ED 441 157                                              CE 080 183

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TITLE           Use of the World Wide Web for Completion of Required Courses
                in Vocational Teacher Certification.
PUB DATE        1997-11-00
NOTE            11p.; Paper published in "Good Thinking, Good Practice:
                Research Perspectives on Learning and Work"
                (ISBN-0-86857-791-X) and presented at the Annual
                International Conference on Post-Compulsory Education and
                Training (5th, Brisbane, Australia, November 26-28, 1997).
PUB TYPE        Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE      MF01/PC01 Plus Postage.
DESCRIPTORS     Access to Education; Adult Students; College Programs;
                Continuing Education; *Distance Education; Educational
                Attitudes; Educational Practices; Higher Education;
                *Inservice Teacher Education; Nontraditional Education;
                Nontraditional Students; *Student Attitudes; Student College
                Relationship; Student Motivation; Student Personnel
                Services; *Teaching Methods; *Vocational Education Teachers;
                *World Wide Web
IDENTIFIERS     Online Courses; *University of Central Florida

ABSTRACT
                Vocational education teachers in the areas of trade and
industry, health occupations, and vocational business education can be hired
without a bachelor's degree in Florida, provided they have at least 6 years
of experience in their occupational field. However, these teachers must
become certified by taking a prescribed number of courses within 2 years of
their hiring. Since 1996, all undergraduate and graduate courses for this
program have been offered by the University of Central Florida solely on the
Internet/World Wide Web. Offering courses solely on the Web presents many
challenges, such as training, access, time management, e-mail accounts, word
processing, and Web skills. Strategies for training students and faculty must
be developed and an infrastructure established and maintained. Support
systems for adult learners involved in using the Web are also necessary.
Initial survey results from students involved in the courses describe
proposed levels of participation in Web-based courses, just as students would
describe participation in in-person traditional course meetings. (Contains 36
references: 12 books, 14 web sites, and 10 search engines). (KC)

# Use of the World Wide Web for completion of required courses in vocational teacher certification

Paper presented at the
5th Annual International Conference on Post-compulsory Education and Training

Good Thinking - Good Practice: Research perspectives on learning and work

GR₄FFITH UNIVERSITY
CENTRE FOR LEARNING AND WORK RESEARCH

Brisbane, Australia November 26-28th, 1997

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**Authors biographies:**
Larry Hudson, Ph.D., is an Associate Professor in Vocational Education & has taught over 40 complete courses since 1979 using one or more distance education technologies. He has over 60 publications & presentations combined & has been awarded over $300,000.00 in grants using distance education. He is currently teaching his 9th & 10th courses within a year using the Web only.

Sue Halfhill is currently a doctoral candidate, having completed all courses & working on her dissertation, in Curriculum & Instruction. Her educational background is in International Affairs & computer science. She has an interest in adult learners & distance education, incentives for faculty & interactive techniques as she is also the distance learning coordinator for UCF--Brevard Campus in Cocoa.

Julie Palmer is a freshman UCF student in the Lead Scholars program. This semester she is working with two faculty assisting adult learners in Web courses, as described in this paper.

Linda Greer is a doctoral student in Curriculum & Instruction who does tutoring via the Web. She has a long time interest in adult learners & is currently completing courses on the Web.

Charles Raquet is an adult learner & masters student in the Vocational Education program & is completing a graduate internship as a "Web intern" this semester. He has completed five courses via the Web.

Robert Paugh, Ed.D., is Associate Professor in Vocational education & has been using distance education technologies since 1984. He is very skilled in use of the Web & has developed several courses solely using the Web. He is the official "Webmaster" for the Program.

**Abstract**
Mandated continuing education presents a challenge for vocational education teachers in post-secondary education This paper describes use of the Web for course delivery to adult full-time workers enrolled part-time in courses.

Use of distance education technologies is not a new solution. The Internet/Web as means of communication is fast becoming one of the answers for increased access and completion of courses & even degrees.

