

Cologne, March 2006 – „*Studying is not game, but serious effort*“ – Aristotle’s words seem to have lost nothing of their validity even almost two and a half millennia later, referring to what most students believe. But should not studying be entertaining and playful, too? ELEKTRA, a research project unifying nine top-class partners from six European states, unequivocally replies with „YES!“.

95% of all German adolescents between 12 and 19 years are users of a PC. Doing homework is only the third priority, while the PC is used for computer games more than twice as many times. Learning and playing – two hitherto incompatible activities, learning being disadvantaged against the colourful and exciting virtual games.

This is not necessarily the case, claims the interdisciplinary research team of ELEKTRA. The advantages of both activities can be united. ELEKTRA’s educationalists, cognitive psychologists and neuroscientists integrate psychologically and pedagogically approved learning concepts into exciting and challenging computer games. Homework shall become a more exciting experience. The adventures and challenges of the fantasy worlds create motivation, interest and awareness, whereby the scientists expect a more intensive learning experience and therewith an improved knowledge transfer for the adolescents.

Modern computer games let their players enter the virtual worlds by offering a high degree of interactivity and realism. They turn the user into the active protagonist and hero, who can act using more and more complex game features. Furthermore, the “gamer” is embedded in a fascinating universe having its own rules and residents to be discovered. By his own actions and the involvement of the player into the framework stories the game becomes important and meaningful to him.

Digital learning environments can benefit from the wide experience of modern computer games by providing holistic learning experience – since pure information does not become knowledge until it is imparted within a context and can therewith be experienced. However, the mystery of these games is closely related to learning: it is essential to meet a challenge and a task, to solve problems, to improve and of course to be awarded. One plays a game in order to win. This is precisely how the human brain can be motivated to learn: We want to understand ourselves, explore and understand the world around us and raise the challenge – if we succeed, we obtain comprehension and self-confidence. And we want to discover and know even more.

Further aspects of learning, which are analysed by the neuroscientists of the ELEKTRA research team, is context learning as well as multimodal learning and the associative mindset: The more views and approaches to a topic the learning environment provides, the better the learning effect and the deeper the understanding. Furthermore, the rules of the game and the principles of computer games and simulations are automatically learned by simply playing. That is exactly what the brain is doing while learning – it abstracts general patterns and rules from concrete situations.

Based on scientific learning concepts and new research results of the European team about learning, the computer game designers and programmers of ELEKTRA create a virtual knowledge environment, taking advantage of the attraction of modern computer games. Learning and playing are linked multi-disciplinarily to each other and for the first time, an adventure game enabling holistic learning and complex knowledge representation is produced.

Chaired by the “Laboratory for Mixed Realities” (LMR) in Cologne, well-known partners, such as the Trinity College Dublin (IRE), the universities of Graz (AT), Bremen (GER) and Liège (BE), as well as the ORT France cooperate to develop this innovative concept, which will be refined / integrated in a high quality “State of the Art” computer game by the LMR and Testaluna (IT). Further partners in this consortium are Klett (GER), as well-known school books publisher responsible for learning concepts and material, as well as BROADVIEW TV (GER) as the marketing and PR expert.

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For further information please contact us or visit our project website, which will be launched soon:

www.elektra-project.org

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