and Research (pp. 125-131). Blacksburg, VA: Virginia Polytechnic Institute and State University, Department of Mining and Minerals Engineering.
- Peng, S. S. (1978). Coal mine ground control. New York: John Wiley & Sons.
- Perry, R. W. & Muchgatel, A. H. (1984). Disaster Management. Westport, CT: Quorum Books.
- Peter, G. A. (1984). 15 cardinal principles to ensure effectiveness of warning system. Occupational Health & Safety, 53(5), 76-79.
- Peters, D. F. (1981). Tailoring first aid to fit company needs. Occupational Health & Safety, 50(12), 36-40, 42, 52.
- Pettit, T. A., Sanderson, L. M., & Linn, H. I. (1987). Workers/rescuers continue to die in confined spaces. Professional Safety, 32(2), 15-22.
- Petsonk, E. L., Hancock, J., & Boyles, C. (1983). Physiologic effects of a self-contained self-rescuer. American Industrial Hygiene Association Journal, 44(5), 368-373.
- Pfiefer, C. M., Jr., Stefanski, J. L., & Grether, C. B. (1976). Psychological, behavioral, and organizational factors affecting coal miner safety and health (Technical Report BSC-5). Columbia, MD: Westinghouse Behavioral Service Center. (NTIS No. PB 275 599).
- Phillips, C. (1986) Basic life support skills manual (2nd Ed.) Englewood Cliffs, NJ: Prentice-Hall.
- Phillips, M. D., & Pepper, R. L. (1982). Shipboard fire-fighting performance of females and males. Human Factors, 24(3), 277-283.
- Pickar, E. R. (1977). Emergency medical needs of coal mines (Final Report). Silver Spring, MD: Orkand Corporation. (NTIS No. PB 80-192651).
- Pickrel, E. W., & Dailey, J. T. (1979). Development of the multiplex controller aptitude test. In Proceedings of the 21st Annual Conference of the Military Testing Association (pp. 60-67). (ERIC Document Reproduction Service No. ED 190648).
- Pinkston, B & Hahn, W. (1981). Development of an improved man transit vehicle. Vol. 2. (Bureau of Mines Contract No. J0366003). Cleveland, OH: Booz, Allen, & Hamilton Inc.

- 
- Pisiewicz, K. (1978). Ocena ryzyka wypadku przy pracy jako wyznacznik bezpiecznych zachowan pracownikow [Assessment of accidents at work as an indicator of safe behavior of workers]. Przeglad Gorniczy, 34(10), 448-451.
- Pittsburgh Research Center. (1980). Mine safety education and training seminar. In Proceedings: Bureau of Mines Technology Transfer Seminars. (Bureau of Mines Information Circular No. 8858). Pittsburgh, PA: Author.
- Pomroy, W. H., & Helmbrecht, R. E. (1985). Design and operation of four prototype fire detection systems in noncoal underground mines. (Information Circular No. 9030). Washington, DC: U. S. Bureau of Mines.
- Pople, Jr., H. E. (1986). CADUCEUS: An experimental expert system for medical diagnosis. In P. H. Winston & K. A. Prendergast (Eds.), The AI business: Commercial uses of artificial intelligence (pp. 67-80). Cambridge: MIT Press.
- Poulton, T. J., & Powell, M. B. (1981). Critical care medical and nursing personnel: Simulation training of administrative skills. Simulation & Games, 12(4), 475-479.
- Powell, P.. (1973). Comment on Miller and Agnew's: First aid training and accidents. Occupational Psychology, 47, 219-220.
- Proceedings of the 21st Annual Conference of the Military Testing Association. (1979). San Diego, CA: Author. (ERIC Document Reproduction Service No. ED 190 648).
- Prout, J. H., Michael, P. L., & Saperstine, L. W. (1973). A study of roof warning signals and the use of personal hearing protection in underground coal mines. Washington, D.C.: U. S. Bureau of Mines.
- Pryor, H. G., & Racey, G. (1982). Minicomputer simulation of medical emergencies and advanced life support. Journal of Dental Education, 46(11), 657-660.
- Quick, J. D., Moorhead, G., Quick, J. C., Gerloff, E. A., Mattox, K. L., & Mullins, C. (1983). Decision-making among emergency room residents: Preliminary observations and a decision model. Journal of Medical Education, 58(2), 117-125.
- Quisenberry, J. (undated). Injuries to female miners in surface and underground coal operations, 1978-1982. Denver, CO: Health and Safety Analysis Center.
- Rankin, J. E. (1979). Bibliography: Human factors in mine safety. Beckley, WV: National Mine Health and Safety Academy.

