Access and Innovation: Partnering to Train Professional Workforce Educators

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Capitalizing on innovative technologies, effective partnerships, and a nationally unique curriculum, Virginia's Workforce Improvement Network, based at James Madison University, provides quality anytime, anywhere certification opportunities to professional workforce educators. This presentation will demonstrate the online system, challenges of its implementation, and strategies for delivering online training to workforce educators.
At no other time in history have critical stakeholders in the American workforce been so capable of creating, and so in need of accessing, a comprehensive delivery mechanism for widespread, quality, context-specific, anytime, anywhere education. The success of this workforce depends on the availability of and access to such learning opportunities. Demands for adult education, literacy programs, and professional workforce developers already far exceed the available supply from state and local agencies. Low unemployment rates, the lack of a comprehensive educational delivery system and an inability to capitalize on the opportunities afforded by new technologies available to the workforce system exacerbate these demands.

Challenges Faced by Workforce Educators
The Workforce Investment Act (WIA) of 1988 requires every state in the nation to develop an effective workforce improvement network and to foster a work-first culture. States and local agencies are responsible for streamlining workforce systems, providing flexible, inclusive and universal access to instruction, empowering individuals in learning, and working together to account for and report on work-first initiatives. Each state must not only develop an infrastructure for these networks but also design and develop curricula to meet the specific needs of their state’s workforce. Fortunately, new technology and new partnerships enable local, state and national agencies to address these responsibilities.

The partnership of James Madison University, Virginia’s Workforce Improvement Network (WIN), and the GTE Links Virginia for Literacy project, is broadening past investments in educational opportunities for adult educators teaching learners within a work environment. These workforce educators are public or private adult educators involved with school-to-work and welfare-to-work transition programs, Workforce Investment Act professionals, community college personnel, public school educators working with employers, and managers/supervisors or trainers of employees.

Capitalizing on opportunities afforded by distance learning technologies, the partners have developed quality professional development options for workforce educators by creating a virtual campus that offers certified workforce learning instruction. To date, a unique curriculum of seven workforce learning topics, consisting of 29 instructional modules for online delivery that will prepare workforce educators to teach adult learners, has been developed and will be delivered via the Workforce Development Campus (WDC). In addition, three online assessments have been created that evaluate content expertise, technical literacy, and anticipated success in online learning environments. This workforce learning certification program is delivered via CourseInfo©, by BlackBoard, Inc., one of the distance learning systems available through James Madison University.

Instructors of the Workforce Development Campus will actively train professional workforce educators to develop workplace programs and curricular materials. The American workforce, in need of basic literacy skills, will benefit from training conducted with employer-specific materials in foundational skills like reading, writing, math, problem solving, interpersonal communications, critical thinking, English as a Second Language (ESL), and GED. WDC-trained workforce educators may eventually serve as workplace evaluators, program or curriculum developers, consultants,
welfare-to-work and prison-to-work transition providers, instructors, trainers and literacy-training volunteers.

**The Partners**

**James Madison University** is the lead partner in the creation of the Workforce Development Campus and its online offerings. JMU has a long tradition of providing services to constituencies throughout the Commonwealth of Virginia and engaging in partnerships with schools, corporations, industry and public agencies.

The **Workforce Improvement Network of Virginia** is a statewide educational consortium focused on workforce improvement and adult education. WIN, funded by the Office of Adult Education of the Virginia Department of Education, is a partnership between James Madison University and the Virginia Literacy Foundation. WIN includes four institutions of higher education and 28 local public adult education and literacy providers in the Commonwealth of Virginia. WIN identifies and continuously prepares a growing cadre of competent professionals to respond to the needs of employers and employees.

The **GTE Links Virginia for Literacy project** was a collaborative effort of James Madison University, George Mason University, Old Dominion University, Virginia Commonwealth University, and the National Institute for Literacy (NIFL) to harness the power of technology to advance basic skills and workforce development throughout the Commonwealth. Initiated in March 1998 by a generous one-time gift of the Virginia GTE Corporation, the universities worked in partnership to respond to workforce literacy needs consistent with the requirements of their local area and the expertise brought by each institution. The National Institute for Literacy provided vision and direction particularly through LINCS, (Literacy Information and Communication System) bringing a national perspective to the work.

