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Instructional Design

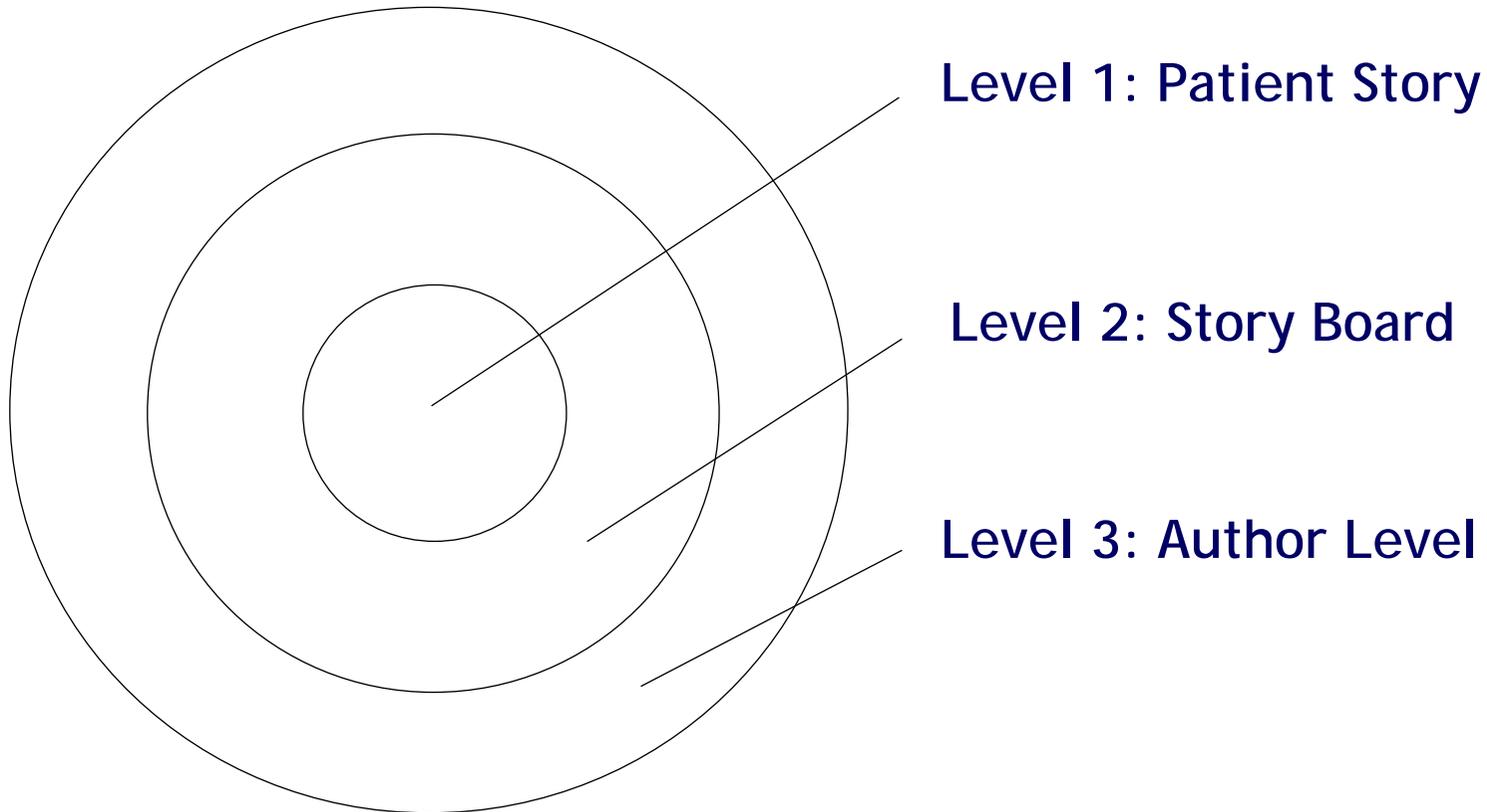### EASOM Summerschool
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Topics

1. Content Levels
2. Case Structure
3. Information Text/ Text Design
4. Multimedia
5. Questions
6. Answer Comment
7. Expert Comment

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1. Content Levels

Level 1: Patient Story

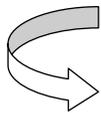Level 2: Story Board

Level 3: Author Level

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1.1 Level 1: Patient Story

= The core of a case

▸ Present as genuine as possible, didactical simplification if necessary (depending on target group)
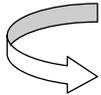
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1.2 Level 2: Story Board

Target: create interest and increase motivation, convey reality and complexity of clinical work

▶ Characterize realistic situations
▶ Put learner in the position of the responsible physician
▶ Keep a consistent perspektive
▶ Use humour reasonably and without exaggeration   .