- Rankin, J. E., & Tolley, G. O. (1983). Fault tree analysis (Safety Manual No. 8). Washington, DC: Mine Safety and Health Administration.
- Rankin, J. E., & Zabetakis, M. G. (1983). Job safety analysis (Safety Manual No. 5). Washington, DC: U. S. Government Printing Office.
- Rantanen, J. (1983). Occupational Health & Safety in Finland. Scandinavian Journal of Work, Environment and Health, 9(2), 140-147.
- Rawlins, D. (1981). Emergencies in the home. British Medical Journal, 283(7), 1229-1230.
- Raygor, A. L. (1977). The Raygor readability estimate: A quick and easy way to determine difficulty. In P. D. Pearson (Ed.), 26th Yearbook of the National Reading Conference. Clemson, NC: National Reading Conference.
- Rayner, J. F. (1958). How do nurses behave in disaster? Nursing Outlook, 6(10), 572-576.
- Reid, D. H., & Shoemaker, J. (1984). Behavioral supervision: Method of improving institutional staff performance. In W. P. Christian, G. T. Hannah, T. J. Glahn (Eds.), Programming effective human services (pp. 39-61). New York: Plenum Press.
- Reigeluth, C. M., & Merrill, M. D. (1984). Extended task analysis procedure (ETAP): User's manual. Lanham, MD: University Press of America.
- Remmer, A., & Jernstedt, G. C. (1982). Comparative effectiveness of simulation games in secondary and college level instruction: A meta analysis. Psychological Reports, 51(3), 742.
- Rescue Training Associates, Ltd. (1985). Action guide for emergency service personnel. Bowie, MD: Brady Communications Company, Inc.
- ReVelle, J. B. (1980). Safety training methods. New York: Wiley.
- Richmond, J. K., Price, G. C., Sapko, M. J., & Kawenski, E. M. (1983). Historical summary of coal mine explosions in the United States, 1959-81 (Information Circular No. 8909). Washington, DC: U. S. Bureau of Mines.
- Riesbeck, C. K. (1980). You can't miss it!: Judging the clarity of directions. Cognitive Science, 4(3), 285-303.
- Rimel, R. W., Jane, J. A., & Edlich, R. F. (1981). An educational training program for the care at the site of injury of trauma to the central nervous system. Resuscitation, 9(1), 23-28.



- 
- Rimoldi, H. J. A. (1961). The test of diagnostic skills. Journal of Medical Education, 36, 73-79.
- Roantree, W. B. (1972). Emergency surgery. In J. M. Rogan (Ed.), Medicine in the mining industries (pp. 273-284). Philadelphia, PA: F. A. Davis.
- Roberts, B. G. (1978, April). Contributions to: Some interesting observations about colliery fires and the weather. Journal of the Mine Ventilation Society of South Africa, 4, 74-78.
- Robertson, E., Ofiesh, G. D., & Johnston, D. R. (1977). Use of algorithms for developing a handbook to aid individuals in coping with medical problems in a nuclear attack emergency. Washington, DC: Defense Civil Preparedness Agency.
- Robertson, L. S. (1983). Injuries: Causes, control strategies, and public policy. Lexington, MA: D. C. Heath and Company.
- Robinson, A. H., & Petchenik, B. B. (1976). The nature of maps. Chicago, IL: The University of Chicago Press.
- Rock, D. L., & Fordyce, W. E. (1982). Item convergent validity: A new method of analysis for frequency or continuously scaled data. The Journal of Experimental Education, 51(1), 38-41.
- Rockwell, T. H., & Giffin, W. C. (1981). An investigation into pilot and system response to critical in-flight events: Vol. 1 & 2. Columbus, OH: The Ohio State University Research Foundations. (NASA Contracts NAS2-10047 and NAG2-75).
- Rockwell, T. H., & Giffin, W. C. (1981). Use of computer aided testing of pilot response to critical in-flight events: Vol. 1. Columbus, OH: The Ohio State University Research Foundation.
- Rockwell, T. H., & Giffin, W. C. (1982). Use of computer aided testing of pilot response to critical in-flight events: Vol. 2. Columbus, OH: The Ohio State University Research Foundation.
- Rogan, J. M. (Ed.). (1972). Medicine in the mining industries. Philadelphia, PA: F. A. Davis.
- Roid, G., & Haladyna, T. (1980). The emergence of item-writing technology. Review of Educational Research, 50(2), 293-314.
- Roid, G., & Haladyna, T. (1982). A technology for test item writing. Academic Press.
- Romiszowski, A. J. (1981). Strategies for the teaching of knowledge and skills. In A. J. Trott (Ed.), Aspects of educational technology: Vol. XV. Distance learning and evaluation (pp. 215-223). London: Kogan Page.

