You **CAN** Teach an Old Nurse with New Tricks:
Integrating Blended Learning into Hospital Education

Stephanee Thurman, RN, MSN, is part of the Education Department at Medical Center of Plano and currently coordinates the Continuing Nursing Education and American Heart Association programs. She received her BSN from Oklahoma City University and her MSN from the University of Texas at Arlington. In addition, Stephanee has earned her Advanced Nurse Educator Certificate from The University of Texas at Arlington. She can be contacted at stephanee.thurman@hcahealthcare.com.

**Disclosure Statements:** The authors report no relevant financial relationships or conflicts of interest. They do not intend to discuss any unapproved or off-label use of any product. There is no commercial support for this educational activity.

**Purpose:** To provide nurses with information and strategies to be a more informed learner regarding the development, utilization, and impact of blended learning methods in continuing education and training.

**At the completion of the article and the post test, the reader should be able to:**
1. Recognize the central principles surrounding adult learners.
2. Distinguish the relationship between adult learners and a successful blended learning program.
3. Critique the utilization of blended learning in the hospital education and training environment.
I remember a specific conversation with my soon-to-be husband, also a nurse, several years ago. We were discussing our experiences with the NCLEX® licensure examination. He sat for his in 1990, carpooling with classmates to the state capitol, spending two full days in a convention center surrounded by other nerve-shot new graduates, furiously answering multiple-choice questions in pencil. Then the wait…it took nearly six weeks for him to receive his results!

“How long did you wait for your results?” he asked me.

I smiled and began explaining. I scheduled my exam for late June 1994 by phone after receiving my approval from the state. I drove across town to the testing center, was placed in a classroom with about eight other people, and spent the next hour answering 75 multiple-choice test questions on the computer. I received my results through the mail in four days!

Which example better reflects your experience?

### Technology becoming the norm

Technology is no stranger in the world of healthcare. Beds weigh patients at the push of a button, IV pumps calculate drip rates of standard concentrations, and barcodes are scanned to help match patients and their medications. Electronic order entry and documentation systems are quickly becoming standard in healthcare facilities across the nation. Many places also support computerized physician order entry (CPOE) instead of hand-written orders and Picture Archiving & Communication Systems (PACS) for viewing and sending digital images of radiology films. It is no wonder that technology would eventually find its way into healthcare education.

The switch to computerized adaptive testing (CAT) for NCLEX® licensure examinations was a significant step in integrating technology into professional nursing education. The Internet certainly changed the face of nursing education by allowing electronic document submission for turning in assignments, online libraries for document retrieval, and the boom in distance education programs. Think of the progress that has been made in patient simulation. I remember taking turns being the “patient” for certain skills practice in our school’s lab. Now electronic patient simulators blink, speak, and produce heart, lung, and bowel sounds. Not to mention they are much more receptive to invasive skills practice than my classmates and I!

The use of technology in our educational preparation and clinical practice is readily accepted and has become a must-have component in the development of new nurses and the care of patients. Technology is also being integrated into hospital education and employee training programs. Hospital education and training programs are combining traditional face-to-face instruction with varying forms of electronic and computer-based applications. This approach, often called blended learning, can be a cost-effective method of delivering educational activities to a wider audience with greater end-user satisfaction. It is not however, to be taken lightly nor delved into without advanced planning and structured evaluation. Concepts such as adult learners, significant learning, and various forms of trouble-shooting must be explored before implementing a blended learning program.

### Learning styles and adult learners

It is important for learners to recognize their preferred learning style. Understanding learning styles can provide insight into your own study habits. Read the following and decide which best fits you.

The **visual learner** prefers written rather than verbal instruction. Photographs and illustrations are important to the learning process. Diagrams and charts are tools to help the learner remember and comprehend. Studying is best done by organizing and reading notes in outline form.

The **auditory learner** prefers verbal instruction and has a gift for remembering the spoken word. Group discussions are important to help clarify information. Retention of material is achieved through verbal repetition. The learner may be distracted easily by noise as well as silence.

