Rethinking Adult Learning Principles in Medical Education: Five Teaching Perspectives

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We have documented that we have no financial relationships to disclose or Conflicts of Interest (COIs) to resolve.
Anyone who stops learning is old, whether at twenty or eighty. Anyone who keeps learning stays young. “~ Henry Ford
Session Objectives

Describe five common perspectives on teaching adults with a tool called the Teaching Perspectives Inventory

Define the characteristics, attitudes, attributes and behaviors of adult learners, including effective principles/teaching strategies and assessment

Describe emerging pedagogies (self-determined learning approaches), including Brookfields’ six principles of adult education and Vella’s 12 principles for effective adult learning with recommended practices for application in medical education

Discuss adult motivations, learning needs, and practical strategies for innovative instructional design for adult learners

Children's Mercy
KANSAS CITY
What kind of teacher are you?

Howard Chandler Christy "Scene at the signing of the constitution of the United States" (source: WikiMedia.org)
Activity I: Teaching Metaphor & Teaching Perspectives Inventory

GROUP ACTIVITY: ARTICULATE WHO YOU ARE AS A TEACHER

1. On a sheet of paper, draw a picture of yourself working as a teacher. What metaphor does the picture suggest for your teaching? See the sample metaphors below. Ask yourself where do you fit and why? If you don’t fit anywhere, come up with your own metaphor and explain it briefly. Then consider why your metaphor does not fit with those listed. What do you believe or value instead? This should help emphasize what is important to you as a teacher and reveal why you do what you do.

2. Now discuss your metaphors with your group members, including your own assumptions and beliefs about teaching and how these assumptions and beliefs inform your philosophy of teaching.

3. Provide brief reports back to full group / Return to large group for discussion.

<table>
<thead>
<tr>
<th>Sample Metaphors</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamplighters</td>
<td>They attempt to illuminate the minds of their learners.</td>
</tr>
<tr>
<td>Gardeners</td>
<td>Their goal is to cultivate the mind by nourishing, enhancing the climate, removing the weeds and other impediments, and then standing back and allowing growth to occur.</td>
</tr>
<tr>
<td>Muscle Builders</td>
<td>They exercise and strengthen flabby minds so learners can face the heavy weight learning tasks of the future.</td>
</tr>
<tr>
<td>Bucket Fillers</td>
<td>They pour information into empty containers with the assumption that a filled bucket is a good bucket. In other words, a head filled with information makes an educated person.</td>
</tr>
<tr>
<td>Challengers</td>
<td>They question learners’ assumptions, helping them see subject matter in fresh ways and develop critical thinking skills.</td>
</tr>
</tbody>
</table>
What is a Teacher?

- Counselor
- Coach
- Motivator
- Judge
- Referee
- Nurse
- Confidant
- Listener
- Advocate
- Evaluator
- Learner
- Organizer
- Collaborator
- Model
- Artist
- Instructional Designer
A Program Director Position Description

• “The program director is encouraged to incorporate basics of adult learning theory into the curriculum and apply these theories when developing trainee learning experiences. In addition, the program director, in collaboration with key faculty, should provide training to residents and fellows in how to teach medical students and peers, consistent with their specialty specific Milestones.”

Reference: University of Washington GME Program Director Position Description
Objective #1

- Describe five common perspectives on teaching adults with a tool called the Teaching Perspectives Inventory
Teaching Perspectives Inventory

TPI Profile Sheet

Thank you for taking the TPI. Your results are represented on the graph below. For information on how to interpret your results, please see the Interpretation page.

<table>
<thead>
<tr>
<th>Perspective</th>
<th>B = Beliefs</th>
<th>I = Intentions</th>
<th>A = Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRANS = 41</td>
<td>B = 15</td>
<td>I = 12</td>
<td>A = 14</td>
</tr>
<tr>
<td>APPREN = 42</td>
<td>B = 14</td>
<td>I = 14</td>
<td>A = 14</td>
</tr>
<tr>
<td>DEVEL = 41</td>
<td>B = 13</td>
<td>I = 15</td>
<td>A = 13</td>
</tr>
<tr>
<td>NURTUR = 38</td>
<td>B = 13</td>
<td>I = 14</td>
<td>A = 11</td>
</tr>
<tr>
<td>SOC REF = 38</td>
<td>B = 11</td>
<td>I = 14</td>
<td>A = 13</td>
</tr>
</tbody>
</table>

Perspective totals on or above this line are DOMINANT for you.

