



Vredenburg & Associates, Inc.

Human Factors, Ergonomics, Safety and Organizational Consulting

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ILENE B. ZACKOWITZ, Ph.D., CPE

Curriculum Vitae

EDUCATION

- ◆ Ph.D. (2000) Industrial/Organizational Psychology, California School of Professional Psychology, San Diego
Dissertation topic: Risk management in organizations
- ◆ Master of Science (1995), Industrial/Organizational Psychology, California School of Professional Psychology, San Diego
- ◆ Bachelor of Science with Highest Honors (1992), Psychology
University of Florida, Gainesville.

CERTIFICATIONS

- ◆ Certified Professional Ergonomist (CPE) #1105 (2001)
- ◆ Board Certified Disability Analyst and Fellow #5438-01 (2001)

CURRENT POSITION

Senior Human Factors and Safety
Vredenburg & Associates, Inc.
Carlsbad, CA (1998 – present)

Consults with businesses and industry in areas including product warning design, injury prevention, machine guarding, job design, job and task analysis, program evaluation, training, risk management, Americans with Disabilities Act (ADA), Fair Housing Act (FHA), Occupational Safety and Health Administration (OSHA), organizational development and assessment, and research instrument development and validation. Conducts and presents original research.

Serves as a forensic (the application of science to law) consultant for product liability, personal injury, FHA/ADA, and employment cases in the areas of human factors, safety, and industrial-

organizational psychology. Collects and reviews case material, inspects accident sites and equipment, and performs testing and evaluation. Issues include hazard management, communication, and warning effectiveness; accessibility of housing and public areas; product/equipment design; reasonableness of conduct; human error; adequacy of supervision and training; behavioral expectations; employee discrimination and harassment; visibility, conspicuity, and lighting; perception/reaction times; and slips and falls. Has consulted on hundred of cases and has qualified as an expert in San Diego, Los Angeles and Orange County Superior courts.

UNIVERSITY APPOINTMENT

Consultant

San Diego Center for Education and Research in Patient Safety (2001-2002)

A joint effort of University of California at San Diego and the Veteran's Administration San Diego Healthcare System. Participates in research concerning issues critical to understanding the role of human error in medicine including performing structured interviews with medical providers regarding non-routine medical events.

INDUSTRIAL-ORGANIZATIONAL CONSULTING

Ergonomics Consultant

Los Angeles Metro (2010)

Trained Metro bus drivers in proper ergonomics techniques and equipment use in order to reduce the risk of repetitive strain injuries.

Ergonomics Consultant

Cargill Corporation (2001-2002)

Performed ergonomics and job hazard analyses of railcar unloading, including, hose management, steam cleaning, fall protection, and working under railcars. Developed, conducted and analyzed organizational safety culture study.

Workplace Safety and Ergonomic Consultant

Access Ergonomics (1998-2001)

Consulted in areas of workplace safety and injury prevention, including ergonomic evaluations, preventative employee training and management training. Developed programs and wrote reports aimed at reducing workplace injuries. Conducted safety training seminars.

Clients included the following companies:

- William-Sonoma
- VeriSign
- Agouron Pharmaceuticals
- County of Los Angeles
- ITT Hartford
- Oracle
- Montgomery Watson
- Next Card
- INSpire

Americans with Disability Act Consultant

Union-Tribune Newspaper, San Diego, CA (1999 – 2004)

Developed an Americans with Disability Act (ADA) plan, which included an evaluation of the accessibility of the production and office facilities, and plan for barrier removal.

Human Factors and Safety Consultant

Ventura County Medical Center (1999)

Performed an analysis of back injury risk factors for four departments: medical/surgical, housekeeping, maintenance and laundry. Trained hospital employees in the hazards associated with their jobs and methods to prevent back injuries.

Human Factors and Safety Consultant

County of Ventura (1999)

Performed a job hazard analysis to determine all potential areas of injury exposure in the performance of the garbage collection job.

Human Factors and Safety Associate

Error Analysis, Inc. (1996 – 1999)

Collected and reviewed case material, inspected accident sites and equipment, and performed testing. Investigated product liability and personal injury accident cases in the area of human factors, safety, and industrial-organizational psychology. Conducted, published, and presented original research studies in the areas of safety, human factors, and industrial-organizational psychology

Human Factors and Safety Consultant

Lens Manufacturer, San Diego, CA (1995)

Developed response to an OSHA Special Order. Developed and implemented a new risk management program, redesigned jobs, and designed new tools.