- 
- Rooney, R. H., et al. (1984). The foster care system simulation: Evaluation of a training innovation. Children & Youth Services Review, 6(3), 173-193.
- Ross, H. E., Dickinson, D. J., & Jupp, B. P. (1970). Geographical orientation under water. Human Factors, 12(1), 13-23.
- Ruben, B. D., & Lederman, L. C. (1982). Instructional simulations gaming: validity, reliability, and utility. Simulation and Games, 13(2), 233-244.
- Rubinsky, S., & Smith, N. (1973). Safety training by accident simulation. Journal of Applied Psychology, 57(1), 68-73.
- Saari, J. & Lahtela, J. (1981). Work conditions and accidents in three industries. Scandinavian Journal of Work and Environmental Health. 7(4), 97-105.
- Sadler, C. (1983). The coalminer's granddaughter. Nursing Mirror, 157(22), 16-20.
- Safar, P., Berkebile, P., Scott, M. A., Esposito, G., Medsger, A., Ricci, E., & Malloy, C. L. (1981). Education research on life-supporting first aid (LSFA) and CPR self-training systems (STS). Critical Care Medicine, 9(5), 403-404.
- Safety Sciences. (1978). AIM: Accident Investigation Methodology (Contract No. 210-75-0017). Cincinnati, OH: National Institute for Occupational Safety and Health. (NTIS No. PB 83-115 782).
- Safrit, M.J. (1977). Criterion-referenced measurement: Applications in physical education. Motor skills: Theory into Practice, 2(1), 21-35.
- Salvendy, G., & Pilitsis, J. The development and validation of an analytical training program for medical suturing. Human Factors. 22(2), 153-170.
- Samways, M. C. (1983). Cost-effective occupational health and safety training. American Industrial Hygiene Association Journal, 44(10), A6-9.
- Sanazaro, P., & Williamson, J. (1970). Physician performance and its effects on patients: A classification based on reports by internists, surgeons, pediatricians, and obstetricians. Medical Care, 8, 299-308.
- Sanders, M. S. (1982). Personal equipment for low seam coal miners: VI. Improved knee pads. (Contract J0387213). Pittsburgh, PA: Bureau of Mines.

- Sanders, M. S., Beith, B., & Blake, T. (1978). Use of personal equipment in low coal: A review of the personal equipment literature (Phase I Report) (Bureau of Mines OFR-39(1)-82). Westlake Village, CA: Canyon Research Group, Inc. (NTIS No. PB 82-218 207).
- Sanders, M. S., & Downing, J. V. (1982). Personal equipment for low seam coal miners: VIII. Improved traction rubber boot soles. (Contract JO387213). Pittsburgh, PA: Bureau of Mines.
- Sanders, M. S., & Krohn, G. S. (1983). Validation and extension of visibility requirements analysis for underground mining equipment. Bureau of Mines. Contract No. JO318072. Cleveland, OH: Canyon Research Group, Inc.
- Sandstrom, C. I. (1971). What do we perceive in perceiving? In B. Honikman (Ed.), Proceedings of the Architectural Psychology Conference at Kingston Polytechnic (pp. 70-72). London: RIBA Publications, Ltd.
- Sarnoff, D. P., & Cole, H. P. (1982). Creativity and personal growth. Journal of Creative Behavior, 17, 95-103.
- Saunders, N. A., & Wallis, B. J. (1981). Learning decision-making in clinical medicine: A card game dealing with acute emergencies for undergraduate use. Medical Education, 15(5), 323-327.
- Scanland, D. K. (1979, October). Criterion vs norm referenced measures. In Proceedings of the 21st Annual Conference of the Military Testing Association (pp. 652-656). San Diego, CA. (ERIC Document Reproduction Service No. ED 190 648).
- Schadt, E. (1982). First aid for choking: A successful community education program. Nursing & Health Care, 3(10), 547-549.
- Schaffer, L., & Atchison, D. (1983). Research to improve health and safety programs in the mining industry (Vol. 1). (Bureau of Mines Contract No. HO308076). Cleveland, OH: Woodward Associates, Inc.
- Schank, R. (1986). Intelligent advisory systems. In P. H. Winston & K. A. Prendergast (Eds.), The AI business: Commercial uses of artificial intelligence (pp. 133-148). Cambridge: MIT Press.
- Schilling, R. S. F. (1981). Occupational health practice (2nd ed.). London: Butterworths.
- Schlick, D. P. (1975). Mine emergency operations of the Mining Enforcement and Safety Administration (Informational Report No. 1011). Washington, DC: Mining Enforcement and Safety Administration.
- Schmidt, H. G. (1983). Problem-based learning: Rationale and description. Medical Education, 17(1), 11-16.

- 
- Schmidt, R. A. (1982). Motor control and learning: A behavioral emphasis. Champaign, IL: Human Kinetics Publishers.
- Schmitt, N., et al. (1978). Subgroup difference in prediction and criterion variances and differential validity. Journal of Applied Psychology, 63(6), 667-672.
- Schofield, J. E., & Giffin, W. C. (1982). An analysis of aircrew procedural compliance. Aviation, Space and Environmental Medicine, 53(10), 964-969.
- Schultz, D. G., & Siegal, A. I. (1979). Post-training performance criterion development and application. Catalogue of Selected Documents in Psychology, 9, 66-67. (MS 1885).
- Schuster, D. H. (1975). Preliminary evaluation of PAMFA: Psychological assist to medical first aid. Journal of Clinical Psychology, 31(1), 97-100.
- Schweiger, D. M. (1983). Is the simultaneous verbal protocol a viable method for studying managerial problem solving and decision making? Academy of Management Journal, 26(1), 185-192.
- Schofield, M. E., & Yoxheimer, L. L. (1983). Psychometric issues in the assessment of clinical competencies. Journal of Counseling Psychology, 30(3), 413-420.
- Segal, J. W., Chipman, S. F., & Glaser, R. (Eds.). (1985). Thinking and Learning skills Vol. 1: Relating Instruction to Research. Hillsdale, NJ: Erlbaum.
- Selltiz, C., Jahoda, M., Deutsch, M., & Cook, S. (1959). Research Methods in Social Relations. New York: Holt, Rinehart and Winston.
- Shatney, C. H., & Friend, B. E. (1984). Potential role of nurses in assessing house officer performance in the critical care environment. Critical Care Medicine, 12(2), 117-120.
- Shoptaugh, C. F., & Whitaker, L. A. (1984, April). Mine safety, productivity, and motivation. In A. Mital (Ed.), Proceedings of the 1st Mid-Central Ergonomics/Human-Factors Conference (p. 377). Cincinnati, OH.
- Shrewsbury Coal Company Safety and Training Department. (undated). Baseball Bolting [Game]. Shrewsbury, WV: Shrewsbury Coal Company.
- Shriver, E. L., & Zach, S. E. (1979). Measuring training effectiveness: Procedural versus combat proficiency. In Proceedings of the 21st Annual Conference of the Military Testing Association (pp. 143-149). (ERIC Document Reproduction Service No. ED 190 648).