Since 1984 all graduate courses in this program have been offered via one or more distance education technologies. Beginning in the summer 1996 all undergraduate and graduate courses in this program have been offered solely on the Internet/Web. Offering courses solely on the Web presents many challenges: training, access, time management, e-mail accounts, word processing and Web skills. Strategies for training students and faculty must be developed and an infrastructure established and maintained. Support systems for adult learners involved using the Web are also necessary.

Initial survey results from student feedback are included. These responses describe proposed levels of participation in Web based courses, much as one would describe participation in in-person traditional course meetings.

**Vocational teacher certification**
In Florida, as in many other states, and countries there are mandated requirements for certification of teachers. (Florida Statutes, Supplement 1996, CHAPTER 231: PERSONNEL OF SCHOOL SYSTEM, 231.02 Qualifications of personnel, http://www.scri.fsu.edu/fla-leg/statutes/1996/CHAPTER_231.html)

Vocational education or occupational teachers are no exception. The term career education is used in Florida (Florida Statutes, Full Volume 1995, CHAPTER 239: TECHNOLOGY, CAREER, AND CONTINUING EDUCATION, http://home.snap.com/main/door/0,1,home-home,00,46.html)

However, for a specific group of career education teachers, requirements are a little different. It is this group of so called "non-degreed" teachers which is described in this paper. Non-degreed, in Florida, means only that a Bachelor's degree is not required to be hired as a full time teacher. This does not mean that one cannot have a bachelors degree or higher, only that a Bachelors degree is not a requirement as it is for entry into other areas of teaching.

Three broad areas are targeted :
Trade & industrial
Health occupations
Vocational Business Education

Trade & Industrial includes cosmetology to welding, auto mechanics to electrical & several so-called "hard" fields in between. Health occupations includes health services areas such as paramedic to dental assistants, home health aides to practical nurses. Vocational business education includes office occupations and users of data processing to software package training.

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Certification covers the public school sector only the K-12 system and does not generally include community college instructors. Most of the teachers are hired for middle school (grades 6-8), high school (grades 9-12), technical centers, and recently have begun serving vocational education teachers in Corrections facilities around the state.

Beyond the areas and schools, hiring is a requirement for certification. Certification becomes an issue when a person is hired as a full-time teacher, not part time or substitute teaching. Additionally, certification is a requirement at the school district level, primarily because school districts were given this responsibility by state legislation. Generally, school districts follow similar plans for the initial certification of these new teachers, including completion of mandated courses offered through universities and within a two year period.

**Target group**
In our situation the target group is the newly hired full-time vocational (career) education teacher who just came from industry. The primary requirement for hiring a full-time vocational education teacher is six years of full-time work experience in industry. As one can expect, the years of experience varies from six to 40+ years of experience.

The age then is varied also. Making this a group of "typical" adult learners. The word typical is in quotes because as we know, there really is no such person as a typical adult learner, only adults with some similar characteristics. This bit of prose might well describe this group and some of their students also.

**The non-traditional.**

They call me non-traditional-- I often wonder why.
Is it because I'm different or are they afraid to see
the individual within-- the real me?

There are some things about me you should know.
I am a bit older--at that in-between age.
I could be a parent or just a responsible adult.
Maybe I'm changing directions in life--
it happens to each of us.

This is also me--the non-traditional.
I have no time for nonsense because I have a goal.
Run-arounds I can't tolerate, as I have a life to lead.
Working is necessary, so time is very precious.
Motivated I am; be prepared for me.

I have a right to be here and the will to succeed.
I am doing something different;
it is my life you see.
Is it because I have my goal and you don't think I should?
Am I the non-traditional or are you afraid to see--
that next week or next year you could be me?

Maybe, when we really know each other,
there won't be a non-traditional.

*L. Robert Hudson*

The above prose was written for adults returning to college or even attending for the very first time. Maybe, just maybe that describes you. This describes many students in our courses.

