



Blended Learning

A new model for Medical Education

Peter de Jong, PhD

**Leiden University Medical Center,
The Netherlands**



Models for learning

- Classroom learning
 - Traditional teaching
 - Face to face
 - Teacher - students
 - Large group – small group





Models for learning

- E-learning

- Learning using computer technologies
 - Online tutorials
 - Simulations
 - Games
 - Online testing
 - Audience response systems
 - Digital Learning Environments
- Online presence, not in classroom

Models for learning: E-learning

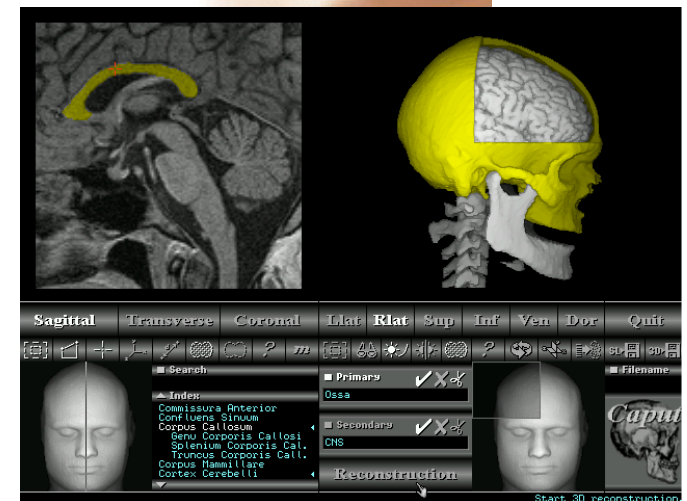


Stap 13/34 Macroscopie van de hersenen van willekeurige Alzheimerpatiënt

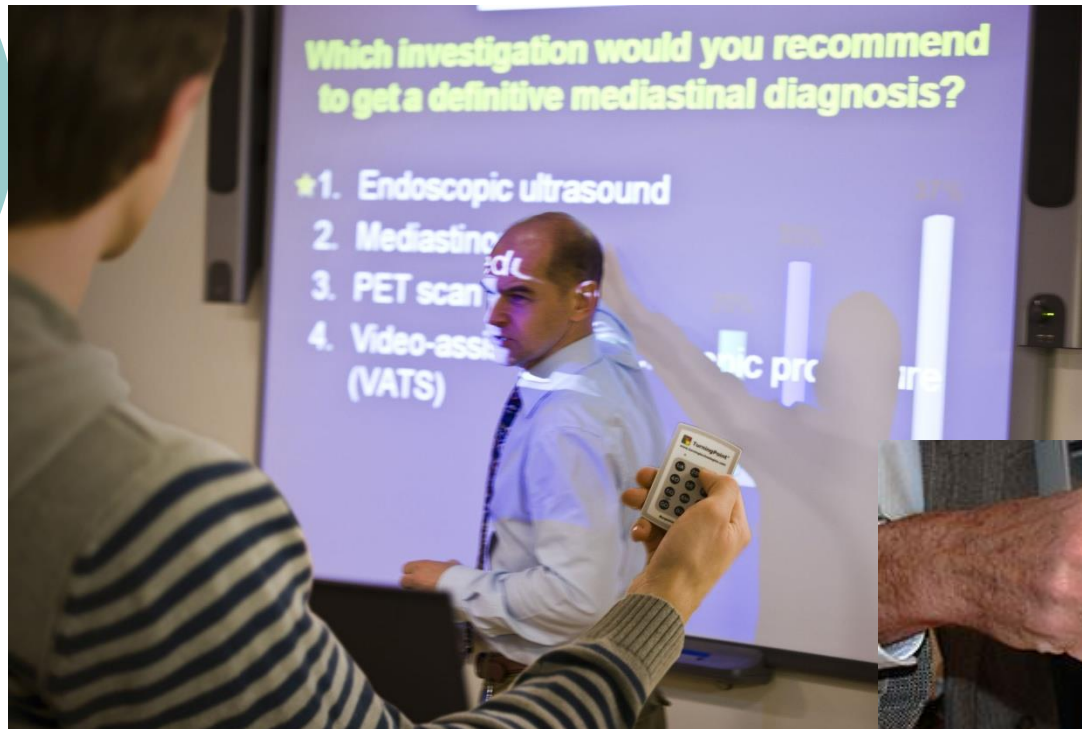
Een dwarsdoorsnede door de hersenen van een **willekeurige Alzheimerpatiënt** laat smalle windingen en vergroting van de ventriculaire ruimte zien, dit is echter **NIET** specifiek voor Alzheimer!