- Shumate, J. L. (undated). Coal mine maps (Safety Manual No. 12). Washington, DC: National Mine Health and Safety Academy.
- Siegel, A. I. (1983). The miniature job training and evaluation approach: Additional findings. Personnel Psychology, 36(1), 41-56.
- Siegel, I., & Federman, P. J. (1976). Development of performance evaluative measures: Investigation into and application of a fleet posttraining performance evaluation system. Psychological Documents, 6, 3. (MS 1314).
- Sime, J. D. (1980). The concept of panic. In D. Canter (Ed.), Fires and human behaviour (pp. 63-81). Chichester: Wiley.
- Singer, R. N. (1980). Motor learning and human performance. New York: Macmillan Publishing Company.
- Singer, T. J. (1982). An introduction to disaster - some considerations of a psychological nature. Aviation, Space, and Environmental Medicine, 53(3), 245-250.
- Singleton, W. T. (1973). Theoretical approaches to human error. Ergonomics, 16(6), 727-737.
- Singleton, W. T. (1979). Safety and risk. In W. T. Singleton, (Ed.), The study of real skills: Vol. 2. Compliance and excellence (pp. 135-154). Baltimore, MD: University Park Press.
- Singleton, W. T. (1979). Skills analysis. In W. T. Singleton, (Ed.), The study of real skills: Vol. 2. Compliance and excellence (pp. 10-44). Baltimore, MD: University Park Press.
- Skelding, M. E. (1979). Cadley Hill fire. Mining Engineer, 139(217), 341-349.
- Skinner, J. B., Knowles, G., Armstrong, R. F., & Ingram, D. (1983). The use of computerized learning in intensive care: An evaluation of a new teaching program. Medical Education, 17(1), 49-53.
- Smart, C. F., & Stanbury, W. T. (Eds.). (1978). Studies on crisis management. Toronto: Butterworth & Co.
- Smith, I.L. (1983). Use of written simulations in credentialing programs. Professional practice of psychology, 4(1), 21-50.
- Snelbecker, G. E. (1974). Learning theory, instructional theory, and psychoeducational design. New York: McGraw-Hill.
- Soboler, G. G. (1979). Mine rescue work. Washington, DC: Al-Ahram Center for scientific translations. (NTIS No. PB2955661).

- Spache, G. D. (1974). Good reading for poor readers (9th rev.). Champaign, IL: Garrard.
- Sparrow, J., Patrick, J., Surgeon, P., & Barwell, F. (1982). The use of job component analysis and related aptitudes in personnel selection. Journal of Occupational Psychology, 55(3), 157-164.
- Spencer, T. D. (1972). Medical aspects of mines rescue. In J. M. Rogan (Ed.), Medicine in the mining industries (pp. 285-298). Philadelphia, PA: F. A. Davis.
- Spencer, T. D., & Lawther, P. J. (1972). Mine gases. In J. M. Rogan (Ed.), Medicine in the mining industries (pp. 224-235). Philadelphia, PA: F. A. Davis.
- Sperounis, F. P., & Miller, L. M. (1983). The context of work in America. In B. S. Levy & D. H. Wegman (Eds.), Occupational health: Recognizing and preventing work-related disease (pp. 15-25). Boston: Little, Brown & Co.
- Spielman, F. J., Murphy, C. A., & Levin, K. J. (1983). Medical student education in life-support skills. Journal of Medical Education, 58(8), 637-640.
- Staff. (1983). Surveillance of occupational injuries treated in hospital emergency rooms - United States. Morbidity and Mortality Weekly Report, 32(7).
- Stafford, S. (1983). Winning attitude benefits safety. Production at Consol mine plant. Mine Safety & Health, 8(2), 18-26.
- Stanley, W. (1984). Annual report: Kentucky Department of Mines and Minerals. Lexington, Kentucky: Kentucky Department of Mines and Minerals.
- Stasz, C. (1980). Planning during map learning: The global strategies of high and low visual-spatial individuals. Santa Monica, CA: Rand Corporation.
- Stea, D. (1974). Architecture in the head: Cognitive mapping. In J. Lang, C. Burnette, W. Moleski, & D. Vachon (Eds.), Designing for human behavior: Architecture and the behavioral sciences (pp. 157-168). Stroudsburg, PA: Dewdon, Hutchinson, and Ross, Inc.
- Steele, D. J., McCulloch, C. M., & Adams, S. C. (1983). Evaluation of coal reserves and assessment of mining feasibility in the Appalachian coalfields of the United States. Reprinted in Dames & Moore, Engineering Bulletin. Paper presented at the Fourth International Coal Exploration Symposium in Sydney, Australia in May 1983.