The project concluded in June 2000 with a meeting of key Virginia business and education leaders and GTE executives to share the results and plan for the future. Some of the results of the project include a curriculum for moving learners from welfare or unemployment to work; a graphically-enhance website entitled GED, JOBS and BEYOND, designed for the less-literate population seeking education, skills and employment; the establishment several state-of-the-art computer labs for use by adult programs throughout the state and the Workforce Development Campus.

Other key associations include:

The **National Adult Education Professional Development Consortium, Inc. (NAEPDC)**, a consortium of State Directors of Adult Education, and the United States Department of Education, provides an avenue for informing adult educators about the Workforce Development Campus and promoting the value of certification nationwide.

The **Electronic Campus of Virginia (ECVA)**, which represents 19 public and private institutions across the Commonwealth of Virginia, may also provide a venue for the delivery of WDC curriculum to potential workforce educators and serve as the test model for developing transparent, statewide certification and accreditation paths.

**Transformation of Course Content**

Longstanding relationships between the partners and a solid, existing face-to-face curriculum, the Workforce Improvement Network’s Facilitator Guide, provided the
foundation for development of online learning opportunities. The development team, which was comprised of an instructional technologist and a subject matter expert (SME), was charged with the task of transforming the existing curriculum of the Workforce Improvement Network from a traditional to an electronic learning environment. Though the team initially anticipated a simple translation of the Facilitator’s Guide, the process of conversion really became a transformation process, leading to the development of a distinctly different curriculum that would address a change in audience.

**The Learning Audience**

The existing Facilitator’s Guide, containing topics, modules, activities, and resources, was a compilation of many previously published materials collected into one source for use by WIN facilitators in preparing and delivering workshops. This compilation served as the foundation from which the instructional content of the Workforce Development Campus (WDC) emerged. These materials could be classified as train-the-trainer content since the original audience was WIN facilitators charged with instructing adult educators in the Commonwealth of Virginia. This comprehensive curriculum was already effective at local and state levels and was consistent with WIA (Workforce Improvement Act) goals.

The WDC audience, however, encompasses learners, not facilitators, who are or who want to be involved with workforce education. These learners could be adult educators in public programs, human resource development professionals in business and industry, and community college educators from anywhere that has an Internet connection. Since the audience changed significantly, one of the first tasks of designing the instructional modules was to change the focus of the instruction from train-the-trainer to learner-centered instruction.

**Workforce Learning Content (7 topics totaling 29 modules)**

The design of the Workforce Learning curriculum recognizes the diversity of workforce educators and the need to design and manage training at a local level where individual learners and workplace needs are best understood. The curricula is built around 29 specific modules within seven broad topic areas dealing with workplace education: Introduction to Workforce Education, Marketing Workplace Education Programs, Planning and Designing Workplace Programs, Organizational Assessment in Workforce Education, Curriculum Development in Workforce Education, Instruction in Workforce Education Programs, and Program Evaluation in Workplace Education. Each instructional module within these topics is designed to model effective adult-learning practice and principles and to encourage dialogue and active learning. These components form the basis for certification.

Course materials are designed for flexibility and responsiveness when providing professional development offerings to current or potential workforce educators. Within the curriculum, instructors are able to custom-design professional development options to meet specific learner needs. Online modules contain activities that meet varied instructor objectives and learner needs. The curriculum is designed to balance skill practice and functional context learning, fostering learner control, motivation, empowerment and opportunities to explore personal learning strategies and methodologies.

The transformation of the existing content from a collection of instructor’s materials for face-to-face workshops to online content for learners was time consuming
and complex. In addition to adapting the content for an audience of learners rather than instructors, a second level of transformation involved the material itself. The compilers of the original content chose the term “module” to indicate that the units of instruction within a topic were modular and could be re-arranged depending on the facilitator’s intentions. The modules contained activities and resources. The resources were documents necessary for the completion of some, but not all, activities. Many of the resources were presented as overheads. Since the overheads only listed major points, additional material and background would be filled in by the facilitator’s commentary as the overhead was being displayed.

Original materials were not intended to be used in their entirety, but to provide an outline for the workshop facilitators who would draw on their personal experiences to lead the workshops using any of the activities and resources from any of the broad topic areas in the guide as supplements. For example, a workshop leader might immediately sense by the looks on the faces of the participants or by the types of questions they were asking that an activity in a particular topic was not proceeding as planned or that the participants were lacking a fundamental piece of knowledge required to understand the activity. The leader could then stop the action, verbally explain what needed to be done, or pull out an additional resource, which may come from an entirely different topic area, and present it to the workshop members.