Klik op het vergrootglas om de foto uit te vergroten



Models for learning: E-learning





Models for learning

- Mobile learning
 - Learning using mobile devices
 - Laptop
 - Smart phones
 - iPad
 - Focus on communication
 - Synchronous
 - A-synchronous

Models for learning: mobile



Models for learning

- Blended Learning

- Combination of face to face learning, E-learning and mobile learning
 - Delivery formats
 - Different forms of communication
 - Didactic models





E-learning

Is E-learning better than face to face?

- Equally effective
 - Knowledge
 - Skills
 - Behavior

- More effective (used blended)
 - Explaining
 - Procedures

Sitzmann et al. Personnel Psychology 2006, 59, 623-664.
Cook et al. JAMA. 2008; 300(10):1181-1196.



E-learning

Advantages

- Images and sounds
- Motion
- Dynamic simulation

- Efficiency: attribute - content



How to use Blended Learning in different teaching philosophies?



Teaching philosophies

Behaviorism

- Content > exercise > test
- “drill and practice”

Blending options:

- Online training & test, followed by skillslab



Teaching philosophies

Cognitivism

- Students obtain knowledge

Blending options:

- Multimedia presentation of content, concept maps, hyperlinks, patient simulation cases



Teaching philosophies

Constructivism

- Students constructs knowledge

Blending options:

