THE UNIVERSITY OF NORTH TEXAS PROGRAM OF APPLIED TECHNOLOGY AND PERFORMANCE IMPROVEMENT

Jeff M. Allen, PhD | Karen R. Johnson, PhD

The University of North Texas offers the prestigious Applied Technology and Performance Improvement (ATPI) program at both undergraduate and graduate levels in the department of Learning Technologies, College of Information. The ATPI program focuses on the multidisciplinary nature of human resource development, performance improvement, and workforce innovations, preparing students for careers as scholars in academic settings or as corporate training consultants and practitioners in business and industry. As a public research university, the ATPI program prepares both scholars and scholar-practitioners to lead their field through research-based practices and research dissemination under the mentorship and guidance of strong faculty. Graduates of the program hold high-level professional and leadership positions both nationally and internationally.

INSTITUTIONAL INFORMATION

As one of the nation's largest universities, offering 100 undergraduate degrees, 83 master's degrees, and 37 doctoral programs, the University of North Texas (UNT) grants far-reaching career opportunities to over 37,000 students. Founded in 1890, UNT provides access, welcomes diversity, and strengthens collaborations with many educational, business, and community partners, while building new partnerships across the globe. UNT benefits immensely from a rich diversity of students. Faculty and staff work diligently to prepare students for the challenges they meet in a changing world.

The university is located in Denton, a town of about 131,000 people only 36 miles north of Dallas–Fort Worth, the country's fourth-largest metropolitan area. This location offers students a wealth of job opportunities, together with entertainment, culture, shopping, and professional sports. Yet Denton is a college town, which offers a peaceful haven for study and research. Thus, UNT has the advantages of both the big city and a college town.

As a major public research university, UNT is deeply committed to advancing educational excellence and preparing students to become innovative and engaged citizens of the world. This is accomplished through a broad and balanced array of programs in which well-prepared students, dedicated scholars, and artists collaborate with our local and global communities in the creation, integration, application, and dissemination of knowledge. UNT is committed to foster global understanding and promote cultural appreciation through the exchange of ideas, allowing for important research that addresses global issues, which is central to preparing tomorrow's successful global leaders. UNT hosts visiting scholars from more than 50 countries and offers global learning and experience programs in more than 37 nations.

For 125 years, the University of North Texas has fulfilled its mission to create leaders and visionaries. From humble origins in a rented space above a hardware store in downtown Denton, UNT has grown into one of the nation's largest public universities and is the largest in the North Texas region.

PROGRAM HISTORY

In 2017, the Applied Technology and Performance Improvement (ATPI) program will celebrate its 100th anniversary. The history of the program can be traced back to the early 1900s; the first courses in manual training at UNT were offered in 1909, and in 1917 the Department of Manual Training was formed. This department evolved into the Department of Industrial Education in 1925 with four divisions: industrial arts, linotype and typography, mechanical and sense instruction, and the Smith-Hughes vocational division. Although there is evidence that a course in the industrial arts division began in 1912, the department formally emerged in 1939 under the School of Education. Courses of instruction in vocational technical education and industrial arts started in 1973 under the Division of Counselor Education within the College of Education. The Bachelor of Applied Arts & Sciences (BAAS) was first introduced in 1980.

The Department of Occupation and Vocational Education was formed in 1988 within the College of Education. In 1994 it was moved under the Department of Technology and Cognition. This department became the Department of Educational Psychology in 2007. In 2008, as the department changed to Learning Technologies, it formed the core of the College of Information, Library Sciences, and Technology (now the College of Information). As of Fall 2016, there are plans to move the ATPI program to the Department of Information Sciences to form a division of Knowledge Management.

The change in program, department, college names, and curricula since the inception of the program is a reflection of the constant changes and demands from business and industry and the field in general. As a response to these changes, it is imperative to align the program with industry needs to optimally prepare students to make a difference in the global workforce.

PROGRAM IDENTITY

The ATPI program has an identity derived from its history and has been changed by the workforce throughout the years. In the early 1990s, as with many other programs around the country, the program moved to corporate training as a mirror program to vocational technical education. Both of these aspects of the program exist today with an active career and technical education program that is supported with over $1 million in external funding per year and a performance improvement program that remains a driving force in the region and nation.

At the heart of the program lies a philosophy of workforce education. Within career and technical education, the ATPI program prepares teachers through continuing

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education, certification, and degree plans to teach 7th to 12th grade students within the 16 Department of Labor career clusters. ATPI prepares both scholars and scholar-practitioners to lead their field through research-based practices and research dissemination at the bachelor's, master's, and doctoral levels. Strong faculty scholars lead this program through student mentorship.

