

Who motivates and promotes learning better?

The appearance of virtual figures in computer-based tutorials

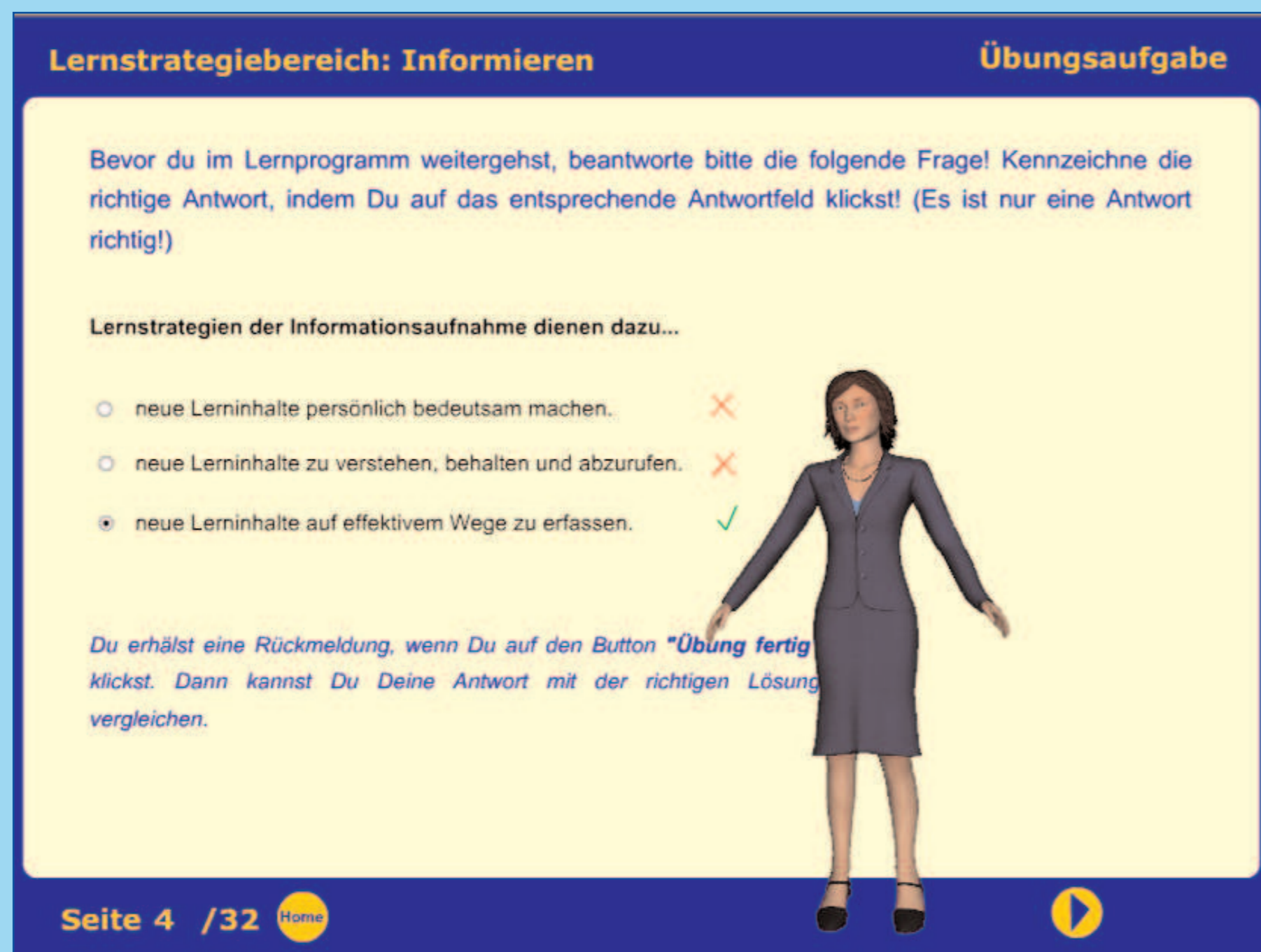
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Introduction

There is a huge variety of pedagogical agents which should promote learning in virtual environments. Not only do these agents differ in the functions they fulfil and their sophistication, the appearance of these virtual figures is also multifarious (Moreno, 2005). The appearances of the agents can be humanoid or not for example. But which appearance has more motivating effects and promotes learning better - a humanoid or a non-humanoid appearance?

The computer-based tutorial

The computer-based tutorial introduces a learning strategy that helps to identify and highlight important text information. The tutorial consists of 32 charts. The information is presented written on the left and it is spoken by a recorded voice, too. On the right side of a chart the virtual figure can be presented. The learner is able to go forward in the film by clicking on a button. Not only knowledge should be transferred. The learner has also to answer questions and to complete tasks in the tutorial. Feedback is given written and audibly for that. The agents' job is to promote the transfer of the learning strategy and the feedback for answered questions and completed tasks by showing gestures.



Hypotheses

- H1: The appearance of the virtual figure has impact on the learners' current motivation and their learning achievement.
- H2: A virtual figure motivates and promotes learning better than none.

References:

Bendel, Oliver (2004). Merkmale, Ziele und Funktionen pädagogischer Agenten. In: Bekavac, B., Herget, J., Rittberger, M. (Ed.). Informationen zwischen Kultur und Marktwirtschaft. Proceedings des 9. Internationalen Symposiums für Informationswissenschaft (ISI 2004), Chur, 6.-8. Oktober 2004. UVK Verlagsgesellschaft mbH, Konstanz, p. 213 – 226.

Moreno, Roxana (2005). Multimedia Learning with Pedagogical Agents. In: R.E. Mayer (Ed.). The Cambridge Handbook of multimedia learning. Cambridge University Press, New York, p. 507 – 523.

The Experiment

The Sample

Finally 45 subjects should participate a training session. By now 28 persons already did, 15 women and 13 men. There are two experimental groups (Group 1 and Group 2) and one control group (Group 3). The experimental groups' training is additionally assisted by one of the virtual three-dimensional figures which use the speaker's voice. Group one is faced with a humanoid-looking woman and group two with a cartoon-like rabbit.



Procedure

1. Answer a questionnaire that collects personal data, previous knowledge and current motivation
2. Attend the training session
3. Answer a questionnaire that collects data about the user's mood and experiences in the learning environment and the acquired strategic knowledge.
4. Cope with a text-task
5. Answer a questionnaire which asks for the knowledge the learner acquired while working on the text

First results