EMPLOYMENT HISTORY

Ph.D. Intern

Error Analysis, Inc.

La Mesa, CA (1995 –1997)

Received training and supervision in all area of forensic human factors and industrial-organizational psychology consulting. Conducted and presented original research studies in the areas of human factors and organizational psychology.

Floor Manager

Rainwater's Restaurant

San Diego, CA (1994-1998)

Extensive knowledge in all areas of restaurant operations. Areas of expertise include: customs and practices regarding service and food preparations / handling, safety management, accident

prevention, employee training, workflow analysis, risk factor identification and recommendations for improved operations, efficiency and safety.

STUDENT INTERNSHIPS

Researcher

Institute for Mental Health Initiatives

Washington, DC (1992)

Conducted research for a symposium for the 1993 American Psychological Association convention and planned a conference on childhood resiliency for top researchers in the field.

Peer Health Educator

Corner Drug Store, Crisis Prevention Center

Gainesville, FL (1990)

Participated in the New Tracks Program, designed to educate at-risk youth in vital life skills and drug education.

Medical Aide

Shands Hospital

Gainesville, FL (1990)

Assisted with care and feeding of newborn infants. Assisted medical professionals with examinations and other tasks, when needed.

VOLUNTEER POSITIONS

- ◆ Has served both elected and appointed offices of the Forensics Professional Group (FPG; Human Factors and Ergonomics Society).
- ◆ Served as a judge for the San Diego Science and Engineering Fair (2007, 2008, 2009).
- ◆ Served as Vice-President of the San Diego Forensics Consultants Association (2002-2003).
- ◆ Invited member of Special Education Advisory Council (SELPA CAC)
- ◆ Volunteered at the Veterans Administration Hospital (Gainesville, FL) to plan and implement recreational activities for disabled patients.
- ◆ Elected officer of Leadership UF, a leadership honorary at University of Florida.

MEMBERSHIPS

- ◆ Human Factors and Ergonomics Society
- ◆ Forensics Professional Group of the HFES
- ◆ Safety Technical Group of the HFES
- ◆ Society of Industrial and Organizational Psychology
- ◆ Psi Chi Psychology Honors Society

RELATED SKILLS

- ◆ Photography: photographs of accident sites, equipment, and the workplace are frequently used for courtroom exhibits, textbooks, lectures and industrial-organizational training.
- ◆ Interviewing: useful for litigation support and more effective focus group data collection

PEER REVIEWER

- ◆ *Journal of Human Factors and Ergonomics in Manufacturing*
- ◆ *Human Factors and Ergonomics Society Annual Meeting Proceedings: Human Factors and Ergonomics Society*

PUBLICATIONS

Vredenburg, A.G., Williams, K. Zackowitz, I.B. & Welner, J.M. (2011). Evaluation of Wheelchair Users' Perceived Kitchen and Bathroom Usability: Effort and Accessibility. *Journal of Architectural and Planning Research*, 27(3), 219-236.

Zackowitz, I.B Vredenburg, A.G, Calkins, L, Kessler, D. (2010). The current state of legal, design, and residential usability issues for people with various disabilities. In *Proceedings of the Human Factors and Ergonomics Society 54th Annual Meeting*. Santa Monica, CA: Human Factors and Ergonomics Society, 753-756.

Zackowitz, I.B & Vredenburg, A.G. (2010). Evaluation of Methods to Remedy Existing Multi-Family Housing to Maximize Accessibility to Residents. In Marek, T., Karwowski, W. & Rice, V (Eds.), *Advances in Understanding Human Performance*, 613-623, Boca Raton, FL: CRC Press.

Vredenburg, M.J., Zackowitz, I.B, Spencer, D., DeTaboada, M.R., & Vredenburg, A.G. (2010). What constitutes typical adolescent behavior and how does it differ from adult conduct? In Karwowski, W. & Salvendy, G (Eds.), *Advances in Human Factors, Ergonomics, and safety in Manufacturing and Service Industries*, 927-936, Boca Raton, FL: CRC Press.

Vredenburg, A.G., Hedge, A. Zackowitz, I.B. & Welner, J.M. (2009). Evaluation of Wheelchair Users' Perceived Sidewalk and Ramp Slope: Effort and Accessibility. *Journal of Architectural and Planning Research*, 26(2), 145-158.