ACADEMIC PROGRAMS AND REQUIREMENTS
Undergraduate

The BAAS degree program is offered 100% online with a major in ATPI. It consists of 120 hours divided as follows:

- 42 hours in the university core
- 36 hours in an applied technology specialization
- 42 hours in professional development

The undergraduate program consists of required coursework in areas such as personal development, instructional strategies, leadership, advanced computer technology, human relations, project management, and communications. Additionally, this program is designed to provide a pathway for community college students to complete a bachelor's degree program.

Students in the BAAS degree program are preparing for careers in business, industry, government, and education. This program is designed for students who have an associate's degree in a technology program at a community college. Within this degree is an option to pursue Career and Technical Education (CTE) teacher certification at the secondary level. CTE requires three to five years of employment experience in one of the career fields.

Master's

UNT offers students a master of science degree in workforce learning and performance (WLP). It is a 100% online degree. Since this program is designed for working adults, fully online course schedules are available in 2-year and 3-year formats. This degree is designed for professionals who are seeking careers in the field of training and development, performance improvement, or knowledge management. This 36-hour program consists of coursework in the following subject areas:

- Foundation of workforce learning and performance
- Performance assessment in workforce learning and performance
- Needs analysis and curriculum development
- Facilitation strategies in applied technology training
- Diversity issues in applied technology, training, and development
- Evaluation and accountability in applied technology and training
- Interpersonal skills development
- Educational statistics
- Contemporary issues in workforce learning and performance
- Capstone I in workforce learning and performance
- Capstone 2 in workforce learning and performance

Doctorate

The ATPI doctor of philosophy (PhD) degree is a world-class program that focuses on the multidisciplinary nature of human resource development, performance improvement, knowledge management, and workforce innovation. This research-oriented degree, with an emphasis on university-level teaching, is designed to prepare students for careers as scholars and researchers, and is offered for individuals seeking opportunities in the business environment as training and development managers or as private consultants.

The program is well balanced with major core courses concentrating on philosophical, theoretical, and foundational curricula as well as more practice-oriented courses focusing on emerging trends, issues, and technological innovations to enhance learning and performance in this dynamic field. Combined with the core courses, the program also has a strong research component oriented toward developing research skills encompassing various methodologies.

Unique to the program is a doctoral portfolio that students are required to complete during coursework. The primary purpose of the portfolio is to actively engage students, under the guidance of faculty, in three critical areas of scholarship: research, teaching, and service. To advance to doctoral candidacy status, the student is required to successfully complete and defend a portfolio of work. The experiential knowledge gained while creating the portfolio shapes our students to become true scholars and leaders in the field. Graduates of our program hold high-level, professional positions in academic settings and industry, both nationally and internationally.

The ATPI faculty subscribes to the Academy of Human Resource Development's standards on ethics, integrity, and graduate program excellence. This is a campus-based program with courses offered in a wide-variety of on-campus and web-based formats.

The ATPI doctoral degree requires a minimum of 60 hours of coursework, including a minimum of 12 hours of coursework outside the program forming a cognate area to help expand leadership perspectives. Examples of programs in which cognate areas are developed include management, psychology, computer science, business communications, organizational behavior, philosophy, human resource management, and sociology. The program of study includes an 18-hour research and statistics core and nine hours of dissertation credit. The dissertation is expected to make a significant contribution to the knowledge base in one of the traditions of thought related to ATPI.

Major Courses—21 Hours

- Technological innovations in training and development
- Leadership development in applied technology and training
- Trends and issues in applied technology and training
- Needs analysis and curriculum development
- Consulting skills
- Evaluation and accountability in applied technology and training
- Special problems in learning technologies

Research, Statistics, and Measurement—18 Hours

- Statistics for educational research
- Research methods in education
- Qualitative research methods
- Consultation with major professor
- Advanced course in consultation with major professor
- Research seminar

FIGURE 1. UNT STUDENT SCHOLARS WITH THEIR FACULTY MENTOR

Dissertation Courses—9 Hours

These courses prepare the student to write his or her doctoral dissertation.

Minor Courses—12 Hours

The suggested areas include

- Learning technologies
- Psychology
- Sociology
- Computer science
- Management
- Business communication
- Organizational behavior
- Human resource management
- Philosophy

RESEARCH AND DEVELOPMENT

Student involvement with our faculty scholarship is a highly prized aspect of the ATPI program and provides both faculty and student an enriching work and learning environment. It is the goal of the ATPI program to have our students lead the field as scholars and scholar practitioners. Our doctoral program portfolio is a driving system to allow this student success. Below is a sample list of scholarly publications completed by students from the ATPI doctoral degree programs, under the mentorship of faculty (See Figure 1). This set of publications provides a diverse snapshot of the types of work that ATPI students publish during their doctoral program.