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Further targets:

- Appreciating attitude towards others

- include aspects of communication and cooperation

▸ describe patient as an individual person and give him an appropriate name

▸ include psychological and social aspects of the patient´s situation

⇨ let the patient speak, include anamnestic conversations etc. (text/audio/video)

▸ characterize cooperative teamwork

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1.3 Level 3: Author level

= External frame of a case

▸ Possibility for a case author to address the learners personally (greeting, introduction, parting words)

▸ Space for (didactical) information from the autor to the learners
(preparation for a seminar, content introduction, summary (in the middle, at the end of a case), literature, learning objectives)

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2. Case structure

▶ Card name/chapter name: favor meaningful names over formal ones

▶ Number of cards/length of a case: for psychological reasons keep the length of the case appropriate .

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3. Information text

The information text leads the learner on all three levels through the case,

▶ as addressing to the learner
▶ as continuing the story board
▶ as presenting the patient story.

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3.1 Content Design

Understandable Speech
- ▶ Explain technical terms and abbreviations (depending on the target group)
- ▶ Synonyms: explain it when different terms describe the same thing
- ▶ Avoid too long sentences and connect sentences with meaningful conjunctions (thererfore, hence, thus, because,…)

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3.2 Typographical Design

Font

▶ Choose size and typeface in consideration of comfortable reading

▶ Don´t use too many font styles

Optically recognizeable structure

▶ structured presentation (breaks, listings, headings, accentuation)

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4. Multimedia

Targets:
- increase motivation
- support visual learning
- realize learning objectives

4.1 Media selection

▶ high grade and meaningful quality

▶ as realistic as possible

▶ also welcome: media that simply visualizes/illustrates

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4.2 Didactical usage

▶ Present an appropriate amount of media

▶ Use media in regard to the defined learning objectives

▶ Embed media into a question
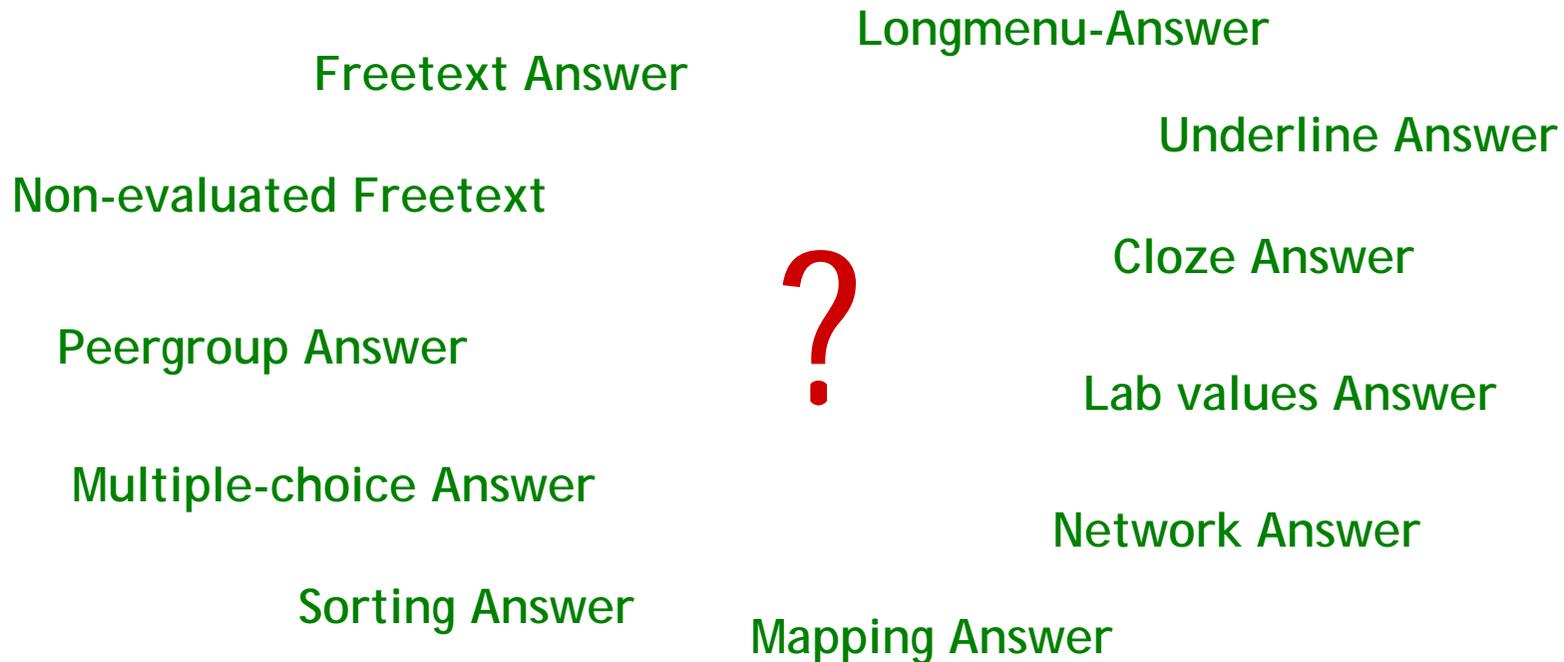
▶ Videos: Offer a text as an alternative   .

