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001. report	White Paper on the Federal Government's Use of Learning Technologies [partial] (1 page)	11/04/1994	P3/b(3)

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Freedom of Information Act - [5 U.S.C. 552(b)]

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Federal Ed Tech.
Future Search Conf.
12-95

PHOTOCOPY
PRESERVATION

Air Force, Wright Patterson AFB

American Society for Training and Development

American Federation of Teachers

American Academy of Distance Learning & Training

Army Corps of Engineers

Clear Spring, Inc. (and Federal Educational Technology Assoc.)

Commerce/NTIS/National Audiovisual Center

Defense Acquisition University

Dept of Education

Dept. of Justice

DoD

DOE

DOL

DOT

Federal Highway Administration

Federal Aviation Administration

EPA

Federal Acquisition Institute

GAO

Graduate School, USDA

HHS

Center for Substance Abuse Prevention

Public Health Service

HUD

Human Performance Technologies, Inc.

Learning Systems Architects

NASA

Natl Demonstration Laboratory for Interactive Technology, Academy for Educational Dvlpmt

NIH

NRC

OPM

Small Business Administration

SSA

State Department

The Document Company. Xerox Corporation

The Institute for the Learning Sciences, Northwestern University

Treasury

Univ of MD Baltimore County

Universal Systems, Inc.

Dept. Of Veterans Affairs

Virtual Experience Corp.

**The Federal Workforce:
Surviving or Thriving in the 21st Century?**

**A White Paper on the Federal Government's Use of Learning
Technologies in Education and Training for the Federal Workforce**

**Submitted by the
Human Resources Development Council**

November 4, 1994

The White Paper on the Use of Learning Technology in Education and Training for the Federal Workforce was submitted to the White House Domestic Policy Council and the Office of Science and Technology Policy by the Human Resources Development Council.

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November 4, 1994

LEARNING TECHNOLOGY IN THE FEDERAL WORKFORCE

"While traditional organizations require management systems that control people's behavior, learning organizations invest in improving the quality of thinking, the capacity for reflection and team learning, and the ability to develop shared visions and shared understandings of complex business issues."

Peter Senge
The Fifth Discipline

The Human Resources Development Council is a recently constituted body that serves as the principal advisory board on federal training and development policy and practices. It is composed of the chief training officers of the major federal departments and agencies and provides guidance and direction to OPM's Human Resources Development Group on human resource development matters. In addition, it serves as a coordinating mechanism across federal agencies as well as a forum for the consideration and approval of new initiatives in training and development for the federal civil service.

This White Paper focuses on the relationship of learning and the use of educational technology on workforce performance in the Federal government. It looks at how learning technologies are being utilized, including factors that support success and others that create barriers. The Council makes recommendations for actions that will support federal training and learning through improved applications of technology.

John Kenneth Galbraith described technology as "... the systematic application of scientific or other organized knowledge to practical tasks."¹ Technology is also defined as "... the tools, process, material resources, and creative human intelligence applied to the solution of practical problems."² Technology is used to describe "both the tools and the processes that facilitate the establishment of learning systems", rather than just the tools (microcomputers, videodisc players, hypermedia, expert systems, etc.). The process of technology is a systems approach, using a dynamic, iterative process to forge the tools into technologies for addressing the challenges of training and learning, and finding the solutions to practical problems.

The HRDC is looking at how learning technologies are being used to improve federal workforce performance. We want to ensure that we are not merely creating more technology, but are creating the "tools, processes, material resources and creative human intelligence" to enable the federal worker to grow into the Agile Learner³ capable of meeting the challenges of the 21st century.

Increasing the role of educational technology in federal training, even if it results in improved training, is not an end

in itself. As Vice-president Al Gore wrote in Earth in the Balance:

"We now face a crisis entirely of our own making: we are drowning in information. We have generated more data, statistics, words, formulas, images, documents and declarations than we can possibly absorb. And rather than create new ways to understand and assimilate the information we already have, we simply create more, at an increasingly rapid pace."⁴

Educational technology will not bring overall changes and desired long term improvements if we do not make the transformation from a culture focused on teaching (training) to one that is focused on learning. The move toward competency-based training and outcomes is reflected in the work of many organizations within government, industry and academia. Throughout industry and government, there is a growing recognition that "a workforce with superior skills is the only sustainable source of competitive advantage." Training and development systems are being viewed as critical to creating readiness and flexibility for change across all levels of the organization.⁵ Learning technologies are playing increasingly important roles in changing the direction of training and development systems.

THE CURRENT STATE OF TRAINING AND LEARNING

The most common category of training incorporating computer or other non-classroom/lecture delivery is computer and systems training. Almost across the board, agencies have turned to some form of computer-based training (CBT)⁶ delivery to teach workers to use the computers and software systems required on the job. Much of the computer training is still delivered as hands-on training in formal classrooms with an instructor. More self-paced learning alternatives are being introduced, ranging from video tapes and video disc courseware to online systems with huge libraries of courses that are fully managed electronically. (See the examples described in Appendix D for the U.S. Customs Service.) Computer-based training, in use since the early 60's, continues to have a major role in federal training delivery.

In the mid-80's, information centers--technology support organizations frequently operated by the Information Resource Management (IRM)/Information Technology (IT) organizations--were widely established throughout the federal government. Focus here was on supporting the use of computers, however, not on computer technology as a tool for learning regardless of the content or programmatic area. Since the late 80's, the growth of multimedia (computer plus graphics, audio, and video in an interactive mode) has continued to fuel the movement toward more and better use of educational technology applications, especially for education.

Today the use of various technologies is widespread across the government in both types of technology employed and types of applications. (See table in Appendix B for a sample of applications across the Federal government.)

Technological advances are transforming the workplace, and demographic trends are changing the nature of work. The HRDC focus is on identifying and supporting actions that will enable the Federal Government to develop the workforce learning necessary to meet the demands of a rapidly changing workplace. Adding more technology is not going to bring the desired outcomes by itself. The use of appropriate technology appropriately used is the key.



Courtesy of Rich Tennant
and Federal Computer Week

BARRIERS TO IMPLEMENTING EDUCATIONAL TECHNOLOGY SOLUTIONS

The four biggest barriers to the effective application of technology in training are:

- 1) the technology itself,
 - 2) the people who use or might use it,
 - 3) budget,
- and
- 4) procurement.

Technology:

Technology is often complicated, incompatible, costly, and subject to constant change. Some level of technological knowledge is required if technology is to be used effectively. Human resource developers, managers and trainers need to learn:

- Technical Feasibility
 - Compatibility of systems
 - Evaluating the competition
 - Potential problems

Planning, Design and Development

- Role of various technologies
- Applications
- Interest among various departments and agencies
- Means of introducing or producing products
- Availability
- Off-the-shelf, adapted courseware (developed by another Agency), or custom courseware
- Timetable for introducing
- Justification
- Cost Analysis (economic analysis)
Traditional cost/benefit analysis does not measure outcomes

Implementation issues and strategies

- Adequate support (contractor or in-house)
- Maintenance and obsolescence (life cycle planning)

People:

Government personnel often lack basic information about the potentials of technology as well as the how-to skills to begin incorporating new approaches for human resource development, training and learning into the existing framework. Our predominant experience as educators, trainers and human resource developers is in the classroom and follows the old pattern of teacher as lecturer, student as listener. We estimate that 90 percent of training still occurs using traditional methods. When the fear of the uninitiated (or technophobic) meets the sometimes mindless enthusiasm of the "techno-guru", common sense may be one of the casualties. Whether enthusiast or technophobe, human resource professionals all need to acquire new knowledge and expand their skills:

Human Resource Management Needs

- work in multi disciplinary teams
- navigate complex multimedia databases
- create real-life scenarios for teaching skills

Overcoming fear

- Perceived threats to job security
- Fear of technology and the unknown

Evaluation

- Evaluation of methodologies, determining best methods
- Evaluation of outcomes

Management/Administration Issues

- Integrating technologies into the existing technological, social, and political infrastructure
- Competing human and capital investment issues
- Decentralized training functions within Agencies

Accountability

- Training is often delivered without being linked to competencies or outcomes.
- Technology gatekeepers do not understand training and learning needs and are often unresponsive when asked for help in planning and implementing technology solutions for training and learning, especially for non-systems (computer) related training.
- Lack of baseline information on traditional training prevents development of realistic comparisons or standards to help evaluate alternative methods.

Budget:

After the idea of incorporating technology has been accepted and the management decisions have been made, another major barrier often impedes the progress--**budget issues:**

Financial

- Tight budgets
- Funding constraints
(e.g.: restrictions on purchase of computers and/or software because they are not seen as learning systems and educational materials)

Procurement:

Even when all other barriers have been overcome, another major source of trouble includes the ever-looming procurement issues:

Procurement

- How, where, how much, etc.
- Restrictions
- RFP process
- Lag-time for procurement (RFP process can take months to years to complete, making the purchase obsolete before the award is even made)

The most frequently cited problem outside of the technology, people, budget and procurement is **communication**--having access to information. We don't know what's being done, who's doing it, where to go for help, how to share what we have and/or know, or how to sort out what we're getting. We become victims of information overload as much as lack of access.

SUCCESS FACTORS

People and planning are key. Most successful applications of technology have been spawned by creative, courageous, and thoughtful risk takers who match the applications of technology to genuine needs and who have accounted for the context in which the technology has to operate. They have had to think about audience, access, affordability, affordances, accommodation, anticipated obsolescence, advocacy and education. These factors affect successful application of all technology-based education and training efforts, not just those for the federal workforce.

