Improving Intergenerational Education: Strategies for Mentoring Military Personnel

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ABSTRACT

This paper addresses the issues central to the task of effectively communicating and transferring insights, which have been acquired over long careers, to colleagues just beginning their careers. This concern is much more salient today than previously for several reasons including the fact that the large post-World War II generation is retiring, social media is reducing face-to-face relationships, and modern family dynamics may be hindering organizational skills development. The authors describe experiences with mentoring approaches which were often either non-existent or non-optimally executed. They characterize the loss of productivity, creativity and morale occasioned by these failures and they note the secondary impacts such as increases in anxiety and reductions in loyalty to profession or workplace. The paper then explicates a set of goals for the mentoring process and characterizes the benefits anticipated from meeting those goals. After collecting extensive anecdotal data on the subject, the authors created a survey instrument which they administered to a diverse group of military personnel, the results of which are presented. Much of the paper is devoted to a description of the design, implementation, modification and outcomes of a series of strategies using technology to encourage and inculcate the mentor and mentee processes. The utility of such strategies is discussed in many contexts: defense, industrial and academic organizations. Acknowledging the advent and utility of current technologies, the authors address the utilization of the internet and other high-bandwidth communications devices to enhance the instantiation, conduct and continuation of the mentoring process. Feedback on the efficacy of and gratification from the mentoring process is reported. An outline of the implementation of an effective mentoring education program is presented. The relationship of an associated topic, knowledge capture, is addressed. The paper concludes with a look to further research, *e.g.* linear studies of the durability of this process.

ABOUT THE AUTHORS

Dan M. Davis is a consultant for the Information Sciences Institute, University of Southern California, focusing on large-scale distributed DoD simulations. His service there was capped by his being the Director of the JESPP project for a decade. Earlier, as Assistant Director of the Center for Advanced Computing Research at Caltech, he managed Synthetic Forces Express, bringing HPC to DoD simulations. Prior experience includes serving as a Director at the Maui High Performance Computing Center and as a Software Engineer at the Jet Propulsion Laboratory and Martin Marietta. He has served as the Chairman of the Coalition of Academic Supercomputing Centers and has taught at the undergraduate and graduate levels. As early as 1971, Dan was writing programs in FORTRAN on one of Seymour Cray's CDC 6500's. He saw duty in Vietnam as a USMC Cryptologist and retired as a Commander, Cryptologic Specialty, U.S.N.R. He received B.A. and J.D. degrees from the University of Colorado in Boulder.

Robert F. Lucas is a Deputy Director of the Information Sciences Institute at the University of Southern California and leads the Computational Sciences Division. He is a Research Associate Professor in the USC Department of Computer Science. At ISI he manages research in computer architectures, VLSI, compilers, and other software tools. He was the principal investigator on the JESPP project from 2002 to 2011, which first implemented GPU acceleration in high performance computing for battlefield simulations. Prior to joining ISI, he did tours as the Director of High Performance Computing Research for NERSC at LBNL, the Deputy Director of DARPA's ITO, and a researcher at the Institute for Defense Analyses, supporting the National Security Agency. Dr. Lucas earned BS, MS, and PhD degrees in Electrical Engineering from Stanford University.

LAUREL K. DAVIS is the President and CEO of Next Generation Leaders, Inc., an independent educational consulting and research organization in Culver City, California. She is an experienced classroom educator who has served in several public schools in the Los Angeles basin. Her current activities include teacher training, consulting on the transition from one school environment to another, creation of materials to address skills shown to impact academic success such as decision-making and learning style awareness. She has developed and fielded several programs on leadership training and assessment. She received a B.A. in Communications and a teaching credential and M.Ed., all from the University of California, Los Angeles.