The **kinesthetic learner** opts for hands-on activities such as note-taking and computer use, and may fidget with small objects while listening or working. Kine

---

Blended learning can be a cost-effective method of delivering educational activities to a wider audience with greater end-user satisfaction.
experience. And finally, adults prefer to apply their learning by seeing the knowledge in action, often by return demonstration or skills verification.

The role of significant learning

Blended learning programs are ideal for adult learners in formal education programs and in work-based training activities. We already know that adults learn best when they are engaged in the material, when they can control certain aspects of the learning environment, and when the knowledge and skills they acquire can be applied to their personal/professional lives. But how do we create educational activities that meet the needs of these learners?

We can all agree that learners should get something important from their learning experiences. Adults especially will feel their time and energy are wasted when only presented with irrelevant or trivial details of a topic. The concept of significant learning has been defined as learning that creates not only a lasting, but also important change in the learner’s life (Fink). A key to significant learning is that activities are based on the learning itself rather than focused solely on the content. Fink went on to develop a taxonomy, or classification, of types of significant learning:

- **Foundational Knowledge** – Includes understanding and remembering specific information and ideas; provides the foundation, or basic level of knowledge needed for other types of learning
- **Application** – Includes new skills and thinking; adds worth to other kinds of learning
- **Integration** – Includes making connections between ideas, people, situations; provides learners with intellectual power
- **Human Dimension** – Includes personal and/or social implications of the learning; emphasizes the human significance of the learning
- **Caring** – Includes development of new feelings, interests, and values; inspires the energy to learn about something
- **Learning How to Learn** – Includes being a better student, becoming self-directed; allows learners to effectively continue learning in the future

It is interesting how these types of significant learning can be applied with the previously-mentioned characteristics of adult learners. Refer to Table 1 to see the relationships between the two concepts. Learning experiences have increased significance to adults when multiple types of significant learning are implemented. Using our example of CPR training, let’s explore how adult learner methods and significant learning interact:

A nurse has previous experience and the foundational knowledge to know at least the basics of the circulatory and respiratory systems. CPR training is blended (part online – part classroom skills) so he/she must learn how to learn using self-directed skills. Motivating factors to complete CPR training include job requirement and learning appropriate patient care for these situations. Practicing CPR also allows the nurse to explore the human dimension of his/her own feelings regarding resuscitation in various scenarios. The nurse’s level of engagement is influenced by how he/she can apply the training in practice and how much he/she cares about learning...
A nurse primarily caring for adult patients may increase their engagement level in certain aspects of CPR training upon becoming a parent or grand-parent. Applying what is learned in CPR training requires use of new skills and knowledge. But more than just performing the skills, the nurse can integrate the skills into their practice, knowing and understanding the effects of their interventions.

**Blended learning in healthcare**

Utilization of blended learning variations requires planning, administrative commitment, and technical support and equipment. The educator role becomes one of learning facilitator and includes outcomes assessment. This environment allows the learner to play a more active role in their learning, which typically leads to increased retention of material. The use of blended learning methods is becoming more and more common in hospital settings for orientation programs, case-based tutorials, regulatory training, and professional continuing education (Magnussen, 2008). However, blended learning is not meant to replace traditional modalities, but to coexist and enhance certain learning experiences. A comparison of pure classroom, blended and pure e-learning was completed by Brandon Hall Research, a leading learning and development research firm. Blended methods were preferred over pure e-learning by 87% of subjects. And blended methods were preferred over pure classroom learning by 71% of the subjects (Weaver, 2008).

Our facility began using blended learning in the last few years because of its ability to reach more learners with consistency that is available at their convenience. Consistency of delivery is important so that all learners receive the same information. Our online education platform is available around the clock and can be accessed by employees from home. This convenience plays right into the control that adult learners want over their education. The growing acceptance of computer-based technology by our learners lends the opportunity to use it to its fullest capacity. Our choice of using all-online or blended activities depends on the material and content being presented.