Technological advances are transforming the workplace, and demographic trends are changing the nature of work. Today's technologies provide many keys to unlock future productivity. Their appropriate application can serve to extend the opportunities for learning in real-world situations, expand our abilities to think and learn, improve accountability, and establish and manage learning environments where people work.

RECOMMENDATIONS

The Human Resource Development Council focus is on identifying and supporting actions that will support Federal workforce learning requirements to meet the demands of a rapidly changing workplace. The following recommendations are designed to provide incentives, access to resources including capital and expertise, rewards and protection to the human resource learning entrepreneurs and innovators in our agencies.

The HRDC offers recommendations on several levels:

- Incentives for individual and organizational entrepreneurs to develop innovative solutions to workforce performance issues and the institutional structure to support lifelong learning.
 - Clearer vision of the role of technology to support learning, workforce competency and productivity improvements in the Federal workplace.
 - Learning opportunities for management and human resource personnel to acquire the understanding and skills to make the transformations in their own agencies and departments.
 - Relationships between federal government, private industry, universities and others to allow the government to leverage its people, knowledge and resources most effectively.
1. **Create a Learning Fund** -- a working capital fund or revolving fund -- to support innovative learning ventures within the federal sector from single program offices up to entire agencies. The fund would support efforts similar to the reinvention labs developed out of the NPR.
- Operate the Learning Fund through an existing lead agency or organization capable of coordinating a national program.
 - The National Demonstration Laboratory for Interactive Information Technologies has operated a learning and demonstration center with public and private sector support. It is currently housed with the Academy for Educational Development, a private association supporting educational development.
 - Other possible agencies include the Office of Personnel Management, National Science Foundation, National

Technical Information Service (Dept. of Commerce) and Naval Research Lab among others.

- Use the Federal Technology Transfer Act as a model to encourage collaboration among public, private and academic sectors. Research parks dot the US where Technology Transfer Act efforts have been successful. (See Appendix C)
- Allow "profits" from ventures to accrue to the government (back to the Learning Fund) to support additional projects, research and educational activities.
- Facilitate joint ventures for new development and research projects.

The HRDC will help to establish criteria for distributing learning funds.

The HRDC will assist with continuing research to develop a Learning Fund program.

2. Utilize existing magnet learning centers that provide working environments for learning, experimenting, innovation, and change. Examples include: CD-ROM Information Resources Center (CIRC); the National Demonstration Lab (Academy for Educational Development); US Geological Survey Centers for Learning; General Accounting Office Training Institute.
 - Operate these magnet facilities as centers of excellence for education and learning (Excellence Center for Education and Learning--EXCEL). Results from research and development efforts would be shared through the EXCEL network.
 - Use existing centers as models for transforming training operations into learning centers within other federal agencies.
 - For example, the National Library of Medicine operates a Learning Center for Interactive Technology that has been functioning as a "magnet center" for over ten years. It also houses the National Coordination Office for High Performance Computing and Communication (HPCC) that coordinates the efforts of several agencies with contracts in these areas to avoid duplication and leverage resources.

The HRDC will ask each agency to nominate centers of excellence and will coordinate improving access to

information-sharing through existing Bulletin Board Systems (BBS) and/or Internet access.

The HRDC will explore the feasibility of operating a listserv for Internet access through the National Technical Information Service (NTIS) and National Audiovisual Center.

3. Develop incentives for people to take risks, trying innovative and new approaches to meet learning and training requirements.

- Create a Vice Presidential award for significant accomplishments in learning and the innovative application of technology to improve workforce training. Recognize individuals and organizations for best practices and innovation in learning.

The HRDC will work to develop criteria similar to Quality awards for outstanding accomplishments.

The Council will work with other Agencies to identify best practices across the federal government.

- Agencies will submit nominees to the OPM and/or the HRDC annually, with the finalists being forwarded to the Vice President's office for an annual recognition and award ceremony.
- Encourage the use of existing mechanisms to reward human resource entrepreneurs with money, recognition, academic or other exchange time, and other career enhancing and developmental opportunities (e.g., Intergovernmental Personnel Assignment (IPA) process, developmental details and rotational assignments, and sabbaticals for academic and research work).

4. Include planning for workforce learning as key component in all Reinvention efforts such as Business Process Re-engineering (BPR), Work Process Reengineering, and TQM. Plans should include evaluating role of educational technology and incorporating alternatives to traditional classroom training.

5. Include the federal workforce in the Administration's vision for learning. Sponsorship should be shared by lead agencies such as the Office of Personnel Management, Departments of Labor, Health and Human Services, Education, and Commerce.

"In moving toward the 21st Century, we must, above all, become an 'education nation' -- and support public sector leaders at all levels who will make

training and education their unmistakable top priority (policy and dollars).

Tom Peters
Liberation Management

- Set Learning as a national priority
- Sponsor a research initiative by the White House Domestic Policy Council and/or Office of Science and Technology Policy to bring new learning theories and learning technologies into the mainstream for workforce development, productivity and quality improvement, and achieving national and international competitiveness in government and business.

Research findings would apply to issues of competitiveness, education reform, school-to-work transition, and related areas.

- Annual recognition of best practices (see Recommendation 2) will continue to reinforce the vision and commitment to this national priority.
- The Federal Government should place more emphasis on technology transfer and training as an integral part of human resource development and management.
 - Technology transfer will be facilitated through the joint efforts of the participants in the EXCEL network and projects sponsored through the Learning Fund.

6. Identify best practices in performance measurements for the transfer of learning and training to the workplace. Focus on evaluation of learning technologies and transfer of learning to job performance.

- Focus on how to demonstrate the impact of human resource, organizational development, and learning programs on business performance.
 - Utilize research and findings of the Dept. of Labor Office of the American Workplace.
- Identify tools, models and metrics necessary to design, implement, and evaluate impacts of training and organizational development efforts.
- Host a conference on evaluation and performance measurements which brings together participants from government, academia, educational associations, and

business to share knowledge and experience. Findings should be published and distributed (electronically) by OPM through the Human Resource Development Group.

7. **Leave delivery decisions about training to the discretion of the learning experts** rather than mandate delivery details in the training provisions of Legislation and Executive Orders.

The following two recommendations address the need to focus on the planners and implementers, to help them acquire a strategic view of learning and training for the organization while also learning how to adapt learning programs and integrate technologies appropriately:

8. **Incorporate technology into the basics for training, especially for senior management (SES and political managers).** E.g.: give managers a laptop at check-in for their four week stint at the Federal Executive Institute, along with help to learn to use the software, email, etc. Set up programs for paperless (almost) work with the products delivered by the Institute participants coming out in electronic form. Set up node on Internet for FEI and perhaps a listserv to promote continued collaboration and sharing of learning, etc.

- SES executives need programs that will help them to understand the role of learning as a strategic part of mission
- Non-Technical SES career officials need training and learning opportunities about information and learning technology.

The HRDC can provide guidance and subject matter expertise in helping to develop a learning program through the FEI and other federal training institutes and programs which incorporates strategic planning and learning with technology.

9. **Create a Federal Human Resource Learning Institute** to help human resource professionals develop learning skills and competencies.

- Develop a "virtual" university environment drawing upon the existing resources, best practices and model programs across the country.
- Establish opportunities for employees to become members of learning teams, teaching and learning simultaneously, with their roles as facilitator and learner interchangeable.

The HRDC will inventory the existing models such as the Federal Executive Institute, Federal Quality Institute, Staff College on Learning and Technology (Center for Substance Abuse Prevention) and other government and non-government organizations.

The HRDC will assist in developing curriculum designed to help federal trainers and HR professionals acquire the skills to move federal training to a learning culture which measures competency and develops training based on learning outcomes, applies best practices and continuous learning to methodologies.

-- NOTES --

1. Galbraith, John Kenneth, *The New Industrial State*, Boston: Houghton Mifflin, 1967.
2. Barbee, David and Gabriel Ofiesh, *A Report on the Nationwide 'State of the Art' of Instructional Technology*, Washington D.C.: Institute for Technological Solutions, 1990.
3. The agile learner is a concept developed by the National Learning Foundation, Paul Messier, Ph.D., President. According to Messier, the agile learner is a strong individual in a self-governing system -- one who is not a sponge for information, but rather one who has sovereignty over information and is capable of reflection and choice.
4. Gore, Albert, Boston: Houghton Mifflin, 1992.
5. "Designing Training and Development for Competitive Advantage: Lessons from the Best" by Judy D. Olian, Cathy C. Durham, Amy L. Kristof (Maryland Business School, University of Maryland), Kenneth G. Brown (Department of Psychology, Michigan State University), and Richard M. Pierce (Human Technology, Inc.).
6. See Glossary in Appendix A for definitions and related terms.

Withdrawal/Redaction Sheet

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Contributors to the White Paper

The HRDC White Paper committee would like to thank all the people who contributed their ideas and materials to the effort. The names below represent only a partial list. There were many others from within the identified organizations who helped, as well as individuals who sent comments over the Internet but left no identity other than their online names. The Internet itself made it possible to ask the questions and gather comments from a wider range of resources than we would ever have been able to reach by traditional methods. It also allowed us to collapse the time required to conduct the research, discuss ideas and write the paper.

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Learning Technology in the Federal Workforce

TECHNOLOGY DEFINITIONS AND DESCRIPTIONS

The following descriptions of the tools available for human resource development include machines, software, and complete systems. The categories are arbitrary, but the tools they represent are real; they hold substantial promise for providing solutions to practical problems.

THE TOOLS AND PROCESSES

Microcomputer At the heart of the new technologies lies the microcomputer. It has made possible the creation, delivery, and management of learning environments that provide textual, audio, video, and graphical stimuli, as well as control, to the learner. Simulation, tutorials, practice, sophisticated branching, manipulation of data and information are available in highly interactive modes.