Vredenburg, A.G. & Zackowitz, I.B. (2009). How Best to Accommodate People with Disabilities Residing in Existing Multi-Family Housing. In Proceedings of the Human Factors and Ergonomics Society 53rd Annual Meeting. Santa Monica, CA: Human Factors and Ergonomics Society. (Distributed at conference. Not included in proceedings CD due to technical problem. Paper accepted for publication by reviewers and is available through the HFES central office).

- Vredenburg, A.G. & Zackowitz, I.B. (2009). Drug Labeling and its Impact on Patient Safety. In Sonja Koneczny (Ed.), *WORK: A Journal of Prevention, Assessment & Rehabilitation*, Volume 33, Number 2. (pp. 169-174). The Netherlands: IOS Press.
- Zackowitz, I.B. & Vredenburg, A.G. (2008). Forensic Human Factors: People, places, products. In C.M. Carswell (Ed.). *Reviews of Human Factors and Ergonomics*, Volume 4. (pp. 75-104). Santa Monica, CA: Human Factors and Ergonomics Society.
- Vredenburg, A.G. & Zackowitz, I.B. (2008). Drug Labeling and its Impact on Patient Safety. In *Proceedings of the Human Factors and Ergonomics Society 52nd Annual Meeting*. Santa Monica, CA: Human Factors and Ergonomics Society, 842-844.
- Zackowitz, I.B. & Vredenburg, A.G. (2008). When is a Warnings Case Not a Warnings Case? *Proceedings of the Applied Human Factors and Ergonomics 2nd International Conference*, Las Vegas, NV, July 15, 2008.
- Vredenburg, A.G. & Zackowitz, I.B. (2008). Who turned off the lights? *Proceedings of the Applied Human Factors and Ergonomics 2nd International Conference*, Las Vegas, NV, July 15, 2008.
- Zackowitz, I.B. & Vredenburg, A.G. (2007). When communication failure contributes to an injury: A case study of para-transportation for wheelchair users. In *Proceedings of the Human Factors and Ergonomics Society 51st Annual Meeting*. Santa Monica, CA: Human Factors and Ergonomics Society, 559-563.
- Vredenburg, A.G. & Zackowitz, I.B. (2007). Playground Ergonomics: Safety and injury prevention through design. In R. Lueder & V. Rice (Eds.), *Ergonomics for Children*. Chapter 27. Taylor & Francis: London.
- Vredenburg, A.G., Hedge, A., Zackowitz, I.B., & Welner, J.M. (2007). Vol. 13. Using human factors engineering to evaluate existing walkway accessibility standards. In *Proceedings of the 59th Annual Meeting of the American Academy of Forensic Sciences*, Colorado Springs, CO: American Academy of Forensic Sciences, 172-173.
- Vredenburg, A.G., & Zackowitz, I.B. (2006). Warning expectations. In M. Wogalter (Ed.) *The Handbook of Warnings: Design and Use*. Chapter 41. Lawrence Erlbaum Associates, Inc. 345-354.
- Zackowitz, I.B., Vredenburg, A.G. & Hedge, A. (2005). A critical analysis of the usability and design of aluminum wheelchair ramps. In *Proceedings of the Human Factors and Ergonomics Society 49th Annual Meeting*. Santa Monica, CA: Human Factors and Ergonomics Society, 803-804.
- Zackowitz, I.B. & Vredenburg, A.G. (2005). Preschoolers, adolescents and seniors: Age-related factors that pertain to forensic human factors analyses. In Y.I. Noy & W. Karwowski (Eds.),