This ebb and flow of information presentation, which changed direction, as needed, is characteristic of face-to-face instruction and meets the needs of learners in this context. The organization of the original instructor’s guide reflect the fluidity of the instructional process for these workshops in that the facilitators could pick and choose what activities and resources they needed. Therefore, the materials were largely self-contained and independent of one another. Since the facilitator was available to give a context to the topics and modules, it was not necessary to provide any textual description about how the materials were intended to work together to create a unified instructional experience.

The content and organization of the original guide was not appropriate for online instruction because the fluid approach to the face-to-face workshops, which is centered squarely on the experience and perceptions of the facilitator, is difficult to reproduce in an asynchronous online environment. Since the facilitator’s live presence is absent in the virtual classroom, the instructional design and content of the WDC materials had to provide the background and context for the activities. A framework for each topic also had to be developed and supported; otherwise, the learners, working on their own at home, would lose sense of the “big picture” of where and why they are engaging in a particular activity. Because of the changed audience and the demands of online learning, the subject matter expert essentially re-generated the entire corpus of existing materials to meet the instructional needs of the web-based learner whose background in workforce education was unknown and whose questions and concerns had to be anticipated and answered in the online content. Rather than a “conversion” or even an “adaptation,” the process of migrating the original content to WDC content could more accurately be described as a massive rendering of the original. The WIN materials acted as the foundation, but the resulting structure differs fundamentally not only in its delivery but also in its materials, design, and emphasis.
Pre-assessments Necessary for the Individualization of Instruction

Three assessments were developed to individualize instruction for the instructors who will manage the WDC topics and for the educators who will access the instruction online. The learners will take several pre-course surveys that will assess their technical skills, learning preferences, and their background experiences in workforce education. Learners will be queried as to their learning preferences to determine whether or not they are likely candidates for online instruction. If not, they may be encouraged to pursue alternate methods of instruction rather than participate in the online certification program. Based on the results of the pre-course assessments, learners and instructors were to be asked to take a tutorial on technical skills that was appropriate for their skill level. WDC staff would review the results of the assessment on background experience and establish which topics the learners should access.

Two tutorials were developed which present instructions on how to use CourseInfo© from an instructor’s and a student’s point of view. An additional tutorial was to have been developed which covered the basics of computer use and Internet navigation, for example, providing instructions on how to cut and paste and how to make a bookmark or favorite. Unfortunately, due to time and manpower constraints, only the student’s and instructor’s tutorials on how to use CourseInfo© were completed. The tutorial for basic computer and Internet skills has not been developed.

Certification

A number of options are available for receiving Workforce Learning Certification or college credit depending on the educators' experiences, the state where they live, and whether or not they are degree or non-degree seeking students.

Any WDC learner must be enrolled as either a degree or non-degree seeking student at James Madison University, the host site for WDC.

Educators who are both Virginia residents or are employed in Virginia and are non-degree seeking students are eligible to receive Workforce Improvement Network certification. Virginia’s Workforce Improvement Network will work with other workforce improvement network initiatives throughout the nation to accredit the WDC certification in other states. In the near future, potential workforce educators who are degree seeking JMU students can receive JMU college credit for WDC topics regardless of their state residency.

Educators who are non-degree seeking JMU students residing in any state can receive the Workforce Learning Certification from JMU for taking any number of WDC topics according to a prescribed plan of study developed for them by the WDC faculty.

When any non-degree seeking educators enroll in the WDC, those learners will be asked to take a survey that assesses their experiences in workforce education. A WDC faculty member will review the educators’ experiences, as recorded in the survey, and develop an individualized plan of study for that learner. This plan of study will list which topics the educators will need to complete in order to receive certification or credit.

Educators who successfully complete their plan of study will receive Workforce Learning Certification from James Madison University.

Technical Aspects: Using CourseInfo©

While adapting the original guide to an online environment, the development team also grappled with providing technically inexperienced learners with enough
information to navigate efficiently in the Web environment via CourseInfo©. Although CourseInfo© has a fairly intuitive interface, in preliminary learner needs assessments, it was discovered that novice users, like the WDC learners, were easily confused and disoriented using this online medium. Therefore, specific navigational guidance had to be integrated into every element of the instructional material. Each topic area contains information on how to save, print, and submit resources. Directions are also provided on how to access a link and when and where to select the “back” option. Though these instructions may seem redundant and unnecessary, users reinforced the need for repetitive and specific instructions at several presentations and workshops. The philosophy was adapted that if a user knew how to perform certain functions, for example, how to send an attachment, then he or she could ignore the instructions, but if guidance was needed, it was available. Non-technical language and consistency was a key concern in the development of user-friendly guidance.

