

Adult Learning Network

The Adult Learning Network is a quarterly publication of the Arkansas Adult Learning Resource Center.

Antarctic Math or Life at Palmer Station

In October 2003, Susan Cowles – the project director of the Science & Numeracy Special Collection of online resources—was invited by Dr. Judy Ward to co-facilitate the numeracy training at the Arkansas Adult Learning Resource Center. Ms. Cowles has twelve years experience teaching adult basic education at Linn-Benton Community College, and she has a grant from the National Institute for Literacy (NIFL) to maintain the Science & Numeracy collection at <http://literacynet.org/sciencelincs>

Ms. Cowles shared what she experienced in the Antarctica during her two-month research project from January to March 2002. She had been chosen for the project by the National Science Foundation. This program sponsors “Teachers Experiencing Antarctica and the Arctic” (TEA) which sends a few teachers each year to remote locations in the Polar Regions. Susan Cowles joined a scientific research expedition and participated in field experiments at Palmer Station. She was part of a team of scientists from the Virginia Institute of Marine Sciences, Gloucester Point, Virginia.



Susan Cowles at AALRC

In order to communicate the impact of this trip to all Arkansas teachers and to help this adventurous educator transfer her experiences to education professionals and adult learners, we conducted the following interview with Ms. Cowles:

Continued on page 3

Results of TABE Audiotape Validation Study

A study was conducted during the past year to test the new audiocassette supplement of the Tests of Adult Basic Education (TABE). The TABE audiocassette was designed as a possible testing modification for students with reading problems. Dr. Larry Evans of the University of Arkansas for Medical Sciences tested 500 students from 25 adult education programs. Students took the TABE Survey Form twice, once using the audiocassette and once without. When using the audiocassette, each student was given a tape player and headphones. The TABE audiocassette reads all TABE instructions, test items, and response choices while the student follows along and uses the normal test booklet and answer form.

Continued on page 6

Professional Development News



Tuition Reimbursement Program

Contact your Program Advisor at the Adult Education Section or Marsha Taylor at the AALRC for more information on this program. You must use a newly revised form available from the AALRC. Reimbursement is applicable to courses taken for Adult Education Certification ONLY!

Remember: (1) The application form must be submitted to the AALRC **10 working days before class begins**. (2) Your class grade and receipt of payment must be received **within 30 days of class ending**.

There is a new requirement: Applicants must provide documentation that the class will count for adult education licensure.

For a list of courses available in adult education, please contact:

University of Arkansas
at Little Rock
Dr. Charlotte Robertson
(501) 569-8933

University of Arkansas
at Fayetteville
Dr. Buddy Lyle
(479) 575-5119 or
(479) 575-4578

Arkansas State University
Jonesboro
Dr. David Agnew
(870) 972-3943

University of Central Arkansas
Conway
Dr. Sherry Roberts
(501) 450-5431

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Upcoming Training Events:

Arkansas Numeracy Campaign

Session 1 – February 10-11
Session 2 – March 9-10
Session 3 – April 6-7

Literacy Strategies

Session 1 – February 5-6
Session 2 – March 4-5
Session 3 – April 1-2
Session 4 – May 6-7

ESL Basics

Session 1 – February 12-13
Session 2 – March 11-12
Session 3 – April 22-23

Payne Jordan

Session 1 - February 23-24
Session 2 – April 13-15
Session 3 – May 17-18
Session 4 – October 4
Session 5 – December 6

Instructional Strategies & Accommodations

February 16-17

Learning Disabilities Training & Dissemination

Session 1 – March 22-23
Session 2 – April 19-20

Committee Meetings

AACAE Executive Committee–
January 15, 10:00, AALRC

LD Policy Committee–
January 20, 10:00, AALRC

Advisory Council –
January 22-23, Wrightsville

GED Task Force –
January 23, 10:30, AALRC

WAGE Advisory Board –
February 27, 9:30, AALRC

*Antarctic Math or Life at Palmer Station**(continued from page 1)****What motivated you to apply for a trip to Antarctica?***

