

Effective Use of Interactive eLearning Techniques

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Disclosures

None

Objective

Discuss interactivity in eLearning with a focus on large groups

Key Questions

- What is interactivity?
- Does interactivity make a difference to learning?
- Does gain or confirmation in knowledge lead physicians to change and improve their practice?

Davis et al. (JAMA 1999)

Reviewed studies meeting following criteria:

- RCT of educational interventions
(eg rounds, conferences)
- Objective determination of performance in workplace or health care outcomes (eg patient adherence to medications)
- Over 50% of audience were practicing physicians

Number of studies found after formal search

- n=14 studies with 17 CE interventions

Davis et al. (JAMA 1999)

Looked at

- Didactic sessions (lectures with minimal audience interaction)
- Interactive sessions (used techniques such as role play, case solving)
- Mixed sessions
- Presence of enabling elements, eg educational materials

Definition of Outcomes

Positive

- One or more primary outcome measures related to physician performance in workplace or patient health care showed a significant change

Negative

- No change occurred

Davis et al. JAMA 1999

Results (17 interventions)

Didactic sessions (n=4)

- None positive

Interactive sessions (n=6)

- 4 positive

Mixed sessions (n=7)

- 5 positive

Davis et al. JAMA 1999

Meta-analysis 31 studies/61 interventions

Mansouri and Lockyer, 2007

Traditional passive CE approaches (eg. conference and lectures)

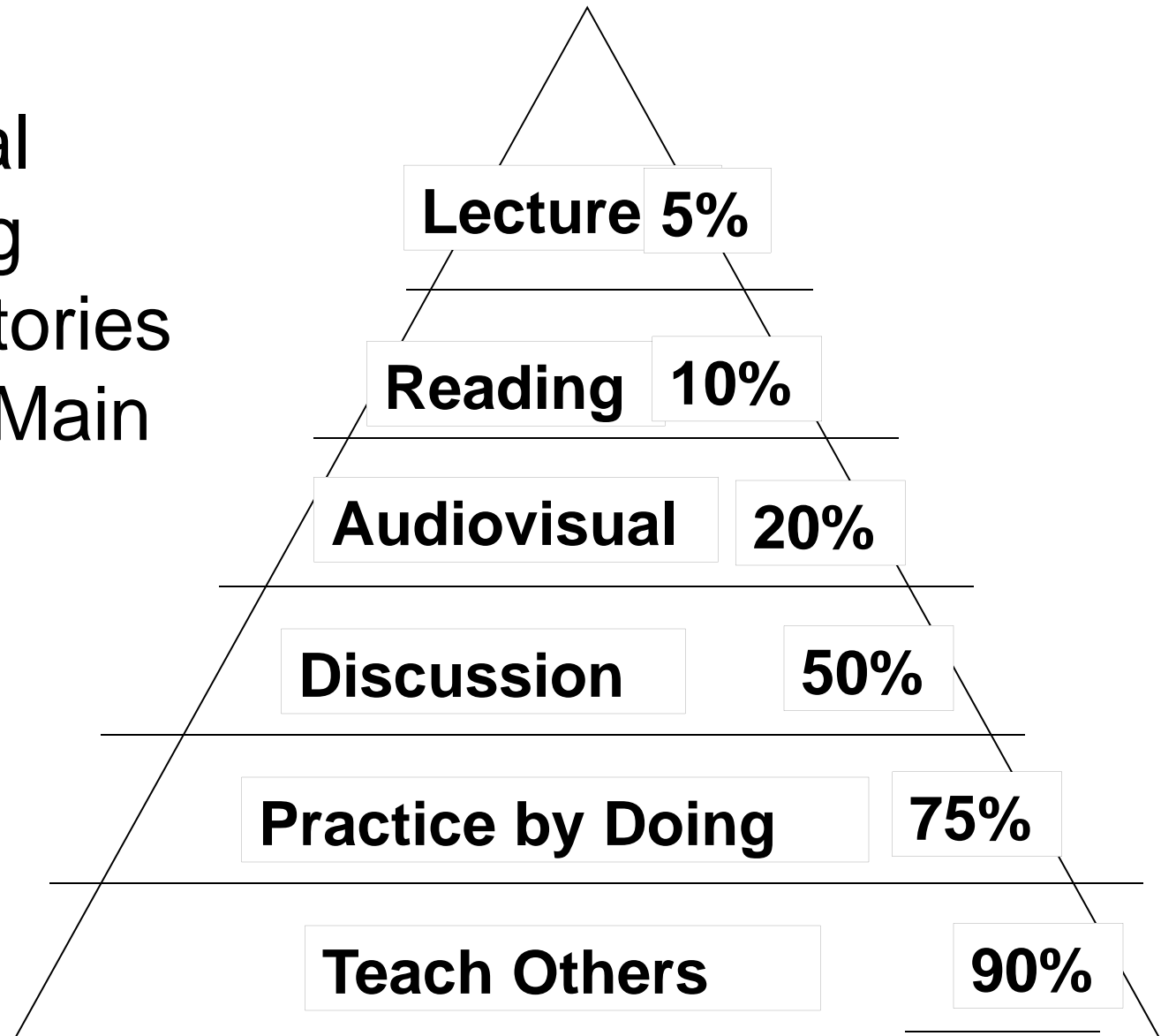
- May increase knowledge and awareness of issues
- Not associated with changes in physician performance or patient outcomes