Returning to our previous example, our blended CPR training consists of an online module for the lesson and multiple-choice quiz combined with live classroom skills validation with instructors. Learners enroll in their choice of classroom date/time, and then are assigned the online module a few weeks prior to class. The online module addresses needs of visual, auditory, and kinesthetic learners, and provides a means of preparation for the skills validation. At the beginning of this endeavor, we still had paper copies of the test available for those uncomfortable with online methods. The word has spread though, and now nearly 90% of our staff completes the online module. Learners are happy to spend less time in class and instructors are happy that students are prepared upon their arrival. In adapting this model, we also have the capability of training more learners in less time for less total cost to the facility. Using a standard amount per hour for student and instructor salaries, we have decreased our facility cost for CPR training from $87 per person to $47 per person.

There are drawbacks and potential pitfalls to using blended learning methods (Weaver, 2008), least of which is that nurses are often hesitant when dealing with change! Let’s explore some other cautions to consider with implementing blended learning:

- **Not suited for all purposes** – Online learning can be used for cognitive content, but people-skills training should be done through other methods
- **Access to required technology** – Not all learners have access to the required technology
- **Lack of skilled facilitator** – Online courses, unlike live instructors, cannot read body language of learners
- **Learner response integrity** – May encourage "group work" or sharing of answers
- **Development cost and complexity** – Increased time up-front for educators and time spent for learner support and trouble-shooting

Finally, how do you make sure your blended learning activities are successful? I believe it is a continuous cycle of developing, testing, tweaking, and deployment. Pilot testing is a great way to discover misspelled words, bad grammar, and content that doesn’t flow. (My co-workers and my husband have become used to being my guinea pigs!) Weaver (2008) also provides advice when choosing blended learning methods for training and continuing education.

---

<table>
<thead>
<tr>
<th>Apply the Learning</th>
<th>• Application</th>
<th>• Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Engagement</td>
<td>• Application</td>
<td>• Human Dimension</td>
</tr>
<tr>
<td>Motivation</td>
<td>• Human Dimension</td>
<td>• Caring</td>
</tr>
<tr>
<td>Previous Experience</td>
<td>• Foundational Knowledge</td>
<td>• Learning How to learn</td>
</tr>
</tbody>
</table>

---

Table 1: Relationship between Adult Learning Characteristics and Fink's Taxonomy of Significant Learning

- **Apply the Learning**
  - Application
  - Integration
- **Level of Engagement**
  - Application
  - Human Dimension
  - Caring
- **Motivation**
  - Human Dimension
  - Caring
- **Previous Experience**
  - Foundational Knowledge
  - Learning How to learn
You should always blend with the end in mind. The importance of the educational goal should drive the scale and depth of the development. Use content that fits the modality. Content, unlike water, does not take the shape of its container.

Administrative and technical support is imperative. Your overall program should be based on the mission and values of your facility. Initial software, upgrades, and help-desk capabilities are integral components of a blended learning curriculum.

The potential for complexity cannot be underestimated. Every course doesn’t need all the latest and greatest computer technological applications.

In summary

Blended learning can provide ideal avenues for engaging adult learners and allowing adults to take charge of their learning experiences. Incorporating blended learning requires careful planning, as it is not a one size fits all solution for the provision of adult education. The points made in this article can guide development of a blended learning program to satisfy adult learners and increase retention of material.

References


Registration Form and Test for Continuing Education Credit

“You CAN Teach an Old Nurse with New Tricks: Integrating Blended Learning into Hospital Education”

**Purpose:** The purpose of this article is to provide nurses with information and strategies to be a more informed learner regarding the development, utilization, and impact of blended learning methods in continuing education and training.

**Objectives:** At the completion of the article and the post-test, the reader should be able to:
1. Recognize the central principles surrounding adult learners.
2. Distinguish the relationship between adult learners and a successful blended learning program.
3. Critique the utilization of blended learning in the hospital education and training environment.