- Sternberg, R. J. (1983). Criteria for intellectual skills training. Educational Researcher, 12(2), 6-26.
- Stevens, R. B. (1976). A guide to the selection of mine shaft fire and smoke protection systems (Bureau of Mines OFR-73(2)-78). Santa Clara, CA: FMC Corporation, Engineered Systems Division. (NTIS No. PB 286 088).
- Stevens, S. S. (1968). Measurement, statistics, and the schemapiric view. Science, 161, 849-856.
- Stoane, C., & Stoane, J. S. (1981). Answers at a distance. In A. J. Trott (Ed.), Aspects of educational technology: Vol. XV. Distance learning and evaluation (pp. 199-205). London: Kogan Page.
- Stoane, J. S., Mayho, D., & Stoane, C. (1981). Answers at a distance (workshop report). In A. J. Trott (Ed.), Aspects of educational technology: Vol. XV. Distance learning and evaluation (pp. 205-207). London: Kogan Page.
- Stone, R. B., Babcock, B. S., & Edmunds, W. W. (1985). Pilot judgment: An operational viewpoint. Aviation, Space, and Environmental Medicine, 56(2), 149-152.
- Stout, K. S. (1980). Mining methods and equipment. New York: McGraw Hill, Inc.
- Strizenec, M. (1974). On research into operator's thinking and decision-making. In E. Edwards & F. P. Lees (Eds.), The human operator in process control (pp. 165-177). London: Taylor & Francis Ltd.
- Strother, R. R., & Buchbinder, L. B. (1980). Communication strategies for fire loss reduction. In D. Canter (Ed.), Fires and human behaviour (pp. 315-321). Chichester: Wiley.
- Sullivan, A. M. (1982). If the shoe doesn't fit ... wear it anyway. Coal Age, 87(2), 120-125.
- Swezey, R. W. (1978). Aspects of criterion-referenced measurement in performance evaluation. Human Factors, 20(2), 169-178.
- Szczurowski, A. (1982). Konferencja Wybrane problemy wypadkowosci ze szczegolnym uwzglednieniem podziemnego gornictwa weglowego [Conference: Selected problems of accident rate with special emphasis on underground coal mining]. Przegladgorniczny, 38(9), v112.
- Taber, R. P., & Banta, R. C. (1971). Coal mine rescue and survival system. Westinghouse Engineer, 31(4), 98-107.

- 
- Takacs, J. J. (1984). Report of investigation (underground coal mine): Methane frictional ignition. Washington, DC: Mine Safety and Health Administration.
- Tamblyn, R., Barrows, H., & Gliva, G. (1980). An initial evaluation of learning units to facilitate problem solving and self-directed study (Portable Patient Problem Pack). Medical Education, 14(5), 394-400.
- Tennessee Valley Authority. (1984). First-aid instructions for TVA employees. Chattanooga, TN: Tennessee Valley Authority, Division of Medical Services.
- Thomas, F. C., Brief, R. S., Allen, R. I., Lynch, J. R., Confer, R. G., Scala, R. A., & Stelluto, J. F. (1980). Guidelines for work in confined spaces. Medical Bulletin, 40(1), 1-46.
- Thompson, J. R. (1966). A study of the Teaching Situation Reaction Test. (Doctoral dissertation, The Ohio State University, Columbus, OH).
- Thompson, N. A., & Hendrick, W. R. (1979). A comparison of safety training and other vocational training requirements. In Proceedings of the 21st Annual Conference of the Military Testing Association (pp. 294-303). (ERIC Document Reproduction Service No. ED 190 648).
- Thomson, C. (1979). Rescue methods - equipment and craft. Practitioner, 222(1331), 672-673.
- Thorndyke, P. W. (1979). Distance estimation from cognitive maps (Report No. R-2474-ONR). Santa Monica, CA: Rand Corporation.
- Thorndyke, P. W. (1980). Performance models for spatial and locational cognition (Report No. R-2676-ONR). Santa Monica, CA: Rand Corporation.
- Thorndyke, P. W., & Goldin, S. E. (1981). Ability difference and cognitive mapping skill (Report No. N-1667-ARMY). Santa Monica, CA: Rand Corporation.
- Thorpe, J. A., Martin, E. L., Edwards, B. J., & Eddowes, E. E. (1976). Situational emergency training: F-15 emergency procedures training Program. Brooks Air Force Base, TX: Air Force Human Resource Laboratory.
- Thunderscan. High-resolution digitizer. (1984). (A software package for MacIntosh computers). Orinda, CA: Thunderware, Inc.
- Tintinalli, J. E., Rothstein, R. J., & Krome, R. L. (Eds.). (1985). Emergency medicine: A comprehensive study guide. New York: McGraw-Hill.
-