- Handbook of Human Factors in Litigation*. Chapter 35. Boca Raton, FL: CRC Press, 35-1 – 35-11.
- Vredenburg, A.G. & Zackowitz, I.B. (2005). Human factors issues to be considered by product liability experts. In Y.I. Noy & W. Karwowski (Eds.), *Handbook of Human Factors in Litigation*. Chapter 26. Boca Raton, FL: CRC Press, 26-1 – 26-11.
- Vredenburg, A.G. & Zackowitz, I.B. (2005). Sexual Harassment: A forensic human factors perspective. In Y.I. Noy & W. Karwowski (Eds.), *Handbook of Human Factors in Litigation*. Chapter 36. Boca Raton, FL: CRC Press, 36-1 – 36-9.
- Vredenburg, A.G., & Zackowitz, I.B. (2003). Conducting a Systems Evaluation to Address Workplace Radiation Exposure Hazard. In *Proceedings of the Human Factors and Ergonomics Society 47th Annual Meeting*. Santa Monica, CA: Human Factors and Ergonomics Society, 1252-1255.
- Vredenburg A.G., & Zackowitz I.B., (2002). Sexual Harassment: An organizational safety issue. In *Proceedings of the Human Factors and Ergonomics Society 46th Annual Meeting*. Santa Monica, CA: Human Factors and Ergonomics Society, 915-919.
- Zackowitz, I.B., & Vredenburg, A.G. (2002). Applying a forensic human factors engineering analysis to falls in elderly people. In *Proceedings of the 54th Annual Meeting of the American Academy of Forensic Sciences*, Colorado Springs, CO: American Academy of Forensic Sciences, 96-97.
- Vredenburg, A.G., & Zackowitz, I.B. (2002). Playground Safety: A forensic human factors analysis of fall injuries. In *Proceedings of the 54th Annual Meeting of the American Academy of Forensic Sciences*, Colorado Springs, CO: American Academy of Forensic Sciences, 95-96.
- Zackowitz, I.B. (2001). Responsibility allocation for workplace accidents. In *Proceedings of the Human Factors and Ergonomics Society 45th Annual Meeting*. Santa Monica, CA: Human Factors and Ergonomics Society, 789-793.
- Vredenburg, A.G., & Zackowitz, I.B. (2001). Evaluating the effectiveness of a pictorial-only warning on a trolley coupler. In *Proceedings of the Human Factors and Ergonomics Society 45th Annual Meeting*. Santa Monica, CA: Human Factors and Ergonomics Society, 848-851.
- Vredenburg, A.G., & Zackowitz, I. B. (2001). Work-related musculoskeletal disorders: Ergonomic risk to healthcare workers. In D. Alexander & R. Rouborne (Eds.), *Applied Ergonomics*. Chapter 17. London: Taylor & Francis, 146-155.
- Vredenburg, A.G., & Zackowitz, I. B. (2001). Ergonomics programs: Reducing work-related musculoskeletal injuries. In D. Alexander & R. Rouborne (Eds.), *Applied Ergonomics*. Chapter 28. London: Taylor & Francis, 259-268.

- Zackowitz, I.B. & Sorenson, R.C., (2001). *Responsibility allocation for workplace accidents*. Paper presented at The Tenth European Congress on Work and Organizational Psychology, Prague, Czech Republic.
- Zackowitz, I.B. (2000). *Responsibility allocation for workplace accidents*. Doctoral Dissertation. California School of Professional Psychology, San Diego, CA.
- Vredenburg A., Hendrick, H., & Zackowitz, I. (2000). Are personality traits useful predictors of managers' success? In *Proceedings of the XIVth Triennial Congress of the International Ergonomics Association and 44th Annual Meeting of the Human Factors and Ergonomics Society*. Santa Monica, CA: Human Factors and Ergonomics Society, 2-301 – 2-304.
- Zackowitz, I.B. (2000). Book Review: Occupational Injury, Risk, Prevention and Intervention. *The Forum*, Newsletter of the Forensic Professional Group of the Human Factors and Ergonomics Society, 5(2), pp. 3.
- Zackowitz, I.B. (1999). From Our Files: Safety climate and safety culture. *The Expert Source*, 3(1), Spring.
- Vredenburg, A.G., & Zackowitz, I.B. (1998). Older drivers: A forensic human factors analysis. (Summary) In *Proceedings of the 50th Annual Meeting of the American Academy of Forensic Sciences*, Colorado Springs, CO: American Academy of Forensic Sciences, 91-92.
- Zackowitz, I.B., & Vredenburg, A.G. (1998). Preschoolers: A forensic human factors analysis. (Summary) In *Proceedings of the 50th Annual Meeting of the American Academy of Forensic Sciences*, Colorado Springs, CO: American Academy of Forensic Sciences, 90-91.
- Vredenburg, A., Hendrick, H. & Zackowitz, I. (1998). Hotel managers: What personality traits predict their success? (Summary) In *Proceedings of the IO/OB 19th Annual Graduate Conference*, San Diego, CA., 112-114.
- Zackowitz, I. & Vredenburg, A. (1998). How individuals manage their impressions when presenting to their peers. (Summary) In *Proceedings of the IO/OB 19th Annual Graduate Conference*, San Diego, CA., 94.
- Zackowitz, I., Cohen, H., & Vredenburg, A. (1998). Operationally defining a legal term for forensic human factors. In *Proceedings of the Silicon Valley Ergonomics Conference*, Palo Alto, CA, 185-189.
- Vredenburg, A., Cohen, H.H., Hornick, R., Laughery, K., Leonard, D., Olsen, R., Smith, L., Thompson, D., Wogalter, M., & Zackowitz, I. (1997). Mock trial: How human factors experts contribute to civil litigation. Case 1: A pedestrian's encounter with a tripping hazard. In *Proceedings of the 41st Annual Meeting of the Human Factors and Ergonomics Society*. Santa Monica, CA: Human Factors and Ergonomics Society, (1) 524-528.