Perspective totals on or below this line are RECESSIVE for you.

mean = 40
SD: ±1.67
Five Teaching Perspectives

- Apprenticeship (Skills)
- Developmental (Abilities)
- Nurturing (Attitudes)
- Transmission (Knowledge)
- Social Reform (Values)

Pratt DD. Five Perspectives on Teaching in Adult and Higher Education Teaching Perspectives Inventory can be determined online at www.teachingperspectives.com
Illustrative Cases for Five Teaching Perspectives
<table>
<thead>
<tr>
<th>Perspective</th>
<th>Practitioners</th>
<th>Strengths</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmission</td>
<td>…are committed to content and subject matter</td>
<td>Use of clear objectives that align with assessments, control sequence and pace of learning</td>
<td>Learners who do not see the logic of the chosen sequence of learning; sage on the stage so too much time spent talking!</td>
</tr>
<tr>
<td>Apprenticeship</td>
<td>…transform the learner from a novice to a skilled practitioner</td>
<td>Use of a progression of meaningful tasks to help learners move towards competence based on their own starting point</td>
<td>Developing authentic tasks for all levels of competence; teaching/explaining complex skills to novices</td>
</tr>
<tr>
<td>Developmental</td>
<td>…cultivate thinking and reasoning skills in the learner</td>
<td>Use of questions to challenge learners incrementally and provide meaningful examples</td>
<td>Choosing good questions and providing adequate time for learners to answer them themselves; creating assessments that measure complex reasoning</td>
</tr>
<tr>
<td>Nurturing</td>
<td>…enable learning through promotion of trust and encouragement of self-sufficiency and self-confidence</td>
<td>Practitioners listen to learners and create relationships with learners</td>
<td>Balancing caring vs. challenge, teaching vs. counseling; assessing student achievement</td>
</tr>
<tr>
<td>Social Reform</td>
<td>…provide the learner with the opportunity to embrace a set of ideals while learning about a discipline</td>
<td>Focus on the collective rather than individual. Content is related to the learners' lives and subjected to critical reflection</td>
<td>Difficulty assessing student achievement; accepting those who object to the teacher’s ideals</td>
</tr>
</tbody>
</table>
Teaching Philosophy

• Philosophy of Adult Education Inventory

2 Questions

1. In planning an educational activity, I am most likely to:

   Identify, in conjunction with learners, significant social and/or political issues and plan learning activities around them.

   1 2 3 4 5 6 7 (h)

   Clearly identify the results I want and develop a program [or class or workshop] that will achieve those results.

B = BEHAVIORAL ADULT EDUCATION (Education for Competence, Behavioral Change, Compliance with Standards)

L = LIBERAL (ARTS) ADULT EDUCATION (Education for Intellectual Development; Comprehensive Education for Life)

P = PROGRESSIVE ADULT EDUCATION (Education for Practical Problem Solving & Application to Everyday Life)

H = HUMANISTIC ADULT EDUCATION (Education for Individual Self-Actualization)

R = RADICAL ADULT EDUCATION (Education for Social Change)
A Student’s Testimonial (Program Director)

• “I have a much clearer vision of who I am as a teacher, which is also how I see myself as a clinician. On some level, I have always seen these characteristics, but being able to put it into words really formalized my philosophy. This will serve as a great reference in the future when I am working on projects, starting to work with new learners, and to continually refine my teaching skills.”
How TPI influences one’s teaching methods and effectiveness
Teaching Perspectives

BELIEFS - What do you believe about instructing or teaching?

INTENTIONS - What do you try to accomplish in your instruction or teaching?

ACTIONS - What do you do when instructing or teaching?