The computer is more than just another tool. It can program and manage a CD-ROM, videodisc player, expert system, or other tool, functioning as part of a *learning technology*. When used in this way, computer-based systems not only deliver training, but also act as *tools of learning* that can help humans gather and manipulate relevant information, and even create intelligence. Computer systems hold the promise of creating more *ideal* instructional systems. (Barbee and Ofiesh, 1990)

Artificial Intelligence (AI) AI computer programs have the ability to *think* in response to user input and to provide information based on user queries or responses. The programs may emphasize problem-solving applied to specific tasks or may be used as training programs. AI is related to Expert Systems, which organize and apply the knowledge of human experts for specific problems.

Intelligent Computer-Assisted Instruction (ICAI), also known as Intelligent Tutoring Systems (ITS), is an intelligent computerized instructional system that makes use of artificial intelligence programming techniques to enhance instructional effectiveness. It is used to organize a comprehensive knowledge base into a clearly defined instructional model which can interact with the learner tailored to the learner's performance and needs.

Authoring Systems In the past the cost of programming the computer for instructional use was very high. Authoring systems were developed to enable instructional developers, without the knowledge of a programming language, to generate

Learning Technology in the Federal Workforce
APPENDIX A: TECHNOLOGY DEFINITIONS AND DESCRIPTIONS

text and graphic lessons on the computer. They can call upon the still frame, motion and audio sequences of a random access videotape or videodisc player, or they can call other peripherals driven by the computer for sound, visuals, text, graphics, or other electronically stored material.

Compact Disc Technologies There is an entire family of compact disc technologies growing out of the CD audio so familiar to the consumer electronics market.

Compact Disc-Read Only Memory (CD-ROM) The 12 cm. CD-ROM disc can store 550 megabytes or more of digital data (the equivalent of about 250,000 pages of text, 500 1.2 MB floppy disks, or a 20' high stack of paper). The data on the disc is in digital form, allowing the computer to read and manipulate it. For education and training purposes, pictures, text, graphics, sound, and even color video sequences can be stored. However, it does not provide full-motion video sequences as a videodisc or videotape does.

Compact-Disc Interactive (CD-I) This system combines a microcomputer and a CD-ROM player in a stand-alone unit, providing random access to graphics, sound, and both still and full motion video. The data format, however, is proprietary, requiring CD-I discs to be played only on CD-I players. This technology, under development by Philips and Sony, was originally targeted for the home market; the developers are now marketing to the business environment as well. Few applications exist at present.

Digital Video Interactive (DVI) DVI allows real-time presentation of up to 72 minutes of full motion, full screen digital video, audio and graphics from a CD-ROM or other large storage device. The technology employs a set of algorithms to compress and decompress digital signals through a chip set on a PC board. Because all the signals are digital, every screen pixel, and every second of sound may be adjusted by the user, providing a highly interactive tool.

Computer Based Training (CBT) CBT can incorporate a wide range of concepts, techniques, media, and technologies. Computers can bring many specific capabilities to training delivery systems, however, with a high degree of interactivity unavailable with other instructional approaches, except, perhaps, for a direct dialogue between a student and instructor. A current definition of CBT from Gloria Gery is "an interactive learning experience between a learner and a

Learning Technology in the Federal Workforce
APPENDIX A: TECHNOLOGY DEFINITIONS AND DESCRIPTIONS

computer in which the computer provides the majority of stimulus, the learner must respond, and the computer analyzes the response and provides feedback to the learner." This new definition moves CBT away from many of the traditional limitations such as little learner control and criticism that it is primarily an electronic page-turner.

CBT is a versatile medium, available from mainframe, mini, and PC networks or on stand-alone units from a hard drive or floppy disk. Some of the distinct capabilities of CBT training include:

- Creation of files for storing information
- Organization of text, video, and numerical data
- Random access to data and programs
- Manipulation of variables and the calculation of outcomes
- Creation of linear, conditionally branched, or non-linear interactions
- Evaluation of student responses and decision-making based on performance assessments

Interactivity and learner control are the primary factors separating CBT from other more traditional instructional media. The wide range of learner control options and levels of interactivity permit a higher degree of individualized learning and add teaching value beyond that achieved with other media. (See also *Artificial Intelligence*, which is an important related topic area.)

Variations of CBT include computer-aided instruction (CAI), computer-based instruction (CBI), computer-based education (CBE), computer-based tutorials (CBI), and interactive tutorials.

Computer Conferencing Using the computer as a delivery system, conferencing sets up an *electronic classroom* combining computers and telecommunications. It is commonly used for student-teacher and student-student communication. Students meet with the instructor online; course information can be presented, along with questions, tests, assignments, and individual responses to questions or discussion items. The role of the instructor is similar to teaching in a classroom

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APPENDIX A: TECHNOLOGY DEFINITIONS AND DESCRIPTIONS

but the contact is electronic rather than face to face. This format may be referred to as *asynchronous computer conferencing*. Virtually any computer terminal can be used with telecommunications.

Courseware The term is used to describe courses developed for educational technology applications. It indicates a learning or training tool for delivered through a computer.

Distance Learning Human resources (learners, experts, teachers, others) come together with material resources (text, audio, and visual databases; predesigned packaged learning environments) to learn. It is more than simply the physical or electronic delivery of local training to another location. It is an interactive phenomena. Examples of distance learning delivery methods include television and satellite, computer, and video conferencing technologies.

Electronic Bulletin Board Systems (BBS) A computer system is used to allow users to leave, read, and exchange messages with other users. Electronic bulletin boards provide access to data files, and permit on-line, real-time conferences between two or more users. The three major functions of a BBS are messaging, data access, and conferencing. The system can be used for support and teaching purposes.

Some of the advantages of using bulletin boards include:

- Wide and almost immediate access to a broad base of expertise
- Timely notices regarding system changes, new services, important announcements
- User involvement and user-to-user support
- Customization of on-line help with the combined immediacy and individuality of phone support and the convenience of on-line help
- Efficiency for support providers who gain a degree of control over their time, eliminate telephone tag, and provide public responses to common questions and problems

Disadvantages include:

- Security problems with dial-in access to internal networks

Learning Technology in the Federal Workforce
APPENDIX A: TECHNOLOGY DEFINITIONS AND DESCRIPTIONS

- Limited appeal to some users who are uncomfortable with electronic communications and want face to face support
- Lack of enforcement to get users to read messages when policy or procedure changes are broadcast
- Costs and/or access for connect time from long-distance participants and for appropriate hardware

Electronic Performance Support (Also referred to as Performance Support Systems or PSS) An electronic performance support system provides a worker with immediate guidance, advice, assistance, and tools to perform a job with a minimum of support from other people. The concept incorporates old as well as new tools, combining them to create powerful new systems to support jobs rather than individual tasks. The technologies being combined in creative ways include mass storage, increased desktop power, on-board video and audio, artificial intelligence, relational database management, networking, dynamic data linking, and uniform interfaces.

Embedded Training When training is delivered by the same computer a person uses for work as the work is performed, it is referred to as embedded training. The training material is located within the application software, or as a shell around it to provide immediate guidance as the individual works. When the training material resides in its own program which parallels the application software, it is called concurrent training. Embedded training can range from simple help functions to full blown tutorials, simulations, or context-sensitive help on a specific topic. It can be used to walk a user through the actual use of the software, providing the appropriate level of support to enable the user to perform tasks while simultaneously learning how to use the tools.

Expert Systems An expert system is an advice giving system used to help make decisions or solve problems. It uses techniques developed in the field of artificial intelligence to represent knowledge and make inferences. It consists of a knowledge base (a set of rules and decisions that make up the expert's knowledge), an inference engine (the method used to access and apply the knowledge), and an interface with the user (usually the keyboard and program which makes it easy to interact with the expert as naturally as possible).

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APPENDIX A: TECHNOLOGY DEFINITIONS AND DESCRIPTIONS

Hypertext/Hypermedia Hypertext is a way of organizing, storing and retrieving textual information using a series of cross references referred to as nodes and links. Hypermedia extends the hypertext concept to include pictures, graphics, sound, and/or motion video in addition to text.

Hypertext A common definition of hypertext is a database that has active cross references and that allows the user to jump to other parts of the database as desired, making the reading (and writing) process non-sequential. The requirement for active cross references makes a computer necessary to implement hypertext. The database can be conceptualized as a network of nodes (documents) and links (cross references). Articles or documents can be shared across multiple locations/machines and allow collaboration in both reading and writing.

Hypermedia When documents are multimedia in nature, the term hypermedia is often used. Multimedia links can be made not only among text documents, but also among pictures, audio, video sequences, or whatever media are available in the machine environment being used. Videodisc and CD-ROM are commonly used media devices.

Learning Stations The interactive learning station can combine a number of tools to provide *embedded training* (training material or assistance is delivered as the person at the workstation works). Training is integrated with the work itself to allow the person to move freely from work to training, then back to work. The training material may be an actual part of the applications software (embedded training) or may be running in a separate program at the same time (concurrent training).

Multimedia The addition of graphic, sound, and motion video (multiple media) is used to create computer-based applications. Multimedia is commonly delivered via video disc (analog) and CD-ROM (digital); new video graphics and sound boards in computers, along with high speed modems are making it possible to transmit multimedia available over the Internet and other data communication systems.

Videodisc A videodisc player employs a laser to access video images stored on the 54,000 frames available on a single side of the disc. Two independent sound tracks may be recorded, with additional audio storage available by using some of the video frame space (referred to as the disc's real estate).