- Communication, weblog, wiki



Teaching philosophies

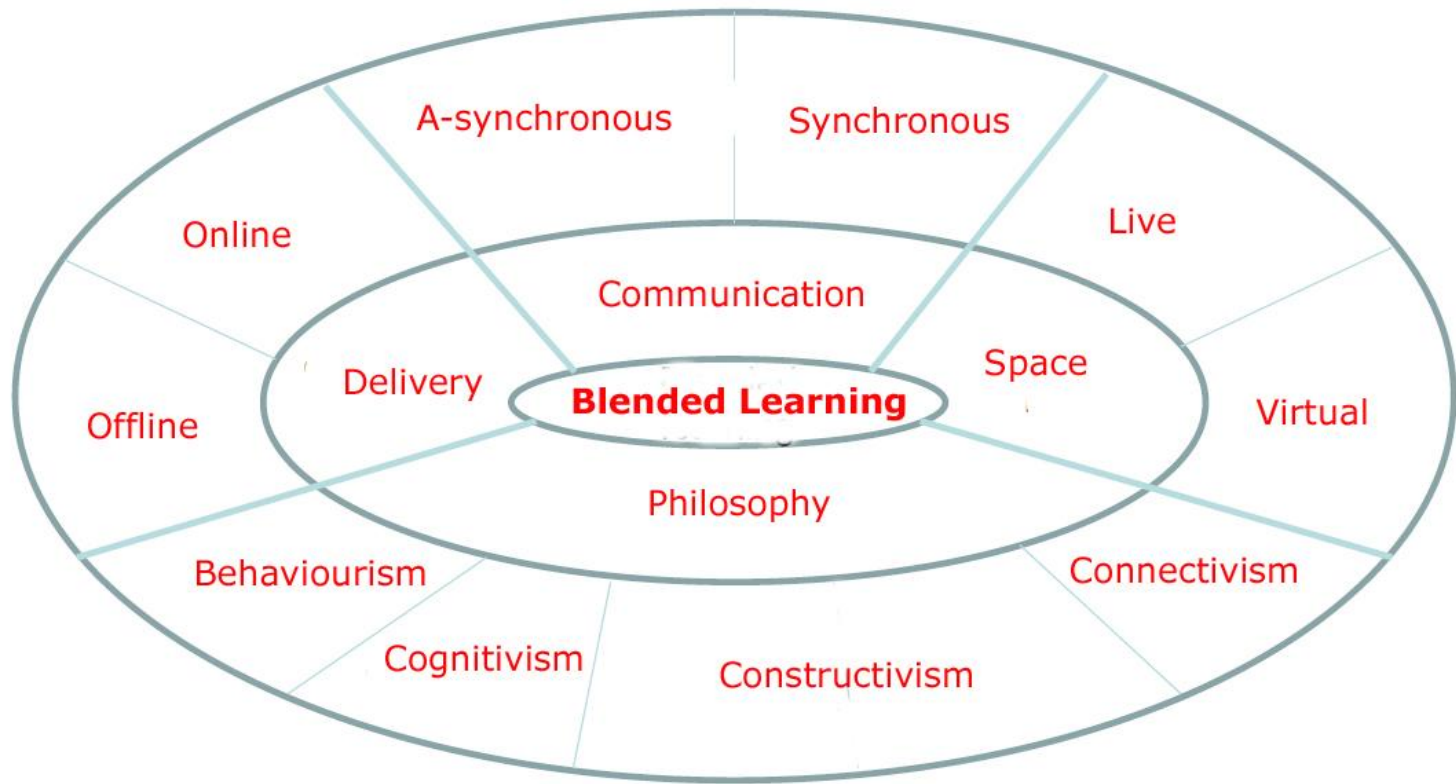
Connectivism

- Students creates connections and develops a network

Blending options:

- Use of internet, wiki, instant messages

Summary





How to design Blended Learning?



Implementing Blended Learning

1. Target group?
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.



Implementing Blended Learning

- Students
- Residents
- Specialists
- PhD students
-

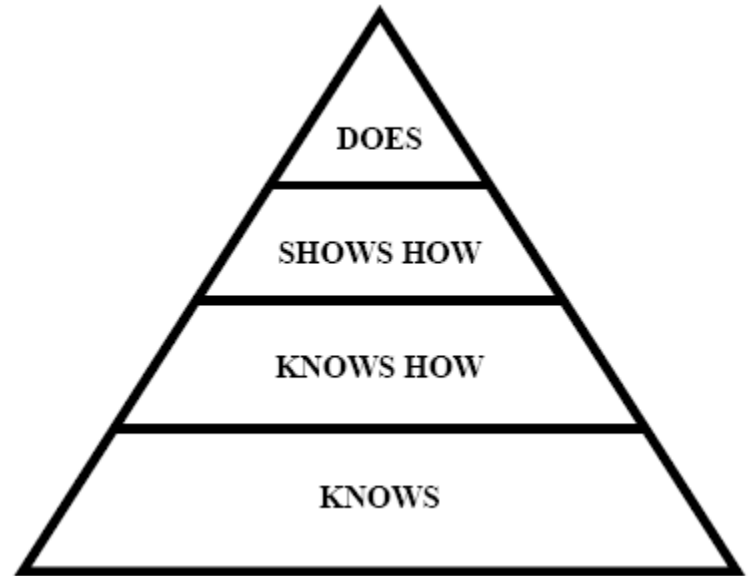


Implementing Blended Learning

1. Target group?
2. Learning goals of the module?
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

Implementing Blended Learning

- Knowledge?
 - Know
 - Knows how
- Skills?
 - Shows how
 - Does



Miller's Pyramid



Implementing Blended Learning

1. Target group?
2. Learning goals of the module?
3. What is the content?
- 4.
- 5.
- 6.
- 7.
- 8.



Implementing Blended Learning

- Topics
- Themes
- Skills
-



Implementing Blended Learning

1. Target group?
2. Learning goals of the module?
3. What is the content?
4. Knowledge or skills needed?
- 5.
- 6.
- 7.
- 8.



Implementing Blended Learning

- Knowledge basic sciences
- Basic skills
-
- Specific education philosophy?



Implementing Blended Learning

1. Target group?
2. Learning goals of the module?
3. What is the content?
4. Knowledge or skills needed?
5. Which test method to use?
- 6.
- 7.
- 8.



Implementing Blended Learning

- Goal of testing
- Content
- Type of test:
 - Multiple choice
 - Oral exam
 - Portfolio
 - Presentation
 -



Implementing Blended Learning

1. Target group?
2. Learning goals of the module?
3. What is the content?
4. Knowledge or skills needed?
5. Which test method to use?
6. Which instructional activities?
- 7.
- 8.