Knowing some of the characteristics about our adult learners is so important; they have chosen to be here and can choose to leave. In our situation the use of the Web is also a requirement and the only means of completing coursework required to acquire permanent teacher certification and maintain their jobs as teachers. Of importance is this fact. In the traditional description of adult learners they can "walk with their feet;" that is they do not have to come back. These students have to be here! The here is somewhat illusionary because there is no "here" or place, as in a room or specific time for class. And, if they walk with their fingers we will just not hear from them! This is still a loss, for us and especially to the students in their classrooms.

**Using the Web**

Imagine this, you have just been hired to teach full-time and were told that there are some university courses which you have to pay for & complete within a two year period or you will not be fully certified. And by the way call this number because the courses are only offered through the Internet on the Web. A bit traumatic, if you are new to this technology, do not have a computer at home and live in a rural area.

This can look like four courses in one:

computers in general,
word processing,
the Internet with e-mail & Web, &
the content of teaching itself.

This can be pretty intimidating for a new teacher with no teaching preparation & a room full of students. The use of the Web is the best means of serving this diverse, by background, location, and numbers by site. It is impossible to offer courses to small numbers at multiple sites. Then we should talk schedules—days, evenings, weekends all people with full lives and not much time for themselves.

All considerations included the Web really is an efficient and personal choice. It is efficient because neither the students or the teachers have to be "on-line" at the same time or the same place and personal because people tend to share more personal comments than they would in-person and have time to think about participation & answers before actually contributing to class.

**Survey results**

During each Web course an "Activity feedback" electronic form is completed. This provides the teacher with information about challenges of completion and offers the student a chance to make suggestions for change, either for the next activity or next time the courses is offered.

1. How much time did you take to complete this activity?
2. Were the activity directions clear?
3. How would you improve the directions?
4. What was the most useful aspect of this activity?
5. What was the least useful aspect of this activity?
6. What technical problems (if any) did you have completing this activity?
7. How did you resolve the problems(s) you described in number 6 above?
8. What academic or content problems (if any) did you have completing this activity?
9. How did you resolve the problem(s) you described in number 8?
10. Were the learning objectives stated on the Web page for this activity met through the assignment?
11. Please fill in any additional comments you would like to include for this evaluation.

Additionally at the end of each Web based course an overall "Course evaluation" is offered electronically. This becomes the official instructor evaluation and suggestions for improvement in a summative format. Although not included here, a section of this evaluation targets interaction.

Validating the effectiveness of the Web for serving these full-time teachers a pilot survey was completed in a spring course. The focus was on levels of interaction because it was hypothesized that there would be similar levels of interaction within a Web course as one would observe in a traditional in-person classroom. Interaction was also of interest because of the target group—adult learners. This group prefers participatory techniques and does not generally like being "lectured" at either in-person or on the Web.

To compare results by type of interaction the following access strategies were analyzed.

Electronic mail:
The range of average number of times per week you sent or received e-mail to or from instructor or other students was from 0-20. The range of average number of times per week you accessed Web sites was 0-30.

Use of an asynchronous class Forum as a class discussion was assessed also. This is where students can post items for discussion and provide answers requested by the instructor.

Discussing class issues on the Class Forum is important to me in my Internet class. Of the 52 students 47 respondedd

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Disagree | 3 | 6.4 | 6.4 | 6.4 |
|  | Agree | 20 | 42.6 | 42.6 | 48.9 |
|  | Strongly Agree | 24 | 51.1 | 51.1 | 100.0 |
|  | Total | 47 | 100.0 | 100.0 |  |
| Total |  | 47 | 100.0 |  |  |

This preliminary data appears to support the use of interactive techniques for adult learners in Web based courses. The adults prefer interaction & yet appear to be spread in frequency of access as one might expect of the diverse nature of the group. The typology of levels of interaction will be continued for students enrolling in Web based courses.

It is the very nature of mandated continuing education or professional development with the use of technologies at a distance which, combined together, produce an environment rich in interactive & supportive possibilities.

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**Vocational Education**
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