

# e learning — new learning media

## a

### Attention

Attention means a selective examination. It is thereby possible to relieve the consciousness. This constant **selection** decides about the information the recipient turns to or not. The human central nervous system can receive  $10^9$  bits per second (binary digit) but can only process about  $10^2$  bits. Two factors determine the regulation of attention, the contrastive pairs: known/ unknown and important/ unimportant (Roth,1995).

## C

### Communicative competence

Basically, means the communicative competence the understanding between people. The message as an object of communication is always mediated through media (language as a media), thus are the capabilities of media use and media reception necessary **prerequisites**. The modality of the medium implies that all five senses are addressed. Communicative competence is a requirement for the development of communities and the society in general as well as a requirement for modern individual self-organized learning processes such as **e-learning** and network learning. Human can only develop communicative competence through cooperative learning as in communities and the society.

### Communication practices

The transmitter encodes and transmits a message which will be then decoded by the receiver. In the course of the communicative interaction the roles of sender and receiver will be exchanged. One can differentiate between **3 forms** of communication:

- Verbal communication:** language as codes of communication in many variations (national language, dialect, jargon)
- Paraverbal communication:** evaluation of what is said - the speaker's mental state - mode of speaking as for instance speech intonation, -speed and vocal range
- Nonverbal communication:** facial expressions, gestures, posture, and even hair style, clothing, jewelry „deliver as complete communication codes indirect information about the sender and complement or modify the verbal statements“ (F.Fellenberg/N.Döring, 2006)

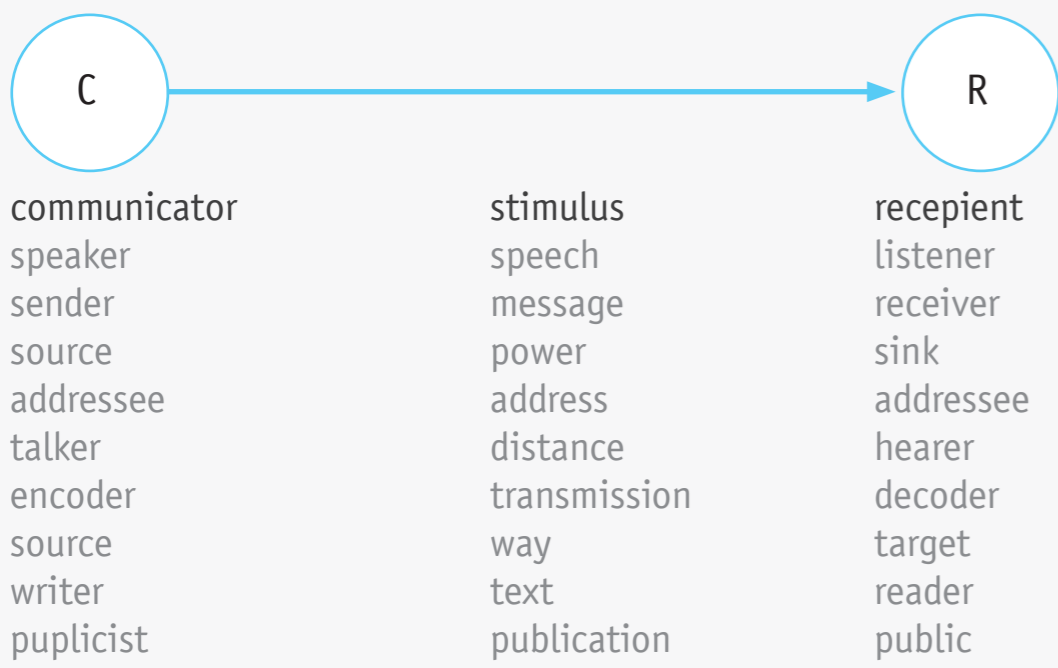


fig.: simplest communication model

## i

### Information

Information is often understood as **disclosure** or **message**. In the journalistic sense, information is a **novelty** or **surprise**, therefore, knowledge that was hitherto unknown. An event is the more informative how surprising it is. In communication theory, means information a **difference** like according to Shands: „anything that makes a difference“ (Shands, 1967). Information is all possible forms of knowledge, first and foremost knowledge and training necessary for continuation of actions or thought processes.

### Information transfer

The communicator cannot transmit everything to the recipient on a 1:1 basis. The recipient can construct information only relational on the base of his own expectations, experiences and attitudes. The comprehension of others statements and writings implies therefore **the own interpretation**. We think to understand and are sometimes forced to rebuild our interpretation due to a subsequent statement. Understanding is therefore only possible until further notice. The verbal communication transfer differs in this way from the technical information transmission.