For many years, I have used Antarctic science as a context for teaching basic skills to adults. When I knew of a scientist or technician on a research ship in the Southern Ocean, I would ask that person if my students could send email messages. Not only did the students practice their writing skills in order to send an email, they also had practice using technology and they learned some science and geography. Math was also emphasized. For example, scientific measurements are given in the metric system. We'd practice changing those measurements to the U.S. customary system, and we'd change the temperature measurements in Celsius to Fahrenheit. There are also lots of Antarctic websites with learning activities, so we'd do those as a class. When I learned about the TEA program, I thought it would be great to be in Antarctica and have students around the country write to me.

How many Adult Educators have undertaken similar expeditions in the past?

I'm the only one, so far. I hope that other instructors will apply for the program at some point. I'd also like to encourage adult learners to think about working in Antarctica when they have finished the programs they're in now. There are lots of interesting jobs, such as equipment drivers, cooks, carpenters, electricians, boating operators, and so forth. There are also many scientific support jobs. A person could find out more about jobs in the Arctic and the Antarctic by checking out the website of the subcontractor who provides support services for the U.S. Polar Programs. That is Raytheon Polar Services Company, <http://www.polar.org/>

What is the connection between Antarctica and math skills?

Well, math is a tool used by people in their work and in other parts of their lives. I asked all the workers at Palmer Station, Antarctica, to come up with ways in which they used math. Many people thought up some interesting math problems. They are all on the web, complete with photos. For example, my roommate Brittney has a knitting problem called "Hat Math". The carpenter and the electrician constructed good problems, as did the cooks ("Oatmeal Cookie Math" and "Brownies for 150 People"). Almost every journal entry has a math problem, though not all of them. You can see the first month of daily journals at <http://literacynet.org/polar/pop/html/journal.html> and all of the journals appear at the TEA website. http://tea.rice.edu/tea_cowlesfrontpage.html#calendar Also, there are several learning activities here, and most of them exercise those math skills: <http://literacynet.org/polar/pop/html/activities.html>

Is there a way for other teachers or students to use the knowledge that you gained during your trip?

Yes! There is a lot of information at the following websites:

- Polar Science Station: <http://literacynet.org/polar>
- POP Goes Antarctica: <http://literacynet.org/polar/pop/html/home.html>
- Teachers Experiencing Antarctica and the Arctic: http://tea.rice.edu/tea_cowlesfrontpage.html
- Student program broadcast archives: <http://www.linnbenton.edu/cowles>

Also, there are teachers in Antarctica and the Arctic right now. Anyone can write to them—just go to <http://tea.rice.edu>

Disability News

Strategies & Accommodations Workshop in February

The AALRC will offer the *Strategies and Accommodations for Adults with Learning Disabilities* workshop on Feb. 16-17, 2004. This 1½ -day workshop is a totally hands-on practice session with instructional materials that have proven to be effective for teaching both cognitive and metacognitive skills to adult students who have learning disabilities and/or ADHD. The workshop will teach instructors how to use specific materials and strategies to ensure effective instruction for this population, 80% of whom rely primarily on kinesthetic learning styles to process new information.

Each workshop participant receives a kit worth \$200 at the end of the workshop that includes all materials used in the training.

For more information or to register, please contact Wanda at the AALRC at wanda@aalrc.org.

Cooper Training a Huge Success

Dr. Richard Cooper was at the AALRC for a week in September to present a series of one-day workshops on teaching adults with learning disabilities. There were approximately 50 participants each day from adult education and literacy programs all over the state, and evaluations plus on-the-spot comments were all positive and indicated that the workshop sessions were extremely helpful.