Accomplishments are listed in alphabetical order for ease of organization. This successful effort is ongoing and continues to increase each year.

Allen, J., Gojer, A.J., Gavrilova Aguilar, M., & Philpot, D. (2012). Sustaining organizational innovation. In V.C.X. Wang (Ed.), *Encyclopedia of e-leadership, counseling and training,* (pp. 514–531). Hershey, PA: IGI Global. doi:10.4018/978-1-61350-068-2.ch038

Chung, C.H., Li, J., & Allen, J.M. (2013). *The cultural impact in creating virtual HRD learning platforms.* Society for Information Technology and Teacher Education International Conference 2013, New Orleans, LA.

Danks, S. & Allen, J. (2014). Performance-based rubrics for measuring organizational strategy and program implementation. *Performance Improvement Quarterly, 27*(1), 33–49.

Gavrilova Aguilar, M., Bracey, P., & Allen, J. (2012). Examining the diversity curriculum of leading Executive MBA programs in the United States. In C.L. Scott & M.Y. Byrd, (Eds.), *Handbook of research on workforce diversity in a*

global society: Technologies and concepts* (pp. 18–37). Hershey, PA: IGI Global.

Hagen, M., & Gavrilova Aguilar, M. (2012). The impact of managerial coaching on learning outcomes within the team context: An analysis. *Human Resource Development Quarterly, 23*, 363–388.

Joshua-Gojer, A.E., & Allen, J.M. (2012). Leveraging workforce diversity through volunteerism. In Chaunda L. Scott and Marilyn Byrd (Eds.), *Handbook of research on workforce diversity in a gobal society: Technologies and Concepts* (354–367). Hershey, PA: IGI Global.

Joshua-Gojer, A.E., & Allen, J.M. (2013). Self-initiated expatriates in the United States: Implications for HRD. *Journal of Knowledge Economy & Knowledge Management, 8*(1), 39–45.

McKee, M.R., Allen, J.M., & Tamez, R. (2014). The effect of mobile support devices on the anxiety and self-efficacy of hospital float staff. *Performance Improvement Quarterly, 27*(2), 59–81.

Pasquini, L A. (2010). Emerging digital resources: Easy and accessible online tools. In J. Voller, M.A. Miller, & S.L. Nest (Eds.) *Comprehensive advisor training and development: Practices that deliver*, (2nd ed.) (pp. 123–29). Manhattan, KS: NACADA Publishing.

Pasquini, L., Wakefield, J.S., Reed, A., & Allen, J. (2014, October). Digital scholarship and impact factors: Methods and tools to connect your research. *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2014* (pp. 1564–1569). Chesapeake, VA: AACE.

Tamez, R., Mayes, R., & Allen, J. (2013, November). *Human resource development perspectives on knowledge management: An integrative literature review*. Paper presented at the 9th International Conference on Knowledge Management, Montreal, QC.

Turner, J.R., & Danks, S. (2014). Case study research: A valuable learning tool for performance improvement professionals. *Performance Improvement, 53*(4), 24–31. doi:10.1002/pfi.21406

Turner, J.R., Chen, Q., & Danks, S. (2014). Team-shared cognitive constructs: A meta-analysis exploring the effects of shared cognitive constructs on team performance. *Performance Improvement Quarterly, 27*, 83–117. doi:10.1002/piq.21163

Turner, J.R., Zimmerman, T., & Allen, J.M. (2012). Teams as a sub-process for knowledge management. *Journal of Knowledge Management, 16*, 963–977. doi:10.1108/13673271211276227

Zimmerman, T.D., Pasquini, L.A., & Allen, J.M. (2014). Editorial: Expanding the boundaries of learning and performance. *Learning and Performance Quarterly, 2*(2), i.

THE GRADUATE FACULTY

Dr. Jeff M. Allen is a regents professor in the College of Information. In addition, he serves as the director of the Center for Knowledge Solutions at UNT, where he is a leading scholar in the area of learning and performance innovation. At the national level, he provides leadership as the past president of the University Council for Workforce and Human Resource Education and as a board member for the Academy of Human Resource Development. He currently serves as the editor-in-chief for *Performance Improvement Quarterly*, was the founding editor of the student-driven *Learning and Performance Quarterly*, and was formerly the editor of *Career and Technical Education*. Each year the Center and research teams generated over $1 million in annual external funding.