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Most videodiscs used in the more sophisticated instructional applications are controlled by a computer (referred to as a Level III videodisc application). Level III applications use the computer to access frames, motion sequences and audio, while overlaying computer-generated text and graphics for maximum instructional utility. The user interface can be touch screen, light pen, mouse, keyboard, voice recognition, or any or all of the these methods, or some other device that represents, for example, a control panel, welding station, or simply the top of a table or desk.

The data on a videodisc is not stored in a digital format as it is on a hard disk or CD-ROM disc; it is stored in analog form. The image or sound itself cannot be altered since it is not in a form the computer can recognize.

Videoconferencing Similar to computer conferencing, videoconferencing, or video-teleconferencing, uses broadcast-quality video with a voice link. The analog signal provides one-way video with two-way audio bridges similar to a conference call. For wide distribution, the signal is usually broadcast via satellite. Video networks are evolving to deliver prepackaged programming to business sites equipped with downlinks for capturing satellite transmissions. Subject matter experts and instructors can be made available to a large audience while reducing travel-related costs. The technology serves to extend the traditional classroom more than replace it.

Learning Technology: Linking Resources to Improve Workforce Performance

The Human Resources Development Council, the principal advisory board on policy and practices for federal training and development, sponsored a "future search" conference to explore specific issues related to the development and use of learning technologies within the federal sector. The conference focused on strategic planning, management, and future use of federal instructional technologies. Goals for the three-day event included:

- Identify existing resources for state-of-the-art learning technology within the Federal Government,
- Create an investment framework to facilitate joint ventures for the effective use of learning technology,
- Establish strategies for planning, managing and using federal instructional technology.

Participants included public and private sector stakeholders with an interest in improving federal workforce performance. They represented line managers, human resources development managers; learning technology experts and end users; procurement, finance, and budget experts; and information resource managers. There were representatives from 24 federal agencies and 13 non-government organizations.

By the end of the conference, six work groups had formed, each focusing on a different aspect of the central issues. Teams designed action plans and began to establish goals and frameworks to carry out the vision of the future created during the earlier stages of the conference. A brief description of each work group and the points of contact if you are interested in joining a team are listed below.

The work of each of these action teams will be coordinated across all of the teams by the conveners. Many of the projects will provide input into other teams' efforts and will build off of the work of the various groups. One of the clear outcomes of the conference was a determination to serve as a model of collaboration across agencies and disciplines around the common theme of learning and performance improvement.

Learning Technology: Linking Resources to Improve Workforce Performance

1. Learning for Performance for the Learning Technology Practitioner Community

Purpose: help practitioners using technologies for learning and training to acquire and maintain their skills in the field. The team wants to establish a network of practitioners across the country, building off of a clearing house being developed by another group, and create a model learning system which provides learning, information and performance support tools incorporating the knowledge, skills, behaviors, and attitudes of master performers.

POC:

Ruth Salinger, HHS, 202 690-5549, fax 202 690-8328; email: rds@ospahh6.ssw.dhhs.gov
Renelle Rae, EPA, 202 260-3297, fax 202 260-6786; email: rae.renelle@epamail.epa.gov

2. Learning Technology Contracts

Purpose: simplify and streamline the contracting processes for acquiring learning technology, this group will build on increasing awareness about how to use existing vehicles (e.g.: agency contracts, policies, buying schedules, changes in procurement rules, etc.) to help federal training developers and managers maneuver through the procurement process.

POC:

Tom Horan, GSA, 703 603-3206, fax 703 603-3258; email: tom.horan@gsa.gov
Bettie Feit, GSA, 703 603-3250, fax 703 603-3258; email: bettie.feit@gsa.gov

3. Partnership and Collaboration

Purpose: Establish the mechanisms necessary to foster the creation of, and support, partnerships and other collaborative activities among agencies of the Federal Government. Subgroups within this team will work on diverse aspects including physical infrastructure and inter-operability issues, continuing to build a clearinghouse on learning, information and performance support, showcasing existing centers of excellence, and developing outreach to state and local government.

POC:

Elaine Rand, DOEd, 202 401-0510, fax 202 401-2780; email: elaine_rand@ed.gov
Lisa Nelson, EPA, 202 260-8782, fax 202 260-1347; email: (not currently available)
Gary Wall, GSA, 703 760-7779, fax 703 506-3322; email: gary.wall@gsa.gov

4. Strategic Planning and Policy

Purpose: Create a government-wide system for access to learning; develop strategy and policies to leverage technologies and resources to facilitate access; create a collaborative, strategic map of government-wide assets. A major focus is on developing investment strategies and building entrepreneurial practices across government.

POC:

Anna Doroshaw, EPA, 202 260-7344, fax 202 260-6786;
email: doroshaw.anna@epamail.epa.gov

Dennis McDowell, CDC, 404 639-1627, fax 404 639-3982;
email: dlm4@phpmts1.em.cdc.gov

5. Learning for Performance Improvement

Purpose: Develop and demonstrate methods to provide automated assistance for enterprise critical processes in federal agencies. This team will identify resources including people, current processes, boundaries, and opportunities. They will work to build partnerships for customer-driven, results-oriented projects to deliver learning, training and support on-demand (transparent an embedded).

POC:

Walter Chiavacci, DOEd, 202 401-1583, fax 202 401-0434; email: walter_chiavacci@ed.gov

6. Technology Assessment

Purpose: Facilitate collaboration and sharing of innovative, emerging, inter-operable, scalable, standards-based technologies related to learning and performance. This group will provide technology evaluation and assessment services. Team members anticipate developing a blueprint for a delivery mechanism that can be adopted by multiple agencies in a joint project to create a model learning and performance system. Milestones include plans to collect and distribute existing and proposed learning and performance delivery solutions, and to develop a prototype model for evaluation by the federal user community.

Elaine Rangel, Dept. of Education 202 401-0510

Anna Doroshaw, EPA 202 260-7344

*In a message**enclosed*

President Clinton last week endorsed the Learning Technology Future Search Conference to "identify specific actions that can be taken to make workplace learning more effective in improving the performance of government." A mix of top Federal Government officials, including training, IRM, procurement professionals and program managers gathered at the Interstate Commerce Commission for three days, December 5-7, 1995, to respond to this request from the President's Management Council and the White House Office of Science and Technology Policy.

The 60 or so participants addressed issues of how to finance and support more effective training within the federal sector through the use of learning technologies, creative financing and collaborative work. Prior to this culminating event, The "Learning Technologies Project" leading to it was designed and managed by the Human Resource Development Council (HRDC) planning team, chaired by Eileen Mason (NRC) and Anna Doroshaw (EPA), with support from consultants. Drs. Mary Broad and George Peabody facilitated the Future Search Conference. At its conclusion, Renelle Rae (EPA), Chair of the HRDC (comprising Directors of Training at all federal agencies) remarked that the Future Search Conference had been a ground breaking event, bringing together individuals from across many organizations and disciplines to work together. She added that, "The success of this conference can be measured in the action plans and commitment of the participants to work together in teams to implement the common visions developed during the conference."

The three days of tasks led conferees from a look at the past — globally, personally and from a learning technologies point of view — to a "Mindmap" of the present (current issues in learning technology) to views of the future created by eight working groups. By the Conference end, the "Conveners" (those who will keep track of progress on the Action Plans) were so enthused that they all agreed to sit down that same afternoon to coordinate the groups' efforts over the next six months to a year.

The future themes that kept emerging over the period of the Conference focused on:

- ▶ "Government-wide" training activities, i.e., avoiding duplication of efforts
- ▶ "Collaboration" of efforts by several agencies to accomplish a difficult goal, instead of today's agency-by-agency approach
- ▶ Taking advantage of the existing (and future) integration of learning technologies from PCS to networks to databases to the World Wide Web for all to contribute to and use.

As John Koskinen, Deputy Director of Management at OMB stated in the official invitation to the Conference, "This conference provides us with an opportunity to create a new investment framework to achieve our critical performance goals." Participants from 24 federal organizations and representatives from 13 non-govt. organizations or associations left the conference with their action plans in hand, ready to start improving performance throughout the federal sector immediately.

In closing remarks to participants, U.S. Office of Personnel Management's (OPM) Kirke Harper, Assistant Director, pledged the continuing support of OPM as federal agencies continue to develop their learning technologies capabilities.

LEARNING TECHNOLOGIES:
LINKING RESOURCES TO IMPROVE WORKFORCE PERFORMANCE

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Learning Technologies: Linking Resources
to Improve Workforce Performance
Future Search Conference: Feedback Form
December 7, 1995

Name (optional)

Don CHASEN

Stakeholder group:

Permanent/
Educator

1. What did you like best about this process?

Good opportunity to "Network" with
Kinship Souls

2. What did you like least?

P.A. system - Need better Technology -
used ~~paper~~ paper instead of technology for conference

3. How well were the conference objectives met?

Well met = 1 2 3 4 5 = Not met at all

- A. The conference produced a shared vision for learning technology in the federal government.

1 2 3 4 5

- B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders.

1 2 3 4 5

- C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision.

