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Knowledge Transfer with New Media –
Investigations for the Example of Low Energy and Solar Architecture

multimedia learning environments; new media; knowledge transfer; evaluation; criteria
catalog; low energy architecture; solar architecture

What does the most profound knowledge serve for if it never leaves the ivory tower of
research and never reaches society’s everyday life? The dissertation investigates for the
example of low energy and solar architecture how new media can be employed to bridge the
gap between research and everyday life. Special emphasis is put on active learning,
constructivist learning theories and Gestalt laws laying ground for knowledge transfer.

In several categories multimedia learning environments are classified, e.g. according to
learning paradigm, potential for interaction and program structure. Possible application ranges
and resulting technical and didactic demands for learning environments are described. Based
on existing criteria catalogs an enhanced check-list for the evaluation of learning
environments is developed and presented.

A broad sample of examples of multimedia learning environments for low energy and solar
architecture is described with learning goals and target groups as well as contents and learning
methods. Selected examples are investigated in detail with the enhanced check-list. With
comparative studies the transfer of technical and didactic possibilities of new media into
practical application is investigated. The results of these studies reveal strengths and
weaknesses of learning environments, leading to guidelines for successful future development
of multimedia learning environments.