TPI: http://www.teachingperspectives.com
# Teaching Perspectives

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sample Items from the TPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELIEFS</td>
<td>What do you <strong>believe</strong> about instructing or teaching?</td>
</tr>
<tr>
<td></td>
<td>32. To be an effective teacher, one must be an effective practitioner.</td>
</tr>
<tr>
<td></td>
<td>36. Teachers should be virtuoso performers of their subject matter.</td>
</tr>
<tr>
<td></td>
<td>38. Teaching should focus on developing qualitative changes in thinking.</td>
</tr>
<tr>
<td>INTENTIONS</td>
<td>What do you <strong>try to accomplish</strong> in your instruction or teaching?</td>
</tr>
<tr>
<td></td>
<td>17. My intent is to demonstrate how to perform or work in real situations.</td>
</tr>
<tr>
<td></td>
<td>21. I expect people to master a lot of information related to the subject.</td>
</tr>
<tr>
<td></td>
<td>30. I want to make apparent what people take for granted about society.</td>
</tr>
<tr>
<td>ACTIONS</td>
<td>What do you <strong>do</strong> when instructing or teaching?</td>
</tr>
<tr>
<td></td>
<td>1. I cover the required content accurately and in the allotted time.</td>
</tr>
<tr>
<td></td>
<td>2. I link the subject matter with real settings of practice or application.</td>
</tr>
<tr>
<td></td>
<td>3. I ask a lot of questions while teaching.</td>
</tr>
</tbody>
</table>
Objective #2

• Define the characteristics, attitudes, attributes and behaviors of adult learners, including effective principles/teaching strategies and assessment
Let’s see what happens when we don’t consider our learners’ learning needs (backgrounds, life experience, and current level of knowledge).
What does adult learning mean to you?

What should adults learn? Why?

How should adults learn? Why?
Adult Learning
Key Principles of Adult Learning and How These Affect the Teaching Process - REAPS

- **Respect**
  - Openness and respect, avoid “talking down”
- **Experience**
  - Use experiential techniques
- **Application**
  - Relate material to practical applications
  - Encourage independent projects
- **Practice**
  - Provide multiple opportunities to practice
- **Self-Concept**
  - Encourage self-directed learning, facilitate the process
Variables Affecting Adult Learning

Current curriculum does not frame the issues facing health care (inflexible and excessive).

Doesn’t help with personal development of students’ strengths (learners’ goals).

Breakdown barriers for students with faculty (relationships).

Engage them in system changes (meet their needs).

University of Michigan Medical School – How Students are Effecting Medical Education Transformation – AMA Wire, March 16, 2015
Main Changes to Education: Emerging Pedagogies

Technology applied to education

Moving towards the formal to informal education

Globalization of education

Tools and services to enhance learning

Learning throughout life

Roles of institutions

Education and open educational resources

Teacher’s role

Individual and social nature of learning

Individual and profession-driven education

Assessment, accreditation and qualifications

Ontological and epistemological foundations of teaching methods

Stoyanov et al., 2010
## Assessing Adult Learning

<table>
<thead>
<tr>
<th>Methods of Assessment</th>
<th>Description</th>
<th>Strategies</th>
</tr>
</thead>
</table>
| Performance Assessment        | Learners are given a variety of tasks and situations where they can demonstrate understandings and apply knowledge, skills, and the foundations of science to a variety of contexts. | • Special clinical skills exam  
• Clinical tutor evaluation  
• Laboratory reports  
• Observed long case  
• Case presentation  
• Clinical tutor assessment  
• Case assessment |
| Authentic Assessment           | Assessments tie directly to the applications of the knowledge, skills, and attitudes in the real world. | • Simulation-based scenarios  
• Procedural checklist  
• OSCE/CEX  
• CQPI  
• Project-based instruction,  
• Learning analytics /footprints |
| Holistic Assessment            | Multi-channel, global assessment that incorporates a wide range of assessment pieces to provide a total picture of the learner. | • Peer/self assessment  
• Portfolios  
• Problem or project-based learning  
• Invention  
• Learning contracts |
Objective #3

• Describe emerging pedagogies (self-determined learning approaches), including Brookfields’ six principles of adult education and Vellases 12 principles for effective adult learning with recommended practices for application in medical education
Self-Determined Learning (Heutagogy)

Heutagogy is the study of self-determined learning and applies a holistic approach to developing learner capabilities with the learner serving as the major agent in their own learning, which occurs, as a result of personal experience.