Vredenburg, A., Cohen, H.H., Hornick, R., Laughery, K., Leonard, D., Olsen, R., Smith, L., Thompson, D., Wogalter, M., & Zackowitz, I. (1997). Mock trial: How human factors experts contribute to civil litigation. Case 2: Adequacy of warning systems to address product hazards. In *Proceedings of the 41st Annual Meeting of the Human Factors and Ergonomics Society*. Santa Monica, CA: Human Factors and Ergonomics Society, (1) 524-528.

Vredenburg, A.G., Zackowitz, I.B., & Cohen, H.H. (1996). Comparative risk perception of common activities: A forensic perspective. In *Proceedings of the 41st Annual Meeting of the Human Factors and Ergonomics Society*. Santa Monica, CA: Human Factors and Ergonomics Society, (1), 520-524.

INVITED LECTURES AND SYMPOSIA

Wheelchair safety: A forensic human factors analysis. Presented at the 12th Annual American Board of Disability Analysts International conference, Atlanta, July 14, 2007.

Living with Autism: A Parent's Perspective. Presented to San Diego State University, Children with Special Needs Class, November 2006.

Office and Industrial Ergonomics. Presented to the Safety Committee at Signet Armorlite, August 27, 2003.

Applying a Forensic Human Factors Engineering Analysis to Falls in Elderly People. Presented at the 54th Annual Meeting of the American Academy of Forensic Sciences, Atlanta, February 15, 2002.

Reducing Work-related Musculoskeletal Injuries. Presented to the San Diego Chapter of the Human Factors and Ergonomics Society, San Diego, March 28, 2000.

Ergonomic Risks to Healthcare Workers. Presented to the San Diego Chapter of the Human Factors and Ergonomics Society, San Diego, March 28, 2000.

LECTURES

Evaluation of Methods to Remedy Existing Multi-Family Housing to Maximize Accessibility to Residents. Presented at the 4th International Conference, Miami, FL.

When is a Warnings Case Not a Warnings Case? Presented at the Applied Human Factors and Ergonomics 2nd International Conference, Las Vegas, NV, 2008.

Who turned off the lights? Presented at the Applied Human Factors and Ergonomics 2nd International Conference, Las Vegas, NV, 2008.

A critical analysis of the usability and design of aluminum wheelchair ramps. Presented at the 49th Annual Meeting of the Human Factors and Ergonomics Society, Orlando, September 27, 2005.

Applying a forensic human factors engineering analysis to falls in elderly people. Presented at the 54th Annual Meeting of the American Academy of Forensic Sciences, Atlanta, GA, February 15, 2002.

Responsibility allocation for workplace accidents. Presented at the 45th Annual Meeting of the Human Factors and Ergonomics Society, Minneapolis/St. Paul, October 10, 2001.

Evaluating the effectiveness of a pictorial-only warning on a trolley coupler. Presented Poster at the 45th Annual Meeting of the Human Factors and Ergonomics Society, Minneapolis/St. Paul, October 10, 2001.

Are personality traits useful predictors of managers' success? Presented at the XIVth Triennial Congress of the International Ergonomics Association and 44th Annual Meeting of the Human Factors and Ergonomics Society. San Diego, August 4, 2000.

Preschoolers: A forensic human factors analysis. Presented at the 50th Annual Meeting of the American Academy of Forensic Sciences, San Francisco, February 11, 1998.

How individuals manage their impressions when presenting to their peers. Presented at the IO/OB 19th Annual Graduate Conference, San Diego, March 29, 1998.

Operationally defining a legal term for forensic human factors. Presented at the Silicon Valley Ergonomics Conference & Exposition, Palo Alto May 5, 1998.