

Diagnosing and treating virtual patients referring to evidence-based recommendations.

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Strategies for effective guideline-implementation

Objectives:
Putting evidence into practice remains a major challenge for the german health-system. Although the number of high-quality evidence-based guidelines for physicians is constantly increasing they are still insufficiently used and accepted by german physicians. Different strategies for a better guideline-implementation have been evaluated such as: Publishing short-versions of guidelines as articles in Journals, translating them into non-medical language (Patient-guidelines) or transforming their key-messages into e-learning-contents. Experienced in problem-based as well as e-learning Witten/Herdecke University evaluates a new didactic approach: Case-based e-learning.

Seven Cases

Methods:
Seven case-based learning-modules were developed. They represent careers of virtual patients as they occur in medical practice with conditions like Dementia, Hypertension or Asthma. Their key messages refer to a corresponding evidence-based guideline.

Features of e-learning modules:

- Guideline based contents
- Common situations of decision making
- 10 to 20 consecutive windows per case
- Correct answers are displayed right after users answers
- Reference to guideline in commentary
- Single- / Multiple Choice, Table- / Drop Down allocation
- "Low-tec" standards to include all users
- Each case is followed by 10 questions; if answered correctly (70%), users acquire one CME-point

Two of these learning-modules were tested in a pilot study by 13 physicians evaluating ten topics. Results were displayed on a five point Likert-scale (see figure 2).

Web-Adresses:

Knowledge Network: www.evidence.de
Online-CME: www.medizinerwissen.de

The screenshots illustrate the user interface of the 'Dementia' case-based e-learning module. It shows a navigation menu on the left, a main content area with a case description and a patient scenario, and a question section with a multiple-choice format. A 'Teilnahmebescheinigung' (Certificate of Participation) is also shown at the bottom, detailing the user's progress and the module's accreditation.

figure 1: Screenshots from the case „Dementia“

More multimedia? More clinical relevance?

Results:
The case-based learning-modules were well accepted by the participants. More than 85 percent rated this kind of learning/knowledge-transfer excellent or good. 90 percent would choose this new didactic approach again. However, participants would have appreciated more media, more options for interaction and more proximity to clinical practice (see figure 2). Based on many useful comments of the testing physicians all online case-based learning-modules were customized and improved.

Pilotstudie " Casebased E-learning " n=13

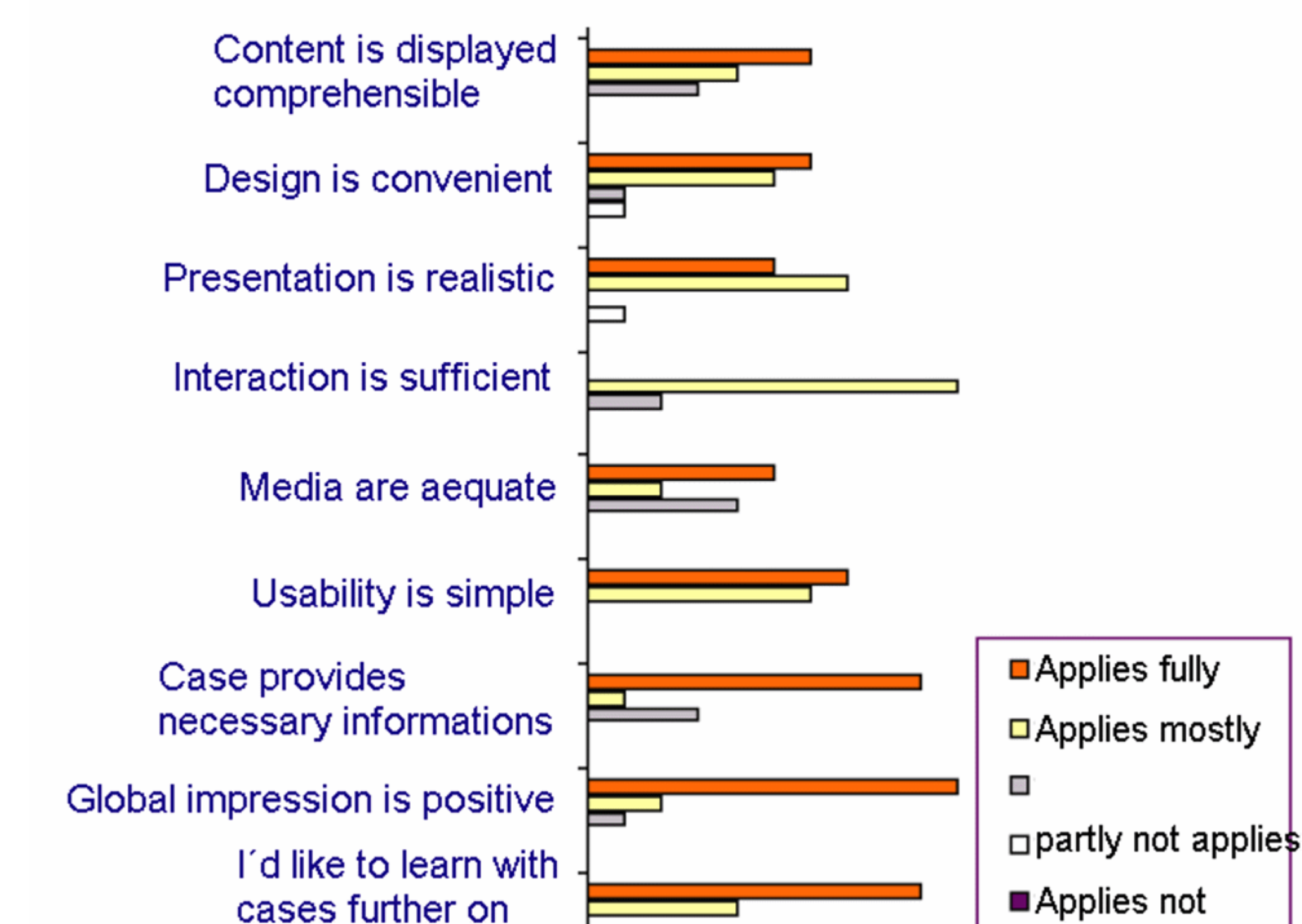


figure 2: pilot study (n=13)

Next steps

Conclusions:
Evidence- and case-based e-learning might be one additional instrument to support guideline-implementation in the future. Testing physicians appreciated the realisation of this concept but suggested more „multimedia“, „interaction“ and relevance for clinical practice. Further research is required to learn about the influence of different e-learning-concepts on daily medical practice.

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