Dr. Rose Baker is an assistant professor in the College of Information. Her research includes management techniques and statistical applications for operations and performance improvement, survey and evaluation design, and impact of and prevention of substance abuse. She holds a PhD in Instructional Systems from The Pennsylvania State University.

Dr. Karen Johnson is an assistant professor in the College of Information. She conducts and publishes research on factors that influence workplace learning processes and outcomes and international human resource development. She was recently appointed as an editorial board member of the journal *Advances in Developing Human Resources*. She is a recipient of the Emerald Literati Network 2016 Awards for Excellence as outstanding reviewer for the *European Journal of Training and Development*.

Dr. John Turner is an assistant professor in the College of Information. His research interests focus primarily on teams, team cognition, knowledge management, performance improvement, leadership, theory building, multilevel models, and meta-analysis techniques. He has published articles in *Advances in Developing Human Resources*, *Performance Improvement Quarterly*, *Performance Improvement*, *Journal of Knowledge Management*, and *International Journal of Technology, Knowledge, & Society*.

Dr. Jerry Wircenski is a professor in the College of Information. His areas of research include courseware design, evaluation, career and technical education, and learners with special needs.

Dr. Michelle Wircenski is a professor in the College of Information. Her research interests include special populations, curriculum accommodations, learning styles, and

authentic assessment. Dr. Wircenski is currently on modified service.

Dr. Laura Pasquini is a lecturer in the College of Information. Her teaching and research scholarship lies in the areas of open education, communities of practice, networked scholarship, and collaborative learning environments for workplace learning and performance. She consults with various education, nonprofit organizations, and corporate associations on optimizing social media for learning, organizational culture and design, and strategic planning. As a self-declared geek and a self-taught techie who digitally engages both her peers and learners, you can often find her tweeting and blogging about learning, performance, and technology.

Dr. Peggy Rouh is a lecturer in the College of Information. Her areas of interest are curriculum design in the online environment, needs analysis, and career and technical education.

STUDENTS AND GRADUATES

Three award-winning alumni provide a vivid picture of success of the ATPI program:

Dr. Holly M. Hutchins's ('04 PhD) career path exemplifies her dedication to improving quality in the workplace, both outside and inside the academy. She is Associate Professor of Human Resource Development at the University of Houston, where she teaches courses in research design, training and development, adult learning, program evaluation, facilitation, and global leadership.

Dr. Hutchins's primary research areas are transfer of learning, organizational crisis management, and faculty development. Her publications have appeared in U.S. and international journals. She is currently conducting research on a National Science Foundation grant that investigates increasing recruitment, retention, and advancement of women science, technology, engineering and mathematics (STEM) faculty. In 2013, she was recognized as a "difference maker" by the University of Houston's Commission on Women to acknowledge leadership and work toward gender inclusiveness and diversity on campus.

Dr. Hutchins has taught at the university level for over 15 years, having begun at UNT as a graduate teaching assistant in the Department of Communication Studies and then as a lecturer in the College of Business Administration while completing her doctoral work. Before going to Houston, she taught in the University College at Tulane University.

Dr. Hutchins has been recognized for her teaching practice, having won the UNT College of Business Out-

FIGURE 2. DR. HOLLY M. HUTCHINS

standing Teaching Award (2001), the College of Technology Fluor Award for Teaching at the University of Houston (2008), and the University of Houston's Teaching Excellence Award (2009). Her scholarly work and service to promoting scholarship was also recognized with the Early Career Scholar award (2011) from the Academy of Human Resource Development. Dr. Hutchins is currently serving her second term on the board of directors for the Academy of Human Resource Development. Dr. Hutchins's training design and consulting work includes working with corporations on various topics as leadership development, group facilitation, transfer of learning, and performance consulting. Dr. Hutchins is pictured in Figure 2.

Dawn Ferrell ('02 PhD) is the first woman in the Texas Air National Guard to become a one-star general; she says her mission is clear—to help others and make her country proud. Her 32-year military career has included overseeing logistics for 35,000 U.S. and NATO troops leaving Afghanistan and guiding forces in search, recovery and humanitarian efforts during hurricanes Katrina and Rita.

> "Serving in the Air Guard and leading the airmen who serve is an honor for me," she says. "Our personnel are the brightest and hardest-working people I have ever known. Their dedication motivates me."

General Ferrell's training, education, and leadership roles prepared her to serve in her latest rank of brigadier general, a title she earned in 2015. Following her promotion, Governor Greg Abbott appointed her as the Texas military department's deputy adjutant general for air,

FIGURE 3. DAWN FERRELL

FIGURE 4. DR. TODD A. FORE

conducting the swearing-in ceremony in January in the senate chambers of the Texas capitol.