**How to earn One Contact Hour:**
1. Read the article.
2. Complete the post test questions and program evaluation by circling the selected responses on the answer sheet.
3. Fill out the registration form.
4. Send registration form, answer sheet, and a check for $12.00 to:
   Continuining Nursing Education
   The University of Texas at Arlington
   Box 19197
   Arlington, TX 76019-0197
5. Send before October 15, 2010. Within three weeks after receipt of your post test and registration, you will be notified of your results. A passing score is 80%. If you pass, your CE certificate will be forwarded to you. If you do not pass, you will be notified and may repeat the test once at no cost.

The University of Texas at Arlington Center for Continuing Nursing Education is an approved provider of continuing nursing education by the Texas Nursing Association, an accredited approver by the American Nurses Credentialing Center’s Commission on Accreditation.

Accredited status does not imply any endorsement by the provider, Texas Nurses Association, or ANCC's COA of any commercial products displayed in conjunction with this activity.

Registration Information:

Name: _______________________________________

Address: _______________________________________

City/State/ZIP: _______________________________________

State(s) of Licensure: _______________________________________

Telephone Number: _______________________________________

Email: _______________________________________

Post Test Questions for Continuing Education Credit Article: “You CAN Teach an Old Nurse with New Tricks: Integrating Blended Learning into Hospital Education”
Please circle your response for each question

1. Combining traditional methods of learning with electronic delivery components is known as:
   a. Blended learning
   b. Integrated learning
   c. Multi-facet education
   d. Objective teaching

2. According to Knowles, which characteristic(s) is/are common among adult learners?
   a. Goal oriented
   b. Practical
   c. Self-directed
   d. All of the above

3. A student records class lectures and prefers study groups. This primary learning style is:
   a. Visual
   b. Verbal
   c. Auditory
   d. Kinesthetic

4. Which would affect the level of engagement of an adult learner?
   a. Ability to control the time and location of training
   b. Learner is able to take leadership role in the learning
   c. Cost of the training
   d. Both a. and b.

5. A main element in significant learning is that the focus is on the ___________ rather than content.
   a. Instructor
   b. Learning
   c. Cost
   d. Efficiency

6. Fink, the author of significant learning, believes that a lasting change important to the learner must occur before significant learning can take place.
   a. True
   b. False

7. Choose factors contributing to the increased use of blended learning in hospital staff development.
   a. Ability to reach more learners
   b. Consistency of delivery
   c. Convenience to the adult learner
   d. All of the above

8. Which would need to be addressed when incorporating electronic learning methods?
   a. Availability of technology to all learners
   b. Mixed levels of acceptance in target audience
   c. Learner integrity, cheating
   d. All of the above

9. Any type of content or topic can be molded into an electronic learning format.
   a. True
   b. False

10. You should always ___________ a new educational activity prior to full deployment to your target learner population.
    a. Proofread
    b. Pilot test
    c. Evaluate
    d. Advertise

Program Evaluation

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective 1 was met.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Objective 2 was met.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>Objective 3 was met.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

The activity was effective as a learning resource/tool.
1 2 3 4 5
The objectives were relevant to the overall purpose.
1 2 3 4 5
The activity met your expectations.
1 2 3 4 5

List two ways that you will integrate what you learned in this activity into your practice and/or work environment:
_________________________________________
_________________________________________
_________________________________________
_________________________________________
_________________________________________

The following were disclosed:
Requirements for successful completion
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflicts of interest</td>
<td>Yes</td>
</tr>
<tr>
<td>Commercial support</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Non-Endorsement of Products
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-label use</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Did you as the participant, notice any bias that was not previously disclosed in this presentation?
Yes         No

If Yes, please describe ___________________________________________

State the number of minutes it took you to read the article, complete the test and evaluation _______________________.

__________________________