- Tisdale, J. E. (1977). Mine-rescue study report on Australian mine-rescue systems and a discussion of American systems with recommendations. Morgantown, WV: Mining Enforcement and Safety Administration.
- Toth, J. C. (1984). Evaluating the use of the basic knowledge assessment tool (BKAT) in critical care nursing with baccalaureate nursing students. Image: The Journal of Nursing Scholarship, 16(3), 67-71.
- Trade and Industrial Education Service. (1981). Victim rescue. Columbus, OH: The Ohio State University, Instructional Materials Laboratory.
- Trade and Industrial Education Service. (1984). Emergency victim care: A training manual for emergency medical technicians (Modules 1-14). Columbus, OH: Ohio State Department of Education.
- Traub, R. E., & Wolf, R. G. (1981). Latent trait theories and the assessment of educational achievement. Review of Research in Education, 9, 377-435.
- Traube, R. J., & Hopper, J. E. (1972). Accident analysis by functional classification for bituminous coal mines in 4-foot to 8-foot seam heights (Bureau of Mines OFR 9-73). Santa Clara, CA: FMC Corporation, Engineered Systems Division. (NTIS No. PB 215 165).
- Trott, A. J. (Ed.). (1981). Aspects of education technology: Vol. XV. Distance learning and evaluation. London: Kogan Page.
- Trounson, L. W. (1984). CPR certification: Consistent and convenient. Nursing Management, 15(9), 30-32.
- Tweed, W. A., Wilson, E., & Isfeld, B. (1980). Retention of cardiopulmonary resuscitation skills after initial overtraining. Critical Care Medicine, 8(11), 651-653.
- Uhley, H. N., Fox, C., Levy, E., & Horne, L. (1979). Enhancement of recall of cardiopulmonary resuscitation (CPR): Use of a moving-image card to review the dynamics of CPR. Heart & Lung, 8(3), 517-520.
- U. K. research for mine emergencies. (1988, February). Kentucky Coal Journal, 14(2), p. 9.
- Umbers, I. G. (1981). A study of control skills in an individual task, and in a simulation, using the verbal protocol technique. Ergonomics, 24(4), 275-293.
- Understanding the DRP: Charts and graphs. (1983). New York: The College Board.

- United Career Center. (1982). Competency based education curriculum for the orientation and safety program of the oil and gas industry. Ripley, WV: West Virginia State Department of Education. (ERIC Document Reproduction Service No. ED 223 832).
- United States Bureau of the Census, Department of Commerce. (November, 1979). Illiteracy in the United States (Current population reports). Washington, DC: Author.
- United States Code: Vol. 13. Title 30 - mineral lands and mining to Title 35 - patents. (1982). Washington, DC: U. S. Government Printing Office.
- United States Department of Transportation. (1977). Basic training course/emergency medical technician: Course guide (2nd ed.). Washington, DC: U.S. Government Printing Office.
- United States Department of Transportation. (1977). Basic training course/emergency medical technician: Instructor's lesson plans (2nd ed.). Washington, DC: U. S. Government Printing Office.
- United States Department of Transportation, National Highway Traffic Safety Administration. (1984). Emergency Medical Technician National Standard Curriculum (3rd Ed.). Bowie, MD: Brady Communications Company, Inc.
- Vale, C. D., & Weiss, D. J. (1975). Study of computer-administered stradaptive ability testing. Psychological Documents, 6, 3. (MS 1305).
- van den Pol, R. A., Reid, D. H., & Fuqua, R. W. (1983). Peer training of safety-related skills to institutional staff: Benefits for trainers and trainees. Journal of Applied Behavior Analysis, 16(2), 139-156.
- Vanderschmidt, H., Burnap, T. K., & Thwaites, J. K. (1975). Evaluation of a cardiopulmonary resuscitation course for secondary schools. Medical Care, 13(9), 763-774.
- Vaught, C. (1984). Patterns of solidarity: A case study of self-organization in underground mining. Dissertation proposal. University of Kentucky, Department of Sociology, Lexington, KY.
- Vaught, C., Brnich, M. J., & Kellner, H. J. (1988). Effect of training strategy on self-contained self-rescuer donning performance. In Mine Safety Education and Training Seminar Proceedings: Bureau of Mines Technology Transfer Seminar (pp. 2-14). (Bureau of Mines Information Circular No. 9185). Washington, DC: U. S. Government Printing Office (I28.27:9185).