1 2 3 4 5
1 ↔

4. Which future scenario did you work on? _____

5. What is the probability of your action plan being implemented?

100%

75%

50%

25%

0%

6. What was the major insight you gained from the conference?

Reinforced - everyone has the same problem of knowledge

7. Is there a major change you would make if a conference like this were to be held again?

Use some thing technology

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

Don't Politician - hi level Administrators

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

See over

11. Additional comments:

Learning Technologies: Linking Resources
to Improve Workforce Performance
Future Search Conference: Feedback Form
December 7, 1995

Name (optional) Steve Seitz Stakeholder group: USER

1. What did you like best about this process?

2. What did you like least? The scenario/vision exercise

3. How well were the conference objectives met? Well met = 1 (2) 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. (1) 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 3 (4) 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 (3) 4 5

4. Which future scenario did you work on? Embedded training and performance support

5. What is the probability of your action plan being implemented?

100%

75%

(50%)

25%

0%

6. What was the major insight you gained from the conference?

Potential for an on-line support system for this group

7. Is there a major change you would make if a conference like this were to be held again?

Better focus and shorter ground work - no scenario development

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

Agency Directors for buy-in/support

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

11. Additional comments:

Learning Technologies: Linking Resources
to Improve Workforce Performance
Future Search Conference: Feedback Form
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Name (optional) STEVE KENNEDY Stakeholder group: HRDC et al

1. What did you like best about this process?

*THE LAST DAY - IT WAS THE ACTUAL
PURPOSE OF THE SESSION*

2. What did you like least?

*THE FIRST TWO DAYS - IT HAS MODERNIZED
POP PSYCH TO NEW DEPTHS - Artificial
structure*

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government.

1 2 3 4 5 *barely
reached
the surface*

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders.

1 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision.

1 2 3 4 5

4. Which future scenario did you work on? _____

5. What is the probability of your action plan being implemented?

100% 75% 50% 25% 0%

6. What was the major insight you gained from the conference?

7. Is there a major change you would make if a conference like this were to be held again?

*MORE PRAGMATIC !! TRY TO ELIMINATE
THE "SOFT STUFF"*

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

only if it's practical

9. Were any important stakeholders missing? Yes No If yes, who were they?

VENDOR COMMUNITY

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

11. Additional comments:

Learning Technologies: Linking Resources
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Name (optional) Cathy Schuchard Stakeholder group: Management / Staff

1. What did you like best about this process?

The broad scope of agency participants + the progress made in the attempt to get a

2. What did you like least?

handle on what is already available. With such a large group it was very time consuming to try to come to consensus

3. How well were the conference objectives met?

Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government.

1 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders.

1 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision.

1 2 3 4 5

4. Which future scenario did you work on?

Partnerships + Collaboration

5. What is the probability of your action plan being implemented?

100%

75%

50%

25%

0%

6. What was the major insight you gained from the conference?

Available Resources

7. Is there a major change you would make if a conference like this were to be held again?

N/A - Fine Job

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

Did a fine job.

11. Additional comments:

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Name (optional) _____ Stakeholder group: _____

1. What did you like best about this process?

Interaction

2. What did you like least?

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. 1 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 3 4 5

4. Which future scenario did you work on? *Sharing Resources*

5. What is the probability of your action plan being implemented?

100%

75%

50%

25%

0%

6. What was the major insight you gained from the conference?

7. Is there a major change you would make if a conference like this were to be held again?

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

Network Providers

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

11. Additional comments:

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Name (optional) Buck Jordan Stakeholder group: Private

1. What did you like best about this process?

Very collaborative

2. What did you like least?

3. How well were the conference objectives met?

Well met = 1 2 3 ~~4~~ 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government.

1 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders.

1 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision.

1 2 3 4 5

4. Which future scenario did you work on? Global

5. What is the probability of your action plan being implemented?

100%

75%

50%

25%

0%

6. What was the major insight you gained from the conference?

Common issues between govt + industry

7. Is there a major change you would make if a conference like this were to be held again?

Include some higher level stakeholders

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

11. Additional comments:

see 7
Well done
Need more mikes (disturbed)

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Name (optional) Craig Locantis Stakeholder group: 1) Ser-

1. What did you like best about this process?

The exchange and the people

2. What did you like least?

The consensus part Weds. afternoon

3. How well were the conference objectives met? Well met = (1) 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. 1 (2) 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 (2) 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 (2) 3 4 5

4. Which future scenario did you work on? #8 Delivery

5. What is the probability of your action plan being implemented?

100%

75%

50%

25%

0%

6. What was the major insight you gained from the conference? *That others were working on the same thing and had the same Internet and connectivity concerns.*

7. Is there a major change you would make if a conference like this were to be held again? *Consensus part should have ~~people~~ groups explain their priorities first before we developed a master list. We moved ahead too soon.*

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

The users of Federal Government Services.

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

They had a very difficult ~~job~~ and did it well.

11. Additional comments:

Very worthwhile!

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Name (optional) _____ Stakeholder group: _____

1. What did you like best about this process? *ALL THE PLAYERS
IN ONE ROOM*

2. What did you like least?

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. 1 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 3 4 5

4. Which future scenario did you work on? _____

5. What is the probability of your action plan being implemented?

100%

75%

50%

25%

0%

6. What was the major insight you gained from the conference?

7. Is there a major change you would make if a conference like this were to be held again?

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

11. Additional comments:

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Name (optional) _____ Stakeholder group: HR & specialist

1. What did you like best about this process?

- meeting others with various interests in L.T.
- talking at the end about a theme of interest

2. What did you like least?

- some of exercises were tedious, pushed hard to keep track of how it all would fit together

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. 1 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 3 4 5

4. Which future scenario did you work on? _____

5. What is the probability of your action plan being implemented?

100% 75% 50% 25% 0%

6. What was the major insight you gained from the conference?

there are a lot of resources around and people want to work together + share

7. Is there a major change you would make if a conference like this were to be held again?

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

management

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

11. Additional comments:

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Name (optional) Eileen Masan Stakeholder group: HRD Specialist

1. What did you like best about this process?

2. What did you like least? It didn't lend itself to answering our specific questions. It took off on some different - albeit important - tangents.

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. (1) 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. (1) 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 (3) 4 5

4. Which future scenario did you work on? Procurement of learning technology

5. What is the probability of your action plan being implemented?

100%

(75%)

50%

25%

0%

6. What was the major insight you gained from the conference?

There is a lot of use of learning technology in the federal government.

7. Is there a major change you would make if a conference like this were to be held again?

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No

9. Were any important stakeholders missing? (Yes) No If yes, who were they?

Congressional, OMB, Executive Office (White House) policy makers

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

11. Additional comments: Although there was a lot of momentum started around learning technology, we didn't concentrate on investment/funding strategies.

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Name (optional) _____ Stakeholder group: HRD

1. What did you like best about this process?

*networking with
learning from people who in Learning Technology*

2. What did you like least?

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. 1 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 3 4 5

4. Which future scenario did you work on? Group #1 - Learning Tech Competence

5. What is the probability of your action plan being implemented?

100%

75%

50%

25%

0%

6. What was the major insight you gained from the conference?

Resources existing already

7. Is there a major change you would make if a conference like this were to be held again?

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

Someone who could make something happen - organize the effort across govt

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

11. Additional comments:

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Name (optional) TOM HORN Stakeholder group: PROCUREMENT

1. What did you like best about this process?

FINAL PRODUCTS

2. What did you like least?

AMBIGUITY DURING BRAINSTORMING

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. 1 (2) 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 (2) 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 (3) 4 5

4. Which future scenario did you work on? PROCUREMENT

5. What is the probability of your action plan being implemented?

100% (75%) 50% 25% 0%

6. What was the major insight you gained from the conference?

STAKEHOLDERS

7. Is there a major change you would make if a conference like this were to be held again?

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No

9. Were any important stakeholders missing? (Yes) No If yes, who were they?

FAA, DOE ACADEMIES (PRACTITIONERS)

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

11. Additional comments: NICE WORK, ESP. ~~FWED~~ pm!!

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Name (optional) _____ Stakeholder group: _____

1. What did you like best about this process? *well-paced*
well-planned
2. What did you like least? *too rigid; the model could have been adapted for example when there was a need for more discussion Wed. evening. Important larger issues were left unaddressed.*
3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

- A. The conference produced a shared vision for learning technology in the federal government. 1 2 3 4 (5)
- B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 (3) 4 5
- C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 (3) 4 5

4. Which future scenario did you work on? _____

5. What is the probability of your action plan being implemented?

100% 75% (50%) 25% 0%

6. What was the major insight you gained from the conference?
that people are so bound by their agency affiliation that they are unable to develop a broad vision
7. Is there a major change you would make if a conference like this were to be held again?
no agency affiliations, no personal commercials, more broad, long-range thinking
8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? (Yes) No If yes, who were they?
CIA, NSA, FBI, DIA

10. Do you have any comments for the facilitators, to help them improve the next Future Search?
flexibility — the model is to serve the content, not the other way around.

11. Additional comments:
disappointing; expected a higher level of action, both in terms of "plan" and in terms of the recipient of the "plan" — the White House. Did not expect simply more groups at our level.