Implementing Blended Learning

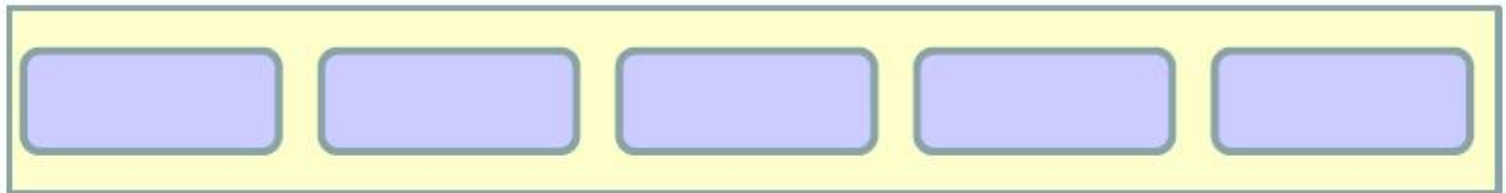
- Lecture
- Small group assignments
- Simulation
- Presentation
- Science project
-



Implementing Blended Learning

1. Target group?
2. Learning goals of the module?
3. What is the content?
4. Knowledge or skills needed?
5. Which test method to use?
6. Which instructional activities?
7. Plan the activities and the tests
- 8.

Implementing Blended Learning

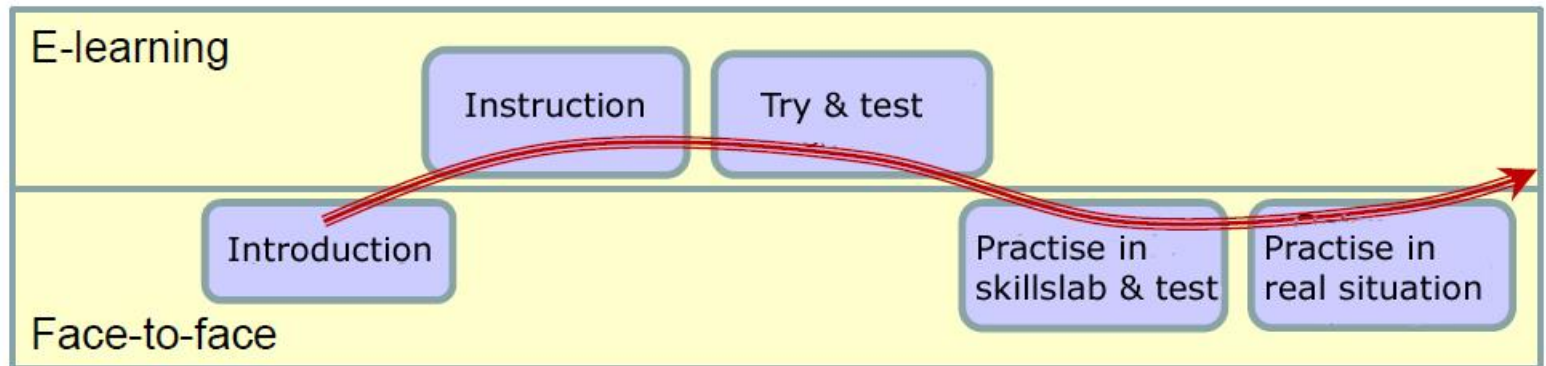




Implementing Blended Learning

1. Target group?
2. Learning goals of the module?
3. What is the content?
4. Knowledge or skills needed?
5. Which test method to use?
6. Which instructional activities?
7. Plan the activities and the tests
8. Design the 'perfect' mix

Implementing Blended Learning





Conclusion

- Blended Learning is a combination of face to face learning, E-learning and mobile learning
- Blended Learning is more effective for:
 - Explaining
 - Procedures

Global connections

- Association of Medical Education in Europe
www.amee.org

Journal: Medical Teacher
www.medicalteacher.org



- International Association of Medical Science Educators
www.iamse.org

Journal: Medical Science Educator
www.medicalscienceeducator.org



*Networking, annual meetings, publications,
collaboration*

Contact

Peter de Jong



p.g.m.de_jong@lumc.nl



editor@iamse.org