Dr. Cooper, from Pennsylvania, is a nationally renowned expert in the field of teaching adults with learning disabilities. His workshop series consisted of:

Day 1: Techniques for Teaching Adults Who Learn Differently
Alternative Study and Organization Skills

Day 2: Teaching Reading to Adults with Learning Problems
Vocabulary Development for Adults with Learning Problems

Day 3: Teaching Spelling and Writing to Adults with Learning Problems

Day 4: Teaching Math to Adults with Learning Problems

Day 5: Multi-Level Classroom Techniques
Designing Adult Education Programs to Meet the Needs of Adults
with Learning Differences

Tech*Talk*

Note: To link to any web address (URL) in this newsletter, go the AALRC's home page at <http://aalrc.org>, look up this newsletter, and then just click on the appropriate link.

During the AACAE Conference last October, I gave a workshop entitled "Tuning Up Your Computer." I left out an important piece of the workshop on the first day. Here is the part that I left out!

Thanks, *Rob Pollan*

After performing all other tune-up tasks, run Scandisk or Chkdsk (Chkdsk is for WindowsXP). Then run Disk Defragmenter (Defrag). Defrag can take a considerable amount of time on computers with large amounts of data on the hard disk, so I recommend that you set defrag to run after hours.

Scandisk - Windows 95,98,ME After all is done, run Scandisk by going to Start – Programs – Accessories – System Tools – Scandisk. Make sure that the automatically fix errors box is checked and the Standard Test also. Click Start and let it run to fix any errors you may have.

Chkdsk - WindowsXP – Click on Start and select run. In the 'Open' dialog box type 'command'. Press OK. At the C:\ prompt type 'chkdsk' without the quotes and press ENTER. Let the program run and fix any errors.

Defrag – This will help your hard disk to run faster and more efficiently. Run this utility every month or so on machines that get a lot of use or have had new software programs installed. Go to Start – Programs – Accessories – System Tools Disk Defragmenter. Press Ok to defrag your C: drive on Windows 95-ME , and press the Defragment button on WindowsXP.

If any program tries to access the disk during defrag, it will quit and you will have to start over. To prevent this, follow these steps:

1. Close all programs.
2. Turn off your screen saver by going to Start – Control Panel – Display. Click on the Screen Saver tab and in the Screen Saver drop down box, select 'none'.
3. Close your programs in the task bar. In the bottom right hand corner of your screen, next to the clock, you will see your programs that are running in the background. Close or disable all programs, except your firewall, by right-clicking the icons and selecting the 'Close' or 'Disable' options.

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Results of TABE Audiotape Validation Study

(continued from page 1)

Several interesting results came out of the study. First, when scores using the audiocassette were compared to those without it, three groups of students were found. The first group did better using the audiocassette, not only for the TABE Reading test, but for other tests as well. The second group was the largest group, and obtained similar scores with or without the audiocassette. The third group actually did worse using the audiocassette. Students in this group were usually good readers who may have been slowed down by using the audiocassette.

A second interesting finding was that it was difficult to predict in advance who would do better with the audiocassette. Students provided information about themselves before testing, including if they had disabilities. These student characteristics, including a claim of reading disability, were actually poor predictors of who would benefit from the audiocassette. The best predictor of benefit from the audiocassette was a significantly higher score on the TABE Reading test when using the audiocassette.

The study's final report recommended that students taking the TABE for the first time always use the audiocassette for the TABE Locator test. After the Locator test, students should be given both forms of the TABE Reading test. Students should use the audiocassette for the first form, and no audiocassette for the second form. The reading scores should then be compared before completing the TABE. If the score from using the audiocassette is a specific number of points higher, then the student can complete the remaining TABE tests using the audiocassette. Adult education programs are given some latitude in selecting a specific number difference for students to use the audiocassette for the entire TABE. This latitude is based on whether a program wants to offer the modification to students with mild, moderate, or only severe reading problems. Specific number differences for these levels of reading problems are contained in the final report.