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Name (optional) _____ Stakeholder group: _____

1. What did you like best about this process?
2. What did you like least?
3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all
 - A. The conference produced a shared vision for learning technology in the federal government. (1) 2 3 4 5
 - B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. (1) 2 3 4 5
 - C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. (1) 2 3 4 5
4. Which future scenario did you work on? #7 - Continue ID of existing Resources - to combine with #2
5. What is the probability of your action plan being implemented? 100% (75%) 50% 25% 0% #2
6. What was the major insight you gained from the conference? Lots of kindred spirits
7. Is there a major change you would make if a conference like this were to be held again? Apply appropriate technology
8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No
9. Were any important stakeholders missing? (Yes) No If yes, who were they? Private sector Gov't & legal & Gov't managers
10. Do you have any comments for the facilitators, to help them improve the next Future Search? More Flexible format
11. Additional comments:

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Name (optional) Renelle Rue Stakeholder group: HRDC

1. What did you like best about this process?

It revealed the common ground among
an extraordinarily broad community —

2. What did you like least?

representing many disciplines
There was only minimal time to discuss content
as a group

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for
learning technology in the federal government. 1 2 3 4 5

B. The conference facilitated a shared understanding
of the changing status, roles, responsibilities, and
potential contributions of key stakeholders. 1 2 3 4 5

C. The conference resulted in realistic action plans
to begin working toward achievement of
the shared vision. 1 2 3 4 5

4. Which future scenario did you work on? Modeling Master Performers

5. What is the probability of your action plan being implemented?

100% 75% 50% 25% 0%

6. What was the major insight you gained from the conference?

We are establishing a new field in gov't out
of many old professions

7. Is there a major change you would make if a conference like this were to be held again?

Manage participants' expectations in
advance of conference

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

high level managers;

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

Explain common ground — why it's important

11. Additional comments:

for manager change

Excellent facilitator kept group moving; ~~and~~ personalities
were difficult to minimize in

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Name (optional) Helly Schneider Stakeholder group: Learning Technol. Users

1. What did you like best about this process?

① That it was scripted & well-organized process ③ Excellent people
④ Good facilitation

2. What did you like least?

The final part sort of fell apart for me - there was so much duplication in the groups that I worry that important

3. How well were the conference objectives met? Well met = 1 ② 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government.

1 ② 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders.

1 ② 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision.

1 2 ③ 4 5

Things may not be covered by groups.

4. Which future scenario did you work on? Retirement Party

5. What is the probability of your action plan being implemented?

100%

75%

50%

25%

0%

6. What was the major insight you gained from the conference?

Some interesting ideas about where we're going and what we have even right now, technologically

7. Is there a major change you would make if a conference like this were to be held again?

Tighten up the ~~map~~ + plans process so that earlier critical

8. Would you be interested in attending a follow-up meeting in 3 to 6 months?

Yes No critical ideas - including those that expected were incorporated

9. Were any important stakeholders missing? Yes No If yes, who were they?

Don't know - maybe some higher level managers

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

Have it out of the city so people could not go back to attend meetings -

11. Additional comments:

Need to have a little more time to plans & get commitments

Overall - excellent

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Name (optional) Mary Bates Stakeholder group: Computer-based training

1. What did you like best about this process?

The networking among people in the same thing that I am doing. The stimulation from excited people.

2. What did you like least?

3. How well were the conference objectives met? Well met = (1) 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government.

(1) 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders.

(1) 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision.

(1) 2 3 4 5

4. Which future scenario did you work on? Interoperability

5. What is the probability of your action plan being implemented?

100%

(75%)

50%

25%

0%

6. What was the major insight you gained from the conference?

All of us are working on the same or similar tasks.

7. Is there a major change you would make if a conference like this were to be held again?

Ended a bit late. I walk through an area that is not really safe after dark.

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No

9. Were any important stakeholders missing? Yes No If yes, who were they?

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

They did an excellent job keeping us on target.

11. Additional comments:

Thanks for inviting me.

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Name (optional) ELEAINE RAND Stakeholder group: LEARNING TECH. USER

1. What did you like best about this process?

ORGANIZATION OF ACTIVITIES WAS SO WELL PLANNED THAT IT MADE IT POSSIBLE FOR ALL OF US TO CONCENTRATE SOLELY ON THE WORK AT HAND.

2. What did you like least?

the future ~~skits~~ ^{skits} piece. Others ^{from other groups} were also uncomfortable. I felt apart from my group & couldn't find a way to get with them (enter in). Ask Lisa Nelson too

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government.

(1) 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders.

1 (2) 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision.

(1) 2 3 4 5

4. Which future scenario did you work on? ~~Partnership & Collaboration~~ Partnership & Collaboration

5. What is the probability of your action plan being implemented?

* (100%) 75% 50% 25% 0%

* Because sps 3, 5 & 7 will work together

6. What was the major insight you gained from the conference?

What great minds in a context can contribute to understanding our future

7. Is there a major change you would make if a conference like this were to be held again?

Redo the future skits part. I do have some ideas - call it interested.

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No

9. Were any important stakeholders missing? Yes No If yes, who were they?

Maybe top managers who would budget for these directions.

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

Wonderful, terrific, excellent & fantastic job! Thanks so much

11. Additional comments:

All above. Also, loved the intellectual stimulation of these educated & experienced people. the catalyst provided stimulated us.

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Name (optional) Roz Gouge Stakeholder group: Academia, Private sector, Associations

1. What did you like best about this process?

Rapid movement through activities

2. What did you like least?

I wished I'd had the white paper earlier. I thought that some difficulty on Wednesday afternoon resulted from lack of common vocabulary.

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. 1 (2) 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 (3) 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 (3) 4 5

4. Which future scenario did you work on? Rip Van Wordon

5. What is the probability of your action plan being implemented?

100% 75% (50%) 25% 0%

6. What was the major insight you gained from the conference?

Existence of databases of information, training, learning technology

7. Is there a major change you would make if a conference like this were to be held again?

Fewer people

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No

9. Were any important stakeholders missing? (Yes) No If yes, who were they?

Adde Suchinsky Ewing - GAO

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

I thought the roles were uneven - i.e. Mary did most of the work.

11. Additional comments:

Considerable momentum generated - I wonder what else we should do to maintain the momentum

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Name (optional) Jeff Seward Stakeholder group: User Group

1. What did you like best about this process? The coming together of the different groups to tackle this area.
2. What did you like least? Too much time spent on "touchy-feely" subjects. Go to concrete problems immediately.
3. How well were the conference objectives met? Well met = 1 2 (3) 4 5 = Not met at all
 - A. The conference produced a shared vision for learning technology in the federal government. 1 2 3 (4) 5
 - B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 (2) 3 4 5
 - C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 3 (4) 5
4. Which future scenario did you work on? Create A System To Identify A Leadership Support System
5. What is the probability of your action plan being implemented?
100% 75% (50%) 25% 0%
6. What was the major insight you gained from the conference? We are all in a state of chaotic flux.
7. Is there a major change you would make if a conference like this were to be held again?
Make it longer with more concrete objectives.
8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No
9. Were any important stakeholders missing? (Yes) No If yes, who were they?
More NO involvement. They are major players.
10. Do you have any comments for the facilitators, to help them improve the next Future Search?
11. Additional comments:

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Name (optional) Bill Totten Stakeholder group: Procurement

1. What did you like best about this process?

The use of 'Future Search'

2. What did you like least?

Task 5A: Developing A Consensus Scenario (Wednesday Afternoon) - very frustrating

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. (1) 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. (1) 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. (1) 2 3 4 5

4. Which future scenario did you work on? Procurement

5. What is the probability of your action plan being implemented?

100% (75%) 50% 25% 0%

6. What was the major insight you gained from the conference?

A World Wide Web ~~site~~ is needed for HRD.

7. Is there a major change you would make if a conference like this were to be held again?

Use an automated tool for voting (see #10)

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No

9. Were any important stakeholders missing? (Yes) No If yes, who were they?

Federal Acquisition Institute

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

Call me @ (202) 501-3823 for info on automated tools to support conferences of this type.

11. Additional comments:

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Name (optional) _____ Stakeholder group: Manager/Staff/Info Res.

1. What did you like best about this process?
Being part of a group coming together on the matter of technology
2. What did you like least?
there didn't seem to be a smooth transition from one day's activity to the next (here's what we did yesterday and here's how today's activity will build on it).
3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all
Let's see when the group comes together again
 - A. The conference produced a shared vision for learning technology in the federal government. 1 2 3 4 5
 - B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 3 4 5
 - C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 (3) 4 5
4. Which future scenario did you work on? Partnership & Collaboration
5. What is the probability of your action plan being implemented?
100% 75% ☒ 50% 25% 0%
6. What was the major insight you gained from the conference?
Involve decision makers at the higher level and use experts to educate and help focus and help shape the future
7. Is there a major change you would make if a conference like this were to be held again?
Use state-of-the-art technology in running the conference
8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No
9. Were any important stakeholders missing? (Yes) No If yes, who were they?
Need more/higher level of management present
10. Do you have any comments for the facilitators, to help them improve the next Future Search?
Use a facility where each participant has a lap-top PC List & rank ideas, thoughts, etc. Use wireless, hand-held mics
11. Additional comments: for questions, feedback, etc.

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Name (optional) Rita Toennies Stakeholder group: private sector

1. What did you like best about this process?

2. What did you like least?

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. 1 (2) 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. (1) 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 (2) 3 4 5

4. Which future scenario did you work on? _____

5. What is the probability of your action plan being implemented?

100%

(75%)

50%

25%

0%

6. What was the major insight you gained from the conference?

7. Is there a major change you would make if a conference like this were to be held again?

conduct some of it "virtually" from offices/homes

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No

9. Were any important stakeholders missing? Yes (No) If yes, who were they?

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

Make certain final document is distributed. Possibly

11. Additional comments:

use Technology to do this such as e-mail / diskette etc.

Learning Technologies: Linking Resources
to Improve Workforce Performance
Future Search Conference: Feedback Form
December 7, 1995

Name (optional) _____

Stakeholder group: _____

Developer/user group

1. What did you like best about this process?

The conference was an opportunity to meet some good contacts working in different areas of learning tech. and to learn their issues & problems.

2. What did you like least?

Facilitators - They forgot that the conference was for us not them. They dismissed the ideas of the group and only cared about the process - they diminished the value of the conference.

3. How well were the conference objectives met?

Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government.

1 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders.

1 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision.