In initial meetings, the development team spent hours reviewing the Facilitator’s Guide and discussing what approach to take when presenting the materials online. Although these meetings were time consuming, they were critical to success as they allowed the team to understand each other’s educational philosophies and to develop a common language. Fortunately, the team had a commitment to interactive learning, providing discovery learning precepts, and empowering the learner to create his or her own meaning through the development of learning communities (Bruner, 1971).

Since each online topic is taken as a separate, independent course, learners could not move from one topic to another, as was the case in the original, face-to-face delivery. The online topics present a tighter framework than the original guide and can be taken out of order. The instructional modules, however, within each WDC topic area are presented generatively, i.e., information from the preceding module is necessary for a complete understanding of the module that follows. The materials generate information from one step to another.

Each module, when appropriate, has activities where the learners:

- Review information in Resources or questions.
- Respond to questions that make them think about the information in terms of their needs, prior knowledge, and interests.
- Search for more information on the Web.
- Work individually or in groups, when appropriate, to apply or synthesize the information.
- Use the discussion board provided in CourseInfo to discuss the learner’s or group’s findings, responses, conclusions, or opinions with the rest of the class.
- When asked, join with all classmates to come to a class consensus on certain issues.

Not every activity within each module follows the structure outlined in these steps, but the overall framework is followed in every module.

An organizational framework using CourseInfo©’s folder/document system was developed that relied on the fewest number of clicks while at same time presenting a clean interface within the constraints of the delivery system. Once that organization was determined, it was repeated for each of the other seven topics. In addition, the development team tried to make sure that once each topic was ready to go online that it would not be changed. Changing any information in a topic once it was online often
involved multiple steps. Unfortunately, as with any development project, revisions still had to be made. The team spent hours working in CourseInfo© to update materials and keep all of the text and formatting consistent across the seven topics. For example, when it was decided to change a definition in the introductory material about terms used in the topics, all seven topics had to be accessed, opened, and changed. In other instances, when a resource was changed, the original file had to be updated in Word, the CourseInfo© topic had to be opened, the course document opened, the file re-uploaded, and the link renamed. Therefore, a critical aspect of creating these materials was making sure that they were as complete and as correct as possible before they were put into the CourseInfo© format; otherwise, hours of production time could be wasted making revisions.

**Training of Instructors**

With help from all partners, the development team conducted a two-day workshop for eight instructors interested in teaching in the Workforce Development Campus. This was a somewhat politically complex task since several of the workshop attendants had key roles in compiling the original guide, which was now just one of several resources used to create the WDC curriculum. After learning about the process and the need for providing flexible online opportunities to more potential workforce educators, the original compilers understood the WDC to be a different product.

In twelve hours of training over the course of two days, the instructors were instructed through a combination of demonstration and hands-on activities. These users were, as a whole, inexperienced with the Web and basics such as file saving and sending attachments. Those with a little more computer and Internet background than others were called upon to help their less computer literate colleagues. The workshop participants also provided the development team with feedback on the WDC content as well as on technical issues. The most frustrating aspect of the workshop for the attendees was learning how to use the discussion board and the virtual chat.

**Team Dynamics**

The development team had an excellent working relationship. They are both advocates of learner-centered instruction, believe in the creation of knowledge through learning communities (Bruner, 1971), and have a healthy understanding of the promises and drawbacks of online instruction. The other individuals involved with the project were the project manager, the Director of the Workforce Improvement Network, and program support personnel. The development team was sometimes confused about the direction of the project, which led to several reiterations of WDC materials. However, after several meetings between the development team and the project manager, these misunderstandings were resolved. The difficulty in moving from a vision to a product reinforces the importance of continued assessment of the project mission, verbal communication, and written documents that are updated throughout the life of the project and shared with all members of the production team.

**Using CourseInfo©**

The primary benefit of using CourseInfo© is that it is accessible to any one who has an Internet connection. Instructors who want to create courses online do not have to buy or download special software as long as the institution with which they are associated has bought a site license. Course creators do not have to know html or any programming
language in order to put a class online using CourseInfo©. However, knowledge of basic html tags for formatting text and creating links would be helpful in making the online text more readable and manageable. This online delivery system also allows course builders to make basic changes in the look of their site by changing the colors and shapes of buttons and by uploading banners with images. Any user with intermediate Web and computer skills can learn to use CourseInfo©. The threaded discussion board is a nice feature, which allows for archiving and for the submission of attachments. The group feature is also useful because small groups have access to their own file transfer, discussion board, chat, and email options. These options promote small group work and interaction.