- measuring mine health & safety skills
- Vaught, C., & Cole, H. P. (1987). The development and assessment of an innovative SCSR donning method. Papers Presented at the Symposium on Safety in Coal Mining (8.4, pp. 1-13). Pretoria, South Africa: Council for Scientific and Industrial Research.
- Vaught, C., & Cole, H. P. (1987). Problems in donning self-rescuers. In Mining applications of life support technology (pp. 26-34). (Bureau of Mines Information Circular No. 9134). Washington, DC: U. S. Government Printing Office (60501760033).
- Vaught, C., & Smith, D. L. (1980). Incorporation and mechanical solidarity in a underground coal mine. Sociology of Work and Occupations, 7(2), 159-187.
- Vineberg, R. (1975). A study of the retention of skills and knowledge acquired in basic training. Alexandria, VA: Human Resources Research Organization. (HUMRRO-TR-75-10) (AD-A012 678).
- Vu, N. V. (Organizer). (1984). Technical considerations and establishing standards for scoring clinical performance in simulated clinical encounters [Symposium]. In Proceedings of the Twenty-Third Annual Conference of Research in Medical Education (pp. 385-390). Washington, DC: Association of American Medical Colleges.
- Vu, N. V., Paiva, R. E. A., Dawson-Saunders, B. K., Marcy, M. L., & Barrows, H. S. (1983). Incremental validity of the medical reasoning aptitude test (MRAT) - a new admission test of clinical problem solving ability. In Proceedings of the Twenty-Second Annual Conference of Research in Medical Education (pp. 61-66). Washington, DC: Association of American Medical Colleges.
- Wagner, H., Fink, C. D., Behringer, R. D., and Pattie, C. L. (1973). Development of job relevant paper and pencil tests. Alexandria, VA: HUMRRO (AD A O 54504).
- Wallace, A. F. C. (1956). Human behavior in extreme situations: A survey of the literature and suggestions for further research. Monographs of the Disaster Research Group, 1 (Publication No. 390).
- Wallace, M., Berger, P., Domer, L., & Cooper, T. (1975). Behaviorally based measures for evaluating the non-clinical performance of dentists in TEAM settings. Journal of Dental Research, 54, 1056-1063.
- Walters, J. B. (1982). ELCAB: An occupational safety and health simulation. Instructor's guide. Cincinnati, OH: National Institute for Occupational Safety and Health.
- Wardell, M., Vaught, C., & Smith, D. L. (1979). Coal miners and coal mining in Southwestern Virginia: An organizational study. Blacksburg, VA: Agricultural Experiment Station.

- Waters, B. K. (1976). Empirical investigation of the stradaptive testing model for the measurement of human ability. Psychological Documents, 6, 3. (MS 1307).
- Watkins, M. M., & Ruffner, J. A. (1983). Research centers directory (8th ed.). Detroit, MI: Gale Research Company.
- Watkins, M. M., & Ruffner, J. A. (November, 1983). New research centers: An inter-edition supplement to the 8th edition of Research Centers Directory (Issue No. 1). Detroit, MI: Gale Research Company.
- Watkins, M. M., & Ruffner, J. A. (February, 1984). New research centers: An inter-edition supplement to the 8th edition of Research Centers Directory (Issue No. 2). Detroit, MI: Gale Research Company.
- Watson, A. P., & White, C. L. (1984). Workplace injury experience of female coal miners in the United States. Archives of Environmental Health, 39(4), 284-293.
- Weagel, R. C. (1969). Rescue at U. S. and Lark mine. Mining Congress Journal, 55(10), 51-53, 56.
- Weaver, F. J., Ramirez, A. G., Dorfman, S. B., & Raizner, A. E. (1979). Trainees' retention of cardiopulmonary resuscitation. How quickly they forget. Journal of the American Medical Association, 241(9), 901-903.
- Weeks, J. L., & Fox, M. (1983). Fatality rates and regulatory policies in bituminous coal mining. American Journal of Public Health, 73(11), 1278-1280.
- Weinstein, M. C., & Fineberg, H. V. (1980). Clinical decision analysis. Philadelphia, PA: Saunders.
- Weiss, D. J. (1973). The stratified adaptive computerized ability test. Minneapolis, MN: Minneapolis University, Department of Psychology.
- Weiss, D. J. (1975, September). Computerized adaptive ability measurement. Paper presented at the 17th annual conference of the Military Testing Association, Fort Benjamin Harrison, IN.
- Weiss, D. J. (1981). Computerized adaptive ability testing. (NTIS No. AD-A099 679/9).
- Weiss, J. J., & Kelly, C. W. (1980). RSCREEN and OPGEN: Two problem structuring decision aids which employ decision templates. (Contract No. N00014-79-C0068). Arlington, VA: Office of Naval Research.