1 2 3 4 5

4. Which future scenario did you work on? _____

5. What is the probability of your action plan being implemented?

100%

75%

50%

25%

0%

6. What was the major insight you gained from the conference?

A wasted opportunity

7. Is there a major change you would make if a conference like this were to be held again?

Stick to objectives, use a little less "game-like, childish approach" - different facilitator who understands their role.

8. Would you be interested in attending a follow-up meeting in 3 to 6 months?

Yes ~~No~~

if structure changed to focus on some tangible results and directed discussions on key issues. - otherwise no

9. Were any important stakeholders missing?

Yes No

If yes, who were they?

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

See above! Basically to "listen" - several people were

11. Additional comments:

ready to leave after 2nd day because conference was not designed to meet objectives. Please, if you use her, tell Dr. Broad - that it's not her conference - it's ours - she is so tied to the process that she wanted an objective for

These are not even the stated "primary objectives" in the conference material

Learning Technologies: Linking Resources
to Improve Workforce Performance
Future Search Conference: Feedback Form
December 7, 1995

Name (optional) Boye Newman Stakeholder group: Private Sector

1. What did you like best about this process? Brought people together & facilitated sharing and communication

2. What did you like least? Day 2 - did not build on results momentum of day 1. Methodology for developing consensus scenarios lost richness and interrelationships among trends -

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. 1 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 3 4 5

4. Which future scenario did you work on? Group 6

5. What is the probability of your action plan being implemented?

100% 75% 50% 25% 0%

6. What was the major insight you gained from the conference? Need for trainers to be an inherent part of strategic planning at highest levels. Training needs to be radically repositioned within agencies to have real impact on performance productivity

7. Is there a major change you would make if a conference like this were to be held again? Yes, in structure & methodology

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

White House

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

Yes - Build on mindmap interest & trends - identify

11. Additional comments:

relationships, hierarchies & clusters of trends & concepts. Focus on a single strategy. develop implementation plans within stakeholder groups. then combine for a general plan of action.

Learning Technologies: Linking Resources
to Improve Workforce Performance
Future Search Conference: Feedback Form
December 7, 1995

Name (optional) _____ Stakeholder group: _____

1. What did you like best about this process?

closure

2. What did you like least?

group too large

3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government. 1 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 3 4 5

4. Which future scenario did you work on? learning tech/perf. improve

5. What is the probability of your action plan being implemented?

100% 75% 50% 25% 0%

6. What was the major insight you gained from the conference?

consensus throughout govt about existence of radical change

7. Is there a major change you would make if a conference like this were to be held again?

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No

9. Were any important stakeholders missing? Yes No If yes, who were they?

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

11. Additional comments:

Learning Technologies: Linking Resources
to Improve Workforce Performance
Future Search Conference: Feedback Form
December 7, 1995

Name (optional) _____ Stakeholder group: _____

1. What did you like best about this process?

meeting w/ others across govt

2. What did you like least?

could have used more breaks!

3. How well were the conference objectives met? Well met = (1) 2 3 4 5 = Not met at all

A. The conference produced a shared vision for learning technology in the federal government.

(1) 2 3 4 5

B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders.

(1) 2 3 4 5

C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision.

1 (2) 3 4 5

4. Which future scenario did you work on? #1

5. What is the probability of your action plan being implemented?

100%

(75%)

50%

25%

0%

6. What was the major insight you gained from the conference?

others have same needs, problems, hopes & dreams

7. Is there a major change you would make if a conference like this were to be held again?

less work on afternoon of 2nd day to allow more time for action plan done last am.

8. Would you be interested in attending a follow-up meeting in 3 to 6 months? (Yes) No

9. Were any important stakeholders missing? Yes No If yes, who were they?

maybe more private sector? more govt agency represented? needed

10. Do you have any comments for the facilitators, to help them improve the next Future Search?

less editing in ideas put on lists!

11. Additional comments:

Learning Technologies: Linking Resources to Improve Workforce Performance

***A Future Search Conference
Sponsored by the Human Resource Development Council
with support from
The President's Management Council
The White House Office of Science and Technology Policy***

Washington DC; December 5-7, 1995

Tentative Agenda

December 5

- | | |
|-----------------------|--|
| 1:00 - 1:45 pm | Welcoming remarks and conference overview |
| 1:45 - 2:15 pm | Participant introductions |
| 2:15 - 3:45 pm | Task 1: Focus on the Past - "Write on the Wall" |
| 3:45 - 5:00 pm | Task 2A: Focus on the Present - External - "Articles" & "MindMap" |

December 6

- | | |
|-------------------------|---|
| 8:30 - 10:15 am | Task 2B: Analysis of the Present - External |
| 10:15 - 11:45 am | Task 3: Focus on the Present - Internal - "Prouds" and "Sorries" |
| 11:45 - 12:45 pm | Lunch |
| 12:45 - 3:00 pm | Task 4: Focus on the Future - Developing Ideal Future Scenarios |
| 3:00 - 5:30 pm | Task 4: Presenting Scenarios; Task 5A: Developing a Consensus Scenario |

December 7

- | | |
|-------------------------------|---|
| 8:30 - 11:15 am | Task 5B: Action-Planning |
| 11:15 - 1:15 pm | Task 5B: Presenting Action Plans (and Box Lunch) |
| 1:15 - 1:45 pm | Comments by Sponsors |
| 1:30 - 2 pm | Evaluation and Close of Conference |
| <u>Post-Conference</u> | Task 6: Implementing Action Plans |

Worksheet 1A: Focus on the Past - Individual Perspectives

Purpose: To create a joint picture of our values and history--our **common ground**.

Guidelines: Time lines on each wall show several time periods. On the time lines, write important events and turning points in those time periods in three categories: personal, global (national and international), and learning technology in the federal government, focus of this conference. This worksheet will help organize your ideas. Then, on the time lines, check (✓) ideas you share, and add your own.

Category	1960-69	1970-79	1980-89	1990-95
Personal				
Learning Technology in the Federal Gov't				
Global (National and Inter- national)				

Worksheet 1B: Focus on the Past - Common Themes

NOTE: Reports are due at _____ p.m.

Purpose: From the time lines, to identify themes and patterns important to "learning technology in the federal government" which establish a context for our shared future.

- Guidelines:**
1. Identify the leader, recorder/reporter, and timekeeper for your group.
 2. Write key points on flip chart pages.
 3. Each group of tables focuses on one time line in relation to the others. Discuss the time lines and prepare a **3-minute** summary report.

Table Assignments:

1. Tables _____:
 - a. Use the **Personal** time line to tell us a story about the people in this room.
 - b. Look at the **Personal** time line in relation to the other two. What patterns do you see?
 - c. Prepare your analysis and report.
2. Tables _____:
 - a. Use the **Global** time line to tell us a story about our recent world history.
 - b. Look at the **Global** time line in relation to the other two. What patterns do you see?
 - c. Prepare your analysis and report.
3. Tables _____:
 - a. Use the **Learning Technology in the Federal Gov't** time line to tell us a story about our community history.
 - b. Look at the **Learning Technology in the Federal Gov't** time line in relation to the other two. What patterns do you see?
 - c. Prepare your analysis and report.

Notes:

**Worksheet 2: Focus on the Present - External
Stakeholders' Important Points on the MindMap**

NOTE: Reports are due at _____ a.m.

Your stakeholder group: _____

Purpose: To analyze present trends, as shown on the MindMap, and identify key trends that we are doing now or want to do in the future, from our stakeholder perspectives.

Guidelines:

1. Select group members for leadership roles.
2. Discuss the MindMap from your group's perspective. What does it mean? What are 2-3 key points or trends?
3. On a flip chart, draw a line down the center.

Label the LEFT side "Doing Now." Label the RIGHT side "Want to Do in Future."

4. List each of your 2-3 key trends and show, for each, what your group is "Doing Now" and what it "Wants to Do in Future."
5. Prepare a **3-minute** report.

Doing Now	Want to Do in Future
Trend	
Trend	
Trend	

Worksheet 3: Focus on the Present - Internal

Stakeholder 'Prouds' and 'Sorries' in our Relationship with Learning Technology in the Federal Government

Purpose: To assess our present relationship to learning technology in the federal government and to other stakeholders.

- Guidelines:**
1. Select group members for leadership roles.
 2. Draw a line down the middle of the flip chart. Label the left side "Prouds" and the right side "Sorries."
 3. On the left, brainstorm a list of things going on NOW that you are very PROUD of in your relationship to learning technology in the federal government. On the right, brainstorm a list of things going on NOW that you are SORRY about in your relationship to learning technology in the federal government. Describe what's happening without blaming or complaining. "Own it, don't moan it."
 4. Select up to 3 '**Proudest Prouds**' and 3 '**Sorriest Sorries.**' Highlight them on a flip chart. Indicate which you want to **continue, improve, change, or eliminate.**
 5. Prepare a **3-minute** report.

Prouds	Sorries

Worksheet 4: Creating an Ideal Future Scenario

Purpose: To imagine the kind of future you would want to work toward for learning technology in the federal government.

- Guidelines:**
1. Put yourself into the future, to the year 2005. Look back to 1995 and DESCRIBE the changes that have taken place for learning technology in the federal government, since this Future Search Conference.
 2. Visualize learning technology in the federal government "now" in the year 2005:
 - How do we work, learn, communicate, function individually and in teams?
 - Where do we stand in performance improvement, collaboration across agencies, customer service, recognition from taxpayers, etc.?
 - How do you describe the aspects of learning technology in the federal government that you know best?
 - List major accomplishments since 1995.
 3. Note the BARRIERS we had to overcome, and how we did it.
 4. Choose a CREATIVE WAY to present your most desirable future:
 - A "60 Minutes" broadcast
 - A televised ceremony at the White House
 - A tour through a new building
 - Home movies
 - Others?