Interactive approaches

- Increase effect size of CE interventions

The Learning Pyramid: Average Retention Rate

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Simple Interactive Face-to-Face Techniques for Large Groups

Examples

- Opening question related to clinical experience with a problem
- Quizzes with flash cards
- Show of hands
- Think pair share

Examples of Large Group eLearning Formats

- Videoconferencing
- Webcasting and webinars

Videoconferencing

- Two or more sites communicate
- Real time two way video and audio transmission
- Private (i.e., participating sites must sign and are identified)
- Examples
 - a) Television quality equipment
 - b) Skype
 - c) Google Hangouts

Webcasts

- Real time or recorded video and audio broadcast over the internet
- Limited two-way interaction
- Not private
 - a) Don't know who is listening or watching
 - b) Only know IP address in hindsight

Interactive eLearning Techniques for large groups

Very little literature on what works

Videoconferencing

Photos and video will be shown

Making videoconferences interactive with large groups?

- Safe approaches
- “High risk” approaches

Interactivity in Videoconferences with Large groups?

Safe approaches

- Live patient interviews with audience asking questions
- Preconference surveys with presenter reporting during rounds
- Presenter asks questions that will evoke audience responses
- Effective approaches to question period

“High Risk” Approaches

Examples

- Think-pair-share
- 1-2-4-All

See www.liberatingstructures.com
for examples of interactive techniques
(Under LS Menu)

Encouraging Interactivity During Question Period

Tips for videoconference rounds chairs and presenters

- Invite questions and comments “without” going from site to site
- Consider all sites as part of one virtual auditorium
- Avoid focusing on host site where chair is located
- Look at the camera, i.e. the audience

Other Interactive eLearning Techniques for Large Groups

Examples

- Ask questions, eg tests to be done for diagnosis and ask audience to write down the answer
- Email or text questions to host site

Evaluation of Interactive of Techniques is Essential

Conclusions/Key Messages

Interactive techniques for large groups

- Enhances learning in general
- Well defined for face-to-face learning
- Not well-defined for eLearning formats in large groups

Research

- Needed to determine effective interactive techniques for large groups

References

- Davis D et al. Journal of the American Medical Association, 282:867-74, 1999
- Mansouri M & Lockyer J. J of Continuing Education in the Health Care Professions, 27 (1):6-15, 2007
- www.liberatingstructures.com