Hase & Kenyon, 2007, p. 112
Self-Determined Learning

LEVEL 3: HEUTAGOGY (REALIZATION)

LEVEL 2: ANDRAGOGY (CULTIVATION)

LEVEL 1: PEDAGOGY (ENGAGEMENT)

LEVEL OF LEARNER MATURITY AND AUTONOMY REQUIRED

LEVEL OF INSTRUCTOR CONTROL AND COURSE STRUCTURING REQUIRED

Blaschke, 2012
Self-Determined Learning

Alternative Resources, Actions, and Beliefs → Problem → Action → Outcomes

Single-loop learning

Double-loop learning

Blaschke, 2012
# Self-Directed vs. Self-Determined Learning

<table>
<thead>
<tr>
<th>Andragogy (Self-directed)</th>
<th>Heutagogy (Self-determined)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-loop learning</td>
<td>Double-loop learning</td>
</tr>
<tr>
<td>Competency development</td>
<td>Capability development</td>
</tr>
<tr>
<td>Linear design and learning approach</td>
<td>Non-linear design and learning approach</td>
</tr>
<tr>
<td>Instructor-learner directed</td>
<td>Learner-directed</td>
</tr>
<tr>
<td>Getting students to learn (content)</td>
<td>Getting students to understand how they learn (process)</td>
</tr>
</tbody>
</table>

Blaschke, 2012
# Adult Learning Principles

<table>
<thead>
<tr>
<th>Vella’s 12 Principles</th>
<th>Brookfield’s Six Principles</th>
<th>Knowles’ Six Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs Assessment</td>
<td>Voluntary participation</td>
<td>Self concept</td>
</tr>
<tr>
<td>Safety</td>
<td>Self-worth</td>
<td>Learner’s experience</td>
</tr>
<tr>
<td>Sound Relationship</td>
<td>Collaborative</td>
<td>Readiness to learn</td>
</tr>
<tr>
<td>Sequencing</td>
<td>Praxis</td>
<td>Orientation to learning</td>
</tr>
<tr>
<td>Praxis / Action with reflection</td>
<td>Critical reflection</td>
<td>Motivation to learn</td>
</tr>
<tr>
<td>Control</td>
<td>Self-directed and empowered</td>
<td>Need to know</td>
</tr>
<tr>
<td>Feelings / Emotions</td>
<td></td>
<td></td>
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<tr>
<td>Immediacy</td>
<td></td>
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<tr>
<td>Clear Roles</td>
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<td></td>
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<tr>
<td>Teamwork</td>
<td></td>
<td></td>
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<tr>
<td>Engagement</td>
<td></td>
<td></td>
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<tr>
<td>Accountability</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Activity II: Small Group Activity (Scenario)
Objective #4

• Discuss adult motivations, learning needs, and practical strategies for innovative instructional design for adult learners
Self-Determined Learning / Heutagogic Design Process

Learning Contract
- Identify learning needs and outcomes
- Negotiate assessment
- Adapt curriculum

Learning Activities
- Identify resources
- Identify and develop learning skills, then
- Design learning activities
- Provide formative feedback
- Self-reflect

Learning Outcomes
- Assess learning outcomes
- Demonstrate competencies and skills

Capable, creative, self-determined learners

Blaschke & Hase, 2016
Self-Determined Learning / Heutagogic Design Elements

- Explore
- Share
- Create
- Reflect
- Connect
- Collaborate

Blaschke & Hase, 2016
The Three Questions
Based on a story by Leo Tolstoy

Written and illustrated by Jon J Muth
“The Three Answers”

The most important time is “Now”

The most important person is “The one you are with”

The most important pursuit is “To do good to that person”

Leo Tolstoy
Take Home Message

Best time for a transformation in medical education.

Our learners are the right people to listen to.

Re-examine our educational practices and learning environments is most important thing to do.

Develop an authentic teaching identity and understand your own teaching persona (Who am I when I teach?)
References


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