The date is December 7, 2005, and WE ARE THERE. What do we see, hear, feel?

What is the title of your story? Central theme? What is featured about learning technology in the federal government?

5. Dramatize KEY POINTS about your accomplishments and BARRIERS overcome along the way to the future. How did you do it?
 6. TIMEKEEPERS PLEASE NOTE: Each group will have 7 **minutes** for the presentation. Decide how to manage the time or ask for help from outside the group.
- Criteria:**
1. The scenario must dramatize **feasible events** (i.e., people are capable of doing them).
 2. The scenario must be one you **believe in and will work for**.
 3. Do NOT consider cost or difficulty. This is an exercise in **creative dreaming**. Include any dream that is **shared** and **worth working for**.

Worksheet 5B-1: Developing Objectives for Action Plans

Purpose: To define a measurable objective which supports the consensus scenario, for which an action plan will be developed.

Guidelines:

1. Yesterday, in your future search presentations, you dramatized a powerful future scenario for learning technology in the federal government by the year 2005. Now, you are asked to develop a specific objective which will support that scenario.
2. The objective should clearly support turning your future scenario into reality; it should have HIGH IMPACT. It also should be really DOABLE over the next few years, not just an impossible dream.
3. In the space below, write one or two objectives which you will propose for your group's consideration. State the objective in a single sentence, with a title of 5 words or less. The objective should be clearly stated so that the average person can understand it. For example:

Objective: Distance Learning Network: To develop a public sector distance learning network of video and computer-based systems, accessible to all governmental agencies at federal, state, and local levels, with shared facilities, resources, and management.

Proposed objectives:

Worksheet 5B-2: Stakeholder Action Plan to Accomplish Objective

Purpose: To develop a realistic action plan to accomplish the objective which our group selected to support our future scenario.

Guidelines:

1. Clearly state the objective the group has agreed on, with attainable measurable outcomes. What will be your "success indicators," how you (and others) will know you reached your goals?
2. Identify a series of milestones (tasks and due dates) which will reach the objective. Each milestone should be very specific. Indicate the organization/position which will be responsible for each milestone.
3. List the necessary resources for each milestone. Be specific. Resources can include: leadership, funds, staff, facilities, etc. Describe what will be necessary to do to obtain those resources.
4. Describe who will be impacted by your objective. Who are the users, the suppliers? Who will be "winners" and "losers" if your objective becomes a reality?
5. What will be your group's next step to start moving towards your first milestone?
6. Do a quality check: Is the plan complete? Is it clear who will do what by when? Will this really provide strong support for your future scenario? Is it bold enough to have real impact? Can it actually be implemented? Is your group committed to supporting the plan over the next weeks and months?
7. Prepare a **7-minute** presentation of your action plan that covers Steps 1-5.
TIMEKEEPERS: Be sure your group practices its presentation to be sure it can be completed within the allotted time.

***Learning Technologies: Linking Resources
to Improve Workforce Performance***

A Future Search Conference

***Sponsored by the Human Resource Development Council
with support from***

***The President's Management Council
The White House Office of Science and Technology Policy***

Washington DC; December 5-7, 1995

Conference Facilitators

Dr. Mary L. Broad, with *Performance Excellence*, assists organizations through performance technology, strategic planning, improved transfer of learning to the workplace, and human resource development systems. Clients include Vitro Comercial (Mexico), Equifax, Agency for International Development, Lexis-Nexis, Inc., and the Department of Transportation. She retired in 1993 from the Defense Information Systems Agency, as Director of the Human Resource Development (HRD) Division. Her book, *Transfer of Training: Action-Packed Strategies to Ensure High Payoff from Training Investments* (1992, with John Newstrom) is now in its fifth printing. Mary served on the Board of Directors of the American Society for Training and Development for 1993-95, and is an adjunct professor for the HRD graduate program at the George Washington University. She can be reached at 301-657-8638.

Dr. George Peabody is president of Associates for Creative Leadership, Inc., in Washington, DC. With his partner, Major Gen. Benjamin Harrison, USA, he has used LOOKING GLASS, a state-of-the-art simulation, to train about 2,500 middle and upper level executives in business and government. His special interest is in training managers to use more effectively the power they have been given and are expected to use. He conducts a course on "Power & Values" at Georgetown University. Dr. Peabody has designed and conducted training programs in the U.S. and 14 other countries. He has consulted with staffs of both houses of Congress. In 1980, he conducted an organizational analysis of the U.S. House of Representatives, reporting to a bipartisan committee. He can be reached at 202-337-6030.

**Learning Technologies: Linking Resources
to Improve Workforce Performance
Future Search Conference: Feedback Form
December 7, 1995**

Name (optional) _____ Stakeholder group: _____

1. What did you like best about this process?
2. What did you like least?
3. How well were the conference objectives met? Well met = 1 2 3 4 5 = Not met at all
 - A. The conference produced a shared vision for learning technology in the federal government. 1 2 3 4 5
 - B. The conference facilitated a shared understanding of the changing status, roles, responsibilities, and potential contributions of key stakeholders. 1 2 3 4 5
 - C. The conference resulted in realistic action plans to begin working toward achievement of the shared vision. 1 2 3 4 5
4. Which future scenario did you work on? _____
5. What is the probability of your action plan being implemented?
100% 75% 50% 25% 0%
6. What was the major insight you gained from the conference?
7. Is there a major change you would make if a conference like this were to be held again?
8. Would you be interested in attending a follow-up meeting in 3 to 6 months? Yes No
9. Were any important stakeholders missing? Yes No If yes, who were they?
10. Do you have any comments for the facilitators, to help them improve the next Future Search?
11. Additional comments:

'Future Search' Highlights

Adapted by Mary L. Broad from "What is a Future Search Conference?"
by Marvin Weisbord, 4/6/93 (15 pages)

Key Facts

A Future Search Conference:

- Is an evolving research-based design by Marvin Weisbord and Sandra Janoff.
 - Focuses on "A future plan for...(an organization, community, or issue, o/c/i)."
 - Brings together 30-80 people who are stakeholders in that future plan.
 - Includes both "insiders" of the o/c/i and "outsiders" (about 1/3 of the total group) who care about its future.
 - Helps all stakeholders achieve breakthroughs and synergy, to find and build on their common ground instead of focusing on what divides them.
 - Develops consensus among the stakeholders, during 16 hours of structured work across three days, on action plans to reach mutually desired outcomes.
-

Important Factors

The Future Search Conference will be more effective if:

- It occurs at a time when the o/c/i is in a critical transition period.
 - The Planning Committee represents major stakeholders and includes decision-makers.
 - Top managers or community leaders participate in the conference with determination that it be successful.
 - Participants manage their own generation of information, analysis, and planning.
 - Stakeholders focus broadly on opportunities, not narrowly on current problems.
 - Conference facilitators manage and support the process, not the product.
-

Assumptions About Stakeholders

A Future Search Conference does **not** involve speeches, panel discussions, presentations, or efforts to resolve difficult problems between participants. Instead, it assumes that stakeholders who commit to attend the full conference:

- Bring the skills, knowledge, and experience necessary to plan effectively;
 - Have probably not had the chance to work closely with other stakeholders;
 - Share many basic common **values** and the willingness to **take responsibility and act** to help design and attain the desired future;
 - Recognize that there are no easy solutions to system problems;
 - "Can bridge lines of culture, class, gender, ethnicity, power, status and hierarchy *if* they work as peers on tasks of mutual concern." (Weisbord, p. 1)
-

Continued, over

Highlights of Future Search (continued)

The Agenda

The typical Future Search agenda consists of five essential tasks:

- Task 1: Defining the *Past* of Society, Self, and the o/c/i.
- Task 2: Defining the *Present*: Trends affecting the o/c/i.
- Task 3: Exploring the *Present*: "Prouds" and "Sorries" about us and the o/c/i.
- Task 4: Developing *ideal future scenarios* for the o/c/i.
- Task 5: Building a *consensus scenario* and *action-planning* for next steps.

Desirable Conditions

There are six important conditions which contribute to the Search's learning, breakthroughs, and voluntary teamwork:

1. Explore the entire **"open system,"** trends and impacts **within** the o/c/i and the **outside world** of society as a whole.
2. Rely on **peer participation** for tasks and roles, self-managed small groups in which all share and interpret information and decide on action steps, to promote discovery, individual and group learning, and voluntary cooperation.
3. Focus on the **future** rather than solve current problems, to stimulate action-planning.
4. Include a **broad spectrum** of viewpoints so that all develop a new vision of the whole. Ensure that participants commit to the **entire 16-hour experience**; no drop-outs or drop-ins. If the task involves an organization's future, representatives of a **"diagonal slice"** of the organization should be present. Also, be sure that both internal and external stakeholders have the **authority** to commit their constituencies to follow through on the actions that are planned.
5. Follow the basic **structure**: 16-19 hours of work across a minimum of 48 hours over three days; this allows the spacing of learning, the "soak time," that helps participants hear each other's views and develop new ideas together. (Typical schedule: afternoon of Day 1, full day on Day 2, closing the early afternoon of Day 3.)
6. **Healthy conditions**: a large open room with many windows, good wall space for many flipcharts, healthy snacks and lunches.

Primary Reference

The best reference is *Future Search: An Action Guide to Finding Common Ground in Organizations & Communities* by Marvin Weisbord and Sandra Janoff, San Francisco: Berrett-Koehler Publishers, Inc., 1992. (415-288-0260, \$24.95)