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5. Questions

2 Targets can be distinguished:

▸ reactivate knowledge

▸ train differential diagnostic reasoning and therapeutic procedures   .

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5.1 Choice of Answer types

Freetext Answer

Longmenu-Answer

Underline Answer

Non-evaluated Freetext

Cloze Answer

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Peergroup Answer

Lab values Answer

Multiple-choice Answer

Network Answer

Sorting Answer

Mapping Answer

-> Use a variety of different answer types to increase motivation

-> Answer type has to be suitable for the type of question

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Evaluated freetext Answer

▶ Suitable for closed question with defined answers/catchwords

▶ Enter synonyms thoroughly

Non-evaluated Freetext Answer

▶ Suitable for open questions when answer is difficult to encode

▶ Good to initiate brainstorming

Peergroup-Answer

▶ Suitable for question that have no clear answer

Long-Menu Answer

▶ Active knowledge is necessary but the answer possibilities are restricted

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Multiple Choice-Answer

▶ Distractors must not give a hint to the correct answer (plausibility, grammatical equality, no vague formulation)

▶ Avoid negative formulation and double negation

-> Use the option to tell the number of correct answers accordingly to the desired difficulty .

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Sorting Answer

▸ to sort according to size, course, order, likelihood, chronology etc.

▸ Only possible when there is a definite order!

Mapping Answer

▸ To assign e.g.:

- terms and structures

- symptoms and diagnoses

- diagnoses and therapies

- ...

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Underline Answer

▶ To distinguish what is correct and false, important and
   unimportant (e.g. anamnestic conversation), ...

▶ Possibility to sort answers

Cloze Answer

▶ active knowledge is demanded (similar to freetext)
   -> use only with definite answers   .

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Lab values answer

There are two different tasks:

▸ Asking for lab values: Which lab values have to be requested? (similar to multiple choice answer)

▸ Interpretation: Which variances do vou expect?

Network Answer

▸ Advocate differential diagnostic reasoning

▸ Complex task, therefore give exact instructions to the learner

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5.2 Feedback: Answer Comment

▶ „As short as possible, as long as neccessary"
▶ Structure the text
▶ Comment <u>all</u> correct and false answers
▶ Communicate the expert knowledge which is relevant to choose the correct answer, anticipate potential errors in reasoning

▶ No demotivating statements!
▶ Here is not the right place to give information that elaborates the story board!

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6. Expert Comment

▸ Presentation of knowledge that exceeds
  - the knowledge necessary to work on the case
  - the knowledge necessary to reach the learning objectives
    (extensive information, but also base knowledge)

⇨ A separate expert comment helps to ensure the continuity of
  the storyboard

▸ Important: Give a hint on the learning card when an expert
  comment is available

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Have a successful
case authoring!