As principal advisor to the adjutant general of Texas, she oversees planning and administration for the largest operational units of the Texas Air National Guard: the 136th Airlift Wing in Fort Worth, the 147th Reconnaissance Wing in Houston, and the 149th Fighter Wing in San Antonio.

A native of Wichita Falls, she enlisted in the Guard at 17. "My father was retired from the Air Force, so I always knew I wanted to be involved in the military," she says. "I also wanted to go to college and enlisting in the Texas Air National Guard allowed me to do both."

"Education, professional development, perseverance, and commitment are all things I needed to succeed at UNT, and in life," she says. "UNT's program helped me achieve my civilian career goals and be a better airman. Nobody ever gets where they are in life on their own." Dr. Ferrell is pictured in Figure 3.

Dr. Todd A. Fore ('98 PhD), a member of the senior executive service, is executive director of the Air Force Personnel Center, Randolph Air Force Base, Texas. The center's primary focus is to ensure that commanders around the world have the right number of skilled Air Force people in the proper grades and specialties to complete their missions. AFPC has a diverse workforce of nearly 2,600 Air Force military, civilian, and contractor personnel responsible for implementing personnel policies, developing personnel programs, and conducting worldwide personnel operations for 1.25 million Air Force military, civilian, and retirees.

Dr. Fore entered federal civil service in 1989 as an intern at Sheppard AFB, Texas. He has served in a variety of assignments at base, major command, and Air Staff levels. These include aircraft maintenance training administrator, command mission planner, and technical training programming and administration division chief. In April 2006, Dr. Fore joined the Office of the Deputy Chief of Staff for Manpower and Personnel and served as Chief of Education and Training Requirements Division. Prior to his current assignment, Dr. Fore was the Deputy Director of Force Management Policy, Deputy Chief of Staff for Manpower and Personnel, Headquarters U.S. Air Force, Washington, D.C. In addition, Dr. Fore periodically serves as adjunct faculty in graduate and undergraduate programs.

Dr. Fore has been honored with awards including Exemplary Civilian Service Award, Meritorious Civilian Service Award, and Exceptional Civilian Service Award. He is a member of the Air War College Alumni Association, Sigma Nu Alumni Association, and the Senior Executive Association. He is pictured in Figure 4.

DIRECTIONS AND PLANS

The ATPI program is highly involved in both the International Society for Performance Improvement (ISPI) and the Academy of Human Resource Development (AHRD). As our scholarly and professional homes, the program will advance involvement of both faculty and students. Currently, ATPI faculty and students are involved in committee and sub-committee service, board membership and editorial-board responsibilities, and as peer-reviewers. ATPI expects this impact to continue to grow with the interrelated faculty and student research scholarship, teach-

The program's move to integrate with knowledge management will provide a greater opportunity to collaborate within the discipline and across multidisciplinary fields in an increasingly global society.

ing scholarship, and service scholarship. The driving force of this collaboration between faculty and students is the doctoral portfolio, which works to mimic the activities of a first-year faculty member.

It is anticipated that the program will move to a division of knowledge management in the College of Information and will continue to explore the wide umbrella of knowledge management as it applies to the field of human resource development and performance improvement. This is a rich field of research that will expand the opportunities of students, alumni, and colleagues. There is an increase in the relationships between the board fields of knowledge management, data science, learning and performance, talent management, and organization development. The program's move to integrate with knowledge management will provide a greater opportunity to collaborate within the discipline and across multidisciplinary fields in an increasingly global society. This is the global workforce direction of our field that parallels the scholar and scholar-practitioner employment competency needed in the coming decade and beyond. ※

REFERENCES

To a large extent, the information for this article was directly retrieved from University of North Texas websites and historical documents, as well as the program faculty. For readability, this information was not cited within the article. Drs. Jeff M. Allen and Karen R. Johnson were the contributing authors and can be contacted for background of materials and references provided for this Performance Improvement Journal article.

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KAREN JOHNSON, PhD, is an assistant professor in the College of Information at the University of North Texas. Originally from Jamaica, she graduated from the University of the West Indies with a degree in Psychology. She holds both an MA and a PhD in Work and Human Resource Education from the University of Minnesota. She conducts and publishes research on international human resource development and on factors that influence workplace learning processes and outcomes. She was recently appointed as an editorial board member of the journal *Advances in Developing Human Resources*. Dr. Johnson is a recipient of the Emerald Literati Network 2016 Awards for Excellence as outstanding reviewer for the *European Journal of Training and Development*. She may be reached at Karen.Johnson@unt.edu