- Welford, A. T. (1976). Skilled performance: Perceptual and motor skills. Glenview, IL: Scott, Foresman and Company.
- Wells, P. (1983). Evaluating learning: A teaching plan for emergency procedures. AORN Journal, 38(1), 125-130.
- West Virginia State Department of Education. (1982). Competency based education curriculum for the orientation and safety program of the oil and gas industry. Ripley, WV: West Virginia Vocational Curriculum Laboratory. (ERIC Document Reproduction Service No. ED 223 832).
- West Virginia University Mining Extension Service. (1984). Electrical accident case studies: Coal mining - surface and underground employees (Bureau of Mines Contract No. J0328045). Morgantown, WV: West Virginia University.
- West Virginia University Mining Extension Service. (1984). Electrical accident case studies: Coal mining - surface and underground employees (preparation plants). Morgantown, WV: West Virginia University.
- West Virginia University Mining Extension Service. (1984). Electrical accident case studies: Preparation plants (Bureau of Mines Contract No. J0328045). Morgantown, WV: West Virginia University.
- West Virginia University Mining Extension Service. (1984). Electrical accident case studies: Surface areas of underground mines (Bureau of Mines Contract No. J0328045). Morgantown, WV: West Virginia University.
- West Virginia University Mining Extension Service. (1984). Electrical accident case studies: Surface mines (Bureau of Mines Contract No. J0328045). Morgantown, WV: West Virginia University.
- West Virginia University Mining Extension Service. (1984). Electrical accident case studies: Underground mines (Bureau of Mines Contract No. J0328045). Morgantown, WV: West Virginia University.
- White, C. L. (1979). Coal employment project training manual. New Market, TN: Coal Employment Project.
- White, R. M. (1979). The anthropometry of United States Army men and women. Human Factors, 21(4), 473-482.
- Whitely, S. E. (1977). Models, meanings, and misunderstandings: Some aspects in applying Rasch's theory. Journal of Educational Measurement, 14, 227-236.
- Whitely, S. E., & Davis, R. V. (1974). The nature of objectivity with the Rasch Model. Journal of Educational Measurement, 11, 163-178.

- Wichansky, A. M. (1976). Human factors aspects of queuing: A critical review. Human Factors, 18(2), 161-172.
- Wiener, E. L., & Curry, R. E. (1980). Flight-deck automation: Promises and problems. Ergonomics, 23(10), 995-1011.
- Wigglesworth, E. C. (1972). A teaching model of injury causation and a guide for selecting countermeasures. Occupational Psychology, 46(2), 69-78.
- Wilkinson, G. L. (1980). Media in instruction: 60 years of research. Washington, DC: Association for Educational Communications and Technology.
- Williams, W. R. (1983). Mine mapping and layout. Englewood Cliffs, NJ: Prentice-Hall.
- Williges, R. C., & Williges, B. H. (1978). Critical variables in adaptive motor skills training. Human Factors, 20(2), 201-214.
- Wilson, E., Brooks, B., & Tweed, W. A. (1983). CPR skills retention of lay basic rescuers. Annals of Emergency Medicine, 12(8), 482-484.
- Winograd, P., & Johnston, P. (1987). Some considerations for advancing the teaching of reading comprehension. Educational Psychologist, 22(3&4), 213-230.
- Winston, P. H. (1986). Perspective. In P. H. Winston & K. A. Prendergast (Eds.), The AI business: Commercial uses of artificial intelligence (pp. 1-13). Cambridge: MIT Press.
- Winston, P. H., & Prendergast, K. A. (Eds.), The AI business: Commercial uses of artificial intelligence. Cambridge: MIT Press.
- Wiser, M., & Carey, S. (1983). When heat and temperature were one. In D. Gentner, & A. L. Stevens (Eds.), Mental Models (pp. 267-297). Hillsdale, NJ: Erlbaum.
- Wolf, F. M., Allen, N. P., Cassidy, J. T., Maxim, B. R., & Davis, W. K. (1983). Concurrent and criterion-referenced validity of patient management problems. In Research in Medical Education: 1983 Proceedings of the Twenty-Second Annual Conference (pp. 116-121). Washington, DC: Association of American Medical Colleges.
- Wood, P. G. (1980). A survey of behaviour in fires. In D. Canter (Ed.), Fires and human behavior (pp. 83-95). Chichester: Wiley.
- Wood, R., & Skurnik, L. S. (1969). Item banking. National Foundation for Educational Research in England and Wales. The Mere Upton, Park, Slough, Bucks.

- Woolliscroft, J. O., Stross, J. K., & Silva, J., Jr. (1984). Critical competence certification: A critical appraisal. Journal of Medical Education, 59(10), 799-805.
- Woolridge, L., Kelly, M. J., Vreuls, D., Cotton, J. C., & Martin, E. L. (1980). Adaptive performance testing system for surface attack tasks in the advanced simulator for pilot training. Westlake Village, CA: Canyon Research Group, Inc.
- Wright, B. D. (1967). Sample-free test calibration and person measurement. In Proceedings of the 1967 Invitational Conference on Testing Problems. Princeton, NJ: Educational Testing Service.
- Wright, B. D. (1977). Misunderstanding the Rasch Model. Journal of Educational Measurement, 14, 219-226.
- Yi-Shengli, & Perry, E. N. (1974). One-hour self-rescue breathing apparatus (Bureau of Mines OFR 8-75). Sunnyvale, CA: Lockheed Missiles and Space Company, Inc. (NTIS No. PB 240 420).
- Zabetakis, M. E. (1983). Fire safety (Safety Manual No. 13). Washington, DC: Mine Safety and Health Administration.
- Zedeck, S., & Baker, H. T. (1972). Nursing performance as measured by behavioral expectation scales: A multitrait, multirater analysis. Organizational Behavior and Human Performance, 7, 457-466.
- Zeller, A. F. (1981). Human error in the seventies - reviewed and projected through the eighties. Aviation, Space and Environmental Medicine, 52(4), 241-246.
- Zimmerman, J. B. (1973). Underground coal mine injuries. Journal of the Kentucky Medical Association, 71(1), 31-37.