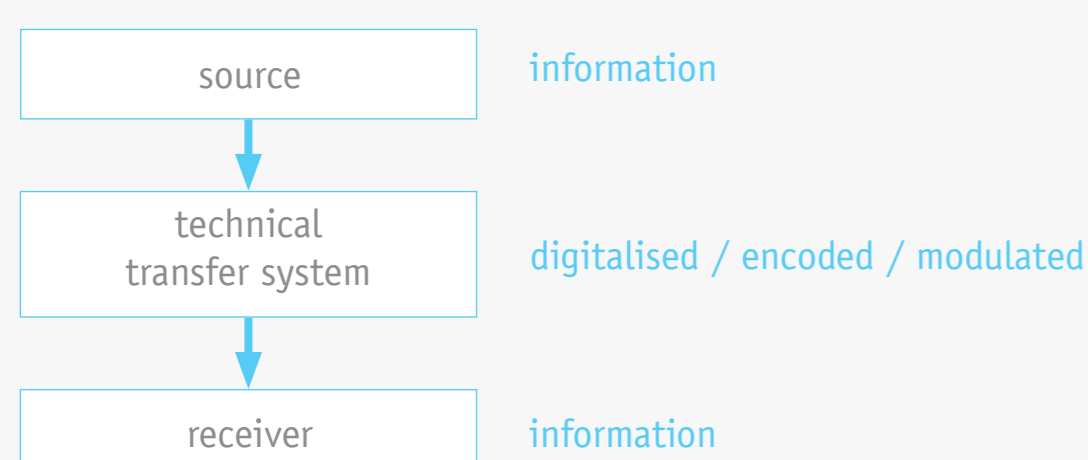


fig.: information and transmission system

## L

### Learning

People can learn. In human history allows learning variations, individual lifestyles as well as the transfer of selected culture, thus learned skills. But it has always been sought for procedures to support and develop formalized learning thus learning in a not personalized way - for instance in the form of textbooks, self-study programs as well as the e-learning. **Learning techniques** as for instance copying, oral repetition, mind maps, keyword lists are recommended since support curiosity, recognition, additional associations through pictures, sounds etc. and thus promote in the end the learning activity. However, the learning of certain behaviors and thought contents is favored in terms of maturation processes. Math can be learned when an understanding of numbers is given. Human learning is an innate ability to understand the world. Learning takes place as long as the human thinks, so people can learn all lifelong.

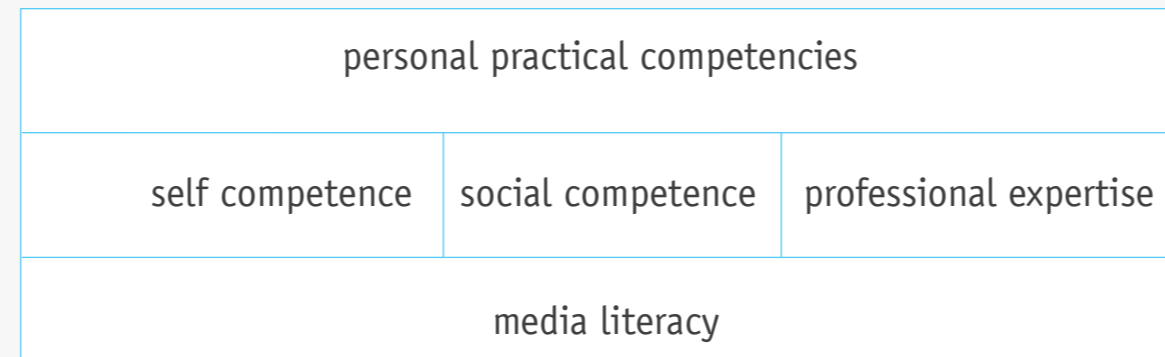


fig.: media literacy a part of personal competences

## m

### Media Literacy

Media literacy as a concept combines the independent dealing with constant new media developments and the support of a self-responsible competent media use. According to Backe are **basic skills** in the process the critique of the media, media studies, media usage, as well as active, creative media design.

- Criticism of the media:** analytical discussion of media services and capacity for self-reflection
- Media Studies:** combines general knowledge of media as for instance the media systems and their functionalities
- Media usage:** skills of reception and ability of autonomous usage (for example: online banking)
- Media Design:** is the expertise to use media for the own concerns and thus to participate in social processes

media literacy			
reception		goal orientation	
<b>media critique</b>	<b>media studies</b>	<b>media use</b>	<b>media design</b>
1. analytic 2. reflexive 3. ethical	1.informative 2.instrumental - qualification	1.rezeptive, to apply 2.interactive, to offer	1. innovative 2. creative

Media literacy is changing in terms of medium, content, target group, social as well as technological challenges. It thus becomes a life-learning task.

	mono...	multi...
<b>medium</b>	<b>monomedial:</b> · book · PC and Desktop	<b>multimedial:</b> · PC + CD-ROM-Player · book + CD, DVD
<b>encoding</b>	<b>monocode:</b> · only text · only picture · only numbers	<b>multicode:</b> · text with picture · grafic with legend
<b>sensory modalities</b>	<b>monomodal:</b> · only visual (text, picture) · only auditory (speech, music)	<b>multimodal:</b> · audiovisual (video, CBT-programms with audio)

