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### Biographical Sketch

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**John R. Cannon, Ph.D.**

**Labor Categories:** Project Manager, Senior Analyst, and Consultant

**Education:** Ph.D., Psychology, State University of New York at Buffalo

John Cannon has more than 35 years of experience in human services, Instructional Systems Design, management systems development, and human performance improvement. He has worked for Human Technology (HT) for the past 33 years. During this time, he has overseen the successful completion of all projects, and has personally managed more than 100 projects. In his role as project manager, Dr. Cannon helped the Federal Aviation Administration pioneer the use of cognitive task analysis methodologies.

Dr. Cannon currently serves as HT's internal consultant on research methodology, statistical analysis, and experimental design. In this role, Dr. Cannon ensures that the methodologies used by the HT team will meet or exceed performance standards.

Prior to joining HT, Dr. Cannon was on the faculty of the College of Human Development at the Pennsylvania State University. He has also taught human resource development courses at the American International College and Marymount University. He has published more than 100 articles, monographs, technical reports, and books.

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### Recent Experience

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- Currently providing consultation services to the U.S. Fish and Wildlife Service and the Canadian Wildlife Service on experimental design, research methods, statistical analysis, and program evaluation. Developed computer-simulation models to project the viability of endangered species and interpreted the results for action planning. Worked with teams of scientists to identify biological and social values to be incorporated in decision models for planning and evaluation.
- Currently advising HT staff on the research and analytical methodologies for a comprehensive disaster workforce planning intervention for the Federal Emergency Management Agency. Task analyses and criterion-referenced measures are being identified for more than 250 positions.
- Currently consulting on the design of research methods being used to develop and validate a critical task list for Border Patrol Agents. The research design includes structured field observations, panel interviews, and task validation. The focus of this project is to ensure that tasks are aligned with the Border Patrol new strategic direction and changing threat environment.
- Currently designing measures for assessing knowledge and performance acquisition for U.S. Customs and Border Protection (CBP) canine teams. These teams are being merged from different legacy agencies including the Customs Service and Border Patrol. Measures must align with CBP's new critical anti-terrorism mission and be responsive to the previously separate organizational cultures. Additionally, the measures must address unique challenges such as factors outside the handler's control (e.g., canine's unpredictable behavior, changing environmental conditions, etc.).
- Assisted the Conservation Biology Institute (CBI), a private nonprofit organization for large-scale conservation planning, to clarify its mission and strategic direction. Worked with staff and board members to realign and reengineer CBI's internal management practices to achieve the organization's mission. This intervention has improved both the organization's effectiveness and operating efficiency.

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### Recent Experience (Continued)

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**John R. Cannon, Ph.D.**

- Conducted survey research on the instructional practices used to train conservation biologists in human interaction skills for the University of Maryland. Used the survey results to help formulate curriculum materials for graduate education.
- Researched and wrote instructional materials for an educational web resource center for a community-based nonprofit organization. The site includes articles, best practices, resource links, and a self-assessment instrument.
- Advised HT staff on the design, development, and validity of the certification programs for CBP Officers. Assessment instruments are used to measure whether personnel have the necessary skills for targeting high-risk cargo and passengers.
- Designed consulting methodologies and evaluation interventions for the University of Maryland Conservation Biology Problem-Solving Group. These interventions were implemented with numerous State and Federal conservation agencies.
- Assisted in the design of a comprehensive front-end analysis to determine the role and training needs of State Emergency Boards for the U.S. Department of Agriculture. A critical incident technique was used to elicit information about potential roles and barriers. Importance and proficiency levels of functions were rated using quantitative measures.

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### Publications

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- Computer Simulations of Possible Futures for Two Flocks of Whooping Cranes (with C. Mirande, and the University of Maryland Conservation Biology Problem-Solving Group). Proceedings of the 1996 North American Crane Workshop.
- Whooping Crane Recovery: A Case Study in Public and Private Cooperation in the Conservation of Endangered Species. Conservation Biology.
- Training Conservation Biologists in “Human Interaction Skills” (with J.M. Dietz, and L.A. Dietz). Conservation Biology.
- Cognitive Task Analysis of Expertise in Air Traffic Control (with T. Seamster, R. Redding, J. Ryder, and J. Purcell). International Journal of Aviation Psychology.
- Analysis of En Route Air Traffic Controller Team Communication and Controller Resource Management (CRM) (with T. Seamster, R. Pierce, and R. Redding). Proceedings of the Human Factors Society.