The drawbacks to this delivery system are that the course designer has to work within the CourseInfo© interface, a situation that does not always lend itself to sound instructional design. The online manual is cumbersome and sketchy; it does not present the level of information necessary to fully grasp the capabilities of the program. CourseInfo© also does not provide file management capabilities. For example, student work must be organized in folders outside of CourseInfo© as there is no function for gathering student submissions into individualized folders. For an instructor whose courses are already extant in many other online systems, migration to CourseInfo© is very tedious and must be performed by copying and pasting. Novice users tend to be confused and overwhelmed by the interface. Because of the folder/document metaphor, a course builder must plan very carefully before putting any materials into the interface. If instructors find that they have five or six documents that would be better organized into one folder, each document must be recreated in the folder since there is no method of migrating documents into folders. In version 4.09, the email system and the chat room are the weakest components of CourseInfo©. Attachments cannot be sent, mail cannot be received, and there is no sent box in the email housed within the CourseInfo© environment. The virtual chat is extremely limited and has several bugs that need to be resolved by Blackboard Inc. before this option can be a useful instructional tool.

**The Future**

With the completion of the online *Workforce Learning* curriculum, the subject matter expert in the development team will teach two pilot offerings this fall. The first offering will be taught to WDC instructors, to evaluate topic content, train the WDC instructors and suggest redesign needs for all WDC offerings. In late fall, the first *Workforce Learning* topic, Introduction to Workforce Education, will be taught to actual students in four states. All WDC instructors will audit this offering. In addition, WIN will work with James Madison University to map credit and certification paths for workforce educators and establish accreditation/certification relationships with other workforce improvement initiatives in other states. The full certification program will be offered in spring of 2001 and the certification program will be marketed to adult/workforce organizations throughout the nation. JMU faculty will assess the quality of the *Workforce Learning* curriculum in addition to reviewing the program performance of WDC learners.

**Lessons Learned**

Visions are moving targets that are difficult to produce. Frequent revisits at all levels of the partnership to the project vision, mission and goals is critical to a successful
operation. Communicating this vision, and what parts of the vision can be accomplished because of time, resources, and staffing period is also critical. Ongoing conversation between key decision-makers about what is possible must be maintained. In addition, all team members must have an equal and active voice in decision-making, as they are closest to the work and most able to articulate progress, impending issues and can best provide accurate time estimates.

Most partners experience a technology learning curve. Education about technology, its potential, and its integration into the teaching and learning process is mandatory. Education about technology for content experts and training in the use of the system for all instructors should be integrated into the project life cycle. In addition, education about the management of technology projects is a critical component of the project partnership. All partners must have a clear understanding of the time needed to produce, change, and assess online instruction. Developing this understanding takes time. Success is more likely if the technology savvy partners invest time in continually reiterating the issues of online delivery and management. A lack of communication around these issues can be costly and could potentially derail the effort.

Design of instructional technology is a collaborative process and requires a communal language and a more than cursory understanding of the expertise of the partners. All partners, and staffing at all levels, must be proactive in making the design process collaborative, seeking to understand each other’s discipline and goals, and seeking to define terms for an open, accessible exchange of knowledge and ideas.

**Summary**

The promise of technology is great yet the costs of technology are high. In the end, the results have the potential to transform current practice in significant ways. Taking advantage of the promise requires a tolerance of ambiguity, teamwork, vision, talent and the willingness to take risks. Using technology to create access and opportunity for lower-skilled workers and the professionals who teach them must be pursued for the American workforce to remain vibrant. Learning at work is increasingly the norm for executives, managers, supervisors and technicians. The investment in worker learning requires advocacy and creativity. Technology and the on-line mediums it makes available provide the greatest resource for providing quality learning at work for all workers, regardless of previous educational experience. The Workforce Development Campus is a small step in the investment in the largest population in America, the non-managerial employee.

Expanding the WDC campus to its fullest potential will require continued investments of time, talent, expertise and financial resources not often made available to adult and literacy educators. Through the generous support of GTE and the continued support of the Verizon Foundation and workforce educators throughout the country, the Workforce Development Campus will continue to grow and evolve.