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Funding Formula Committee to Hold Meetings



For several years now, a committee has been meeting to find a solution to the current problems with the inequitable funding formula.

In January 2004, this committee is taking its findings to local directors for insight.

Sharon Ellis, Priscilla Flowers, Nancy Whitmire, & Paulette Martin

Arkansas Adult Numeracy Campaign

Preface from Dr. Judy Ward

Since the fall of 2002, approximately 140 adult educators have participated in the Arkansas Adult Numeracy Campaign. Many approached the program wondering if it was “just another” workshop that would take up their valuable time. However, at the completion of the class, all demonstrated a new confidence in their own mathematics abilities and took with them new tools and strategies for helping their “math phobic” students. The following article was written by an adult educator who found that he can now help his students learn and understand mathematics in ways he never thought possible.

A Qualitative Impact Study of the Arkansas Adult Numeracy Training written by Thomas Niswonger, NorthArk College, Harrison, AR

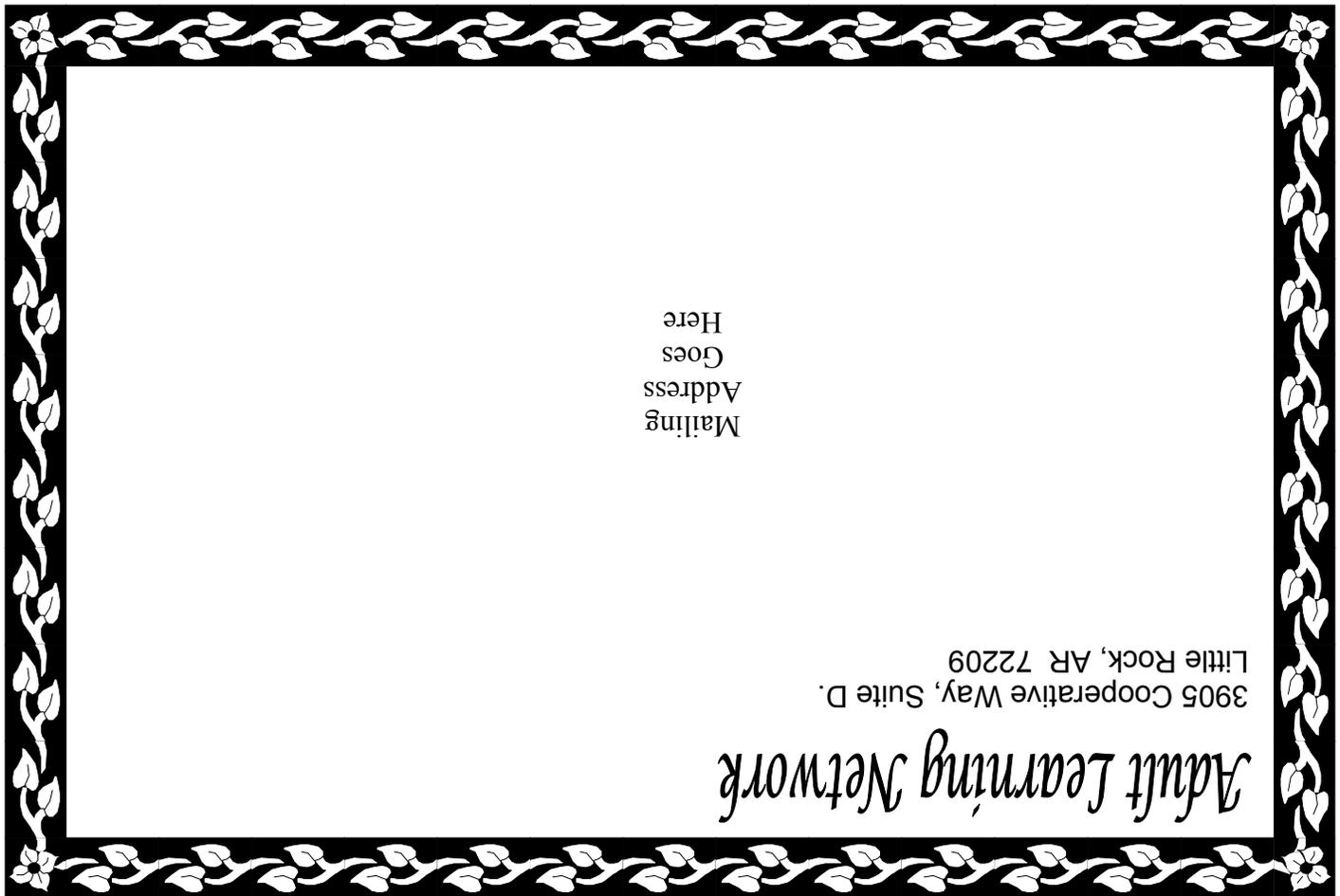
“The purpose of adult education is to provide students with the skills and knowledge that will make them more productive members of society, to be problem-solvers, and capable of dealing with the overload of information in our present society.” Dr. Judy Ward, a dynamic, self-assured, and experienced former middle school math teacher, stated these words to those enrolled in her Fall 2002 Adult Numeracy Class. Next she told the class to keep asking, “How can we help those who tell us that they are scared of math; that they have never been successful; that they’ll never learn it?”