CBT = Computer Based Training (e-Learning)

fig.: matrix to differentiated description of media offerings

teaching concept is a structuring aid to developing multimedia e-learning software



fig.: work steps of teaching

## p

### Education and media

The interaction between people or the person that requires formation and education requires a common medium. This may include sounds, gestures, emblematic objects or technically considered scripts, books, pictures, radio, television and computers. Language is in all its manifestations a fundamental medium. Educational processes are determined out of the logic of the medium as for instance schools broadcasting and TV, study materials, self-learning computer programs and thus e-learning. Thereby, processes will be designed, well-known processes reevaluated or new will be found such as computer-linked texts, interactive learning and multimedia learning. New media are all texts, images and sounds in digital form. Learning media have a number of tools for editing content that consist of segments such as exercises, games, simulations, animations and hypertexts. **Learning effects** occur by using tools, as for instance by editing, creating, storing, or transmitting media. Media cause integration processes. Thereby, it will be examined which contents are approved. Furthermore, it will be analyzed which skills are needed to deal appropriately with the media, or which need to be utilized in an educational process (teaching / education). Educational processes are examined by their impacts, effects, side effects and political, social as well as health aspects. Thereby is the interdependency of content, objectives, methods and media obvious. According to Volker Ladenthin have educational theories caused the recognition, design and invention of the media. **The future** of education and training is not determined through the education itself, but rather through an increasing orientation of the society concerning information technology and multimedia (Klaus Haefner, 2002).



fig.: types of e-learning software (Bodendorf, 1990)

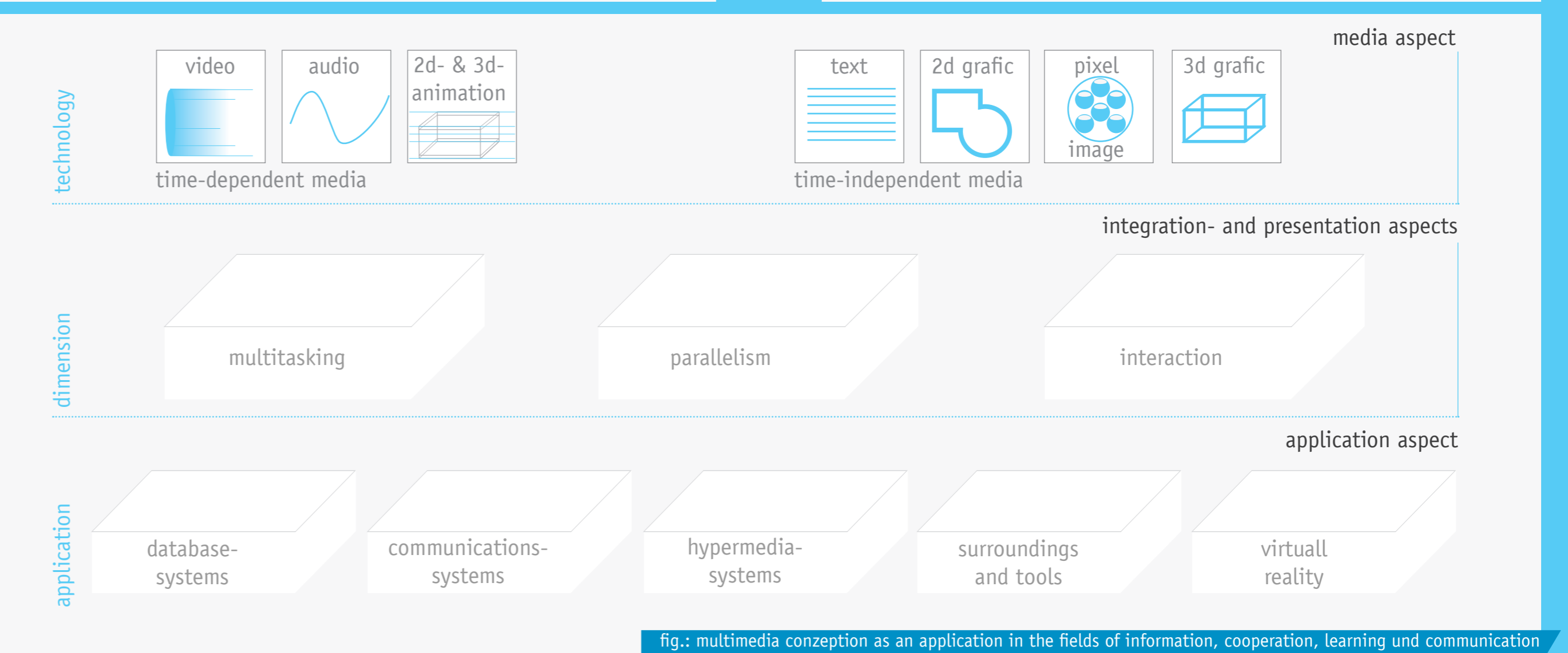


fig.: multimedia conception as an application in the fields of information, cooperation, learning und communication