Having earned a Bachelor’s Degree in mathematics, and having taught the subject for three decades to students ranging from ages eleven to seventy-two, I was keenly aware that many students need math concepts presented differently from traditional approaches. For that reason, I was one of many participants who answered Dr. Ward’s appeal made to the Adult Education community for learning new techniques and materials designed to teach meaningful mathematics to adult learners. Dr. Ward promised that the course would energize those participating by providing experiences that would unlock the meanings of fundamental mathematical concepts. She fulfilled her pledge. I felt as if I were participating in a revolution, one that could explain the mysterious concepts of mathematics to the adult learner.

Preferring not to use the traditional teaching mode, and refusing to be THE authority, Dr Ward encouraged us to explore, evaluate, then to apply all aspects of the course. She set herself as a role model for us to follow in our own classrooms, admitting that she did not have all the answers. “I’m not the director of your learning. I am just a facilitator,” she often said.

With her encouragement, we explored and experimented with the materials that she had assembled – low-budget or free items, ranging from models for exploring fractions, decimals, and percents, to soup cans for experimenting with various sizes of cylinders for discovering the meaning of pi and its relationship to a circle’s circumference. Rather than utilizing abstract rules and procedures, we investigated these concepts by using manipulatives and drawings. Through these examinations, and the inevitable critiques that followed, we discovered for ourselves answers to the “whys” of math, rather than just the abstract rules or procedural “hows”, and then determined their relevance to our students. We worked at shaping many “aha” moments – when an adult educator would finally “see” and understand fractions, the concept of pi, or volume of a cylinder – into gems that could be carried back to our classrooms.

Ccntinued on page 8



ADULT LEARNING NETWORK

A Qualitative Impact Study of the Arkansas Adult Numeracy Training

(continued from page 7)

Though all of my students have benefited from my participation in the Adult Numeracy Class, the most successful application of the course material was with two sisters who were struggling to pass the math part of the GED. Through applying Dr. Ward's method of first utilizing math manipulatives, then making the transition to the more abstract paper and pencil problem-solving techniques, both women successfully passed the GED test. Both attributed their success to the use of the methods I learned in Dr. Ward's class. What better witness can one find as to her method's effectiveness than that?

As Dr. Ward's work continues to reverberate through the adult education community, one can only hope that her efforts will lead to creating and applying even more practical learning approaches to mathematics. Who would have thought that a small box of materials and a notebook filled with activities (and a person determined to use them to ignite a firestorm) could spark such a resurrection?

Thomas Niswonger,
NorthArk College, Adult Education
Harrison, Arkansas