English summaries

Laura Walk: **Movement shapes the brain: findings of brain research bearing relevance to learning** (pp. 27–29)
This article provides an overview of what influence athletics and movement have on brain processes. Based on several studies, it is shown that various forms of movement cause numerous types of adaptation at the cellular, molecular and neurochemical level which influence emotional, social and cognitive processes. It is also noted that by the same token there are gradual differences in these factors at various ages in life.

Gerhard Schaefer: **Weaving the 'carpet of memories': a zigzag movement between association and knowledge** (pp. 30–33)
This article presents a didactical strategy in the form of »zigzag learning« which works on the basis of a constant linkage between free associative learning elements (sporadic learning) with a logically structured content (systematic learning). A »carpet of memory« is woven in this zigzag movement which is propitious for learning efficacy. The strategy is presented using an example from school biology class, but can be easily adapted to forms of teaching conveying knowledge in adult education. The strategy has been developed on the basis of brain biology research.

Rolf Arnold: **Learning as a way out of »self-paralysis«** (pp. 34–36)
In this article learning is understood as an 'emergence'-like movement in which people put their own patterns of learning into movement. This movement is illustrated using the example of South American businessperson. Special attention is devoted in the article to the learning movement is inhibited by: experiences of the past, recollections and emotions. The key to overcoming this 'self-paralysis' is a method of targeted cognitive self-observation which the author understands as a variation of individual emotional competence. For the area of education, this once again poses the challenge of making it possible for individuals to successfully 'emerge'.

Bernd Heckmair/Werner Michl: **Movement and experience as the breeding ground of learning** (pp. 37–40)
From the perspective of experiential pedagogic the two authors develop an outline for experience and action-oriented practice in adult education. They examine in detail the hypotheses confirmed by brain research that the body is the actual site of human learning. This allows them to create the basis for a didactical setting conducive to learning which is heavily based on physical body-related experience in nature and in the community.

Klaus Heuer: **The forgotten walking stick. A find from the legacy of Franz Pöggeler** (pp. 44–45)
This article presents an object from the historical archive of the Deutsches Institut für Erwachsenenbildung – a walking stick which has been passed down by Robert von Erdberg, Walter Hofmann and Rudolf Reuter among the protagonists of the »Hohenrodter Bund« and was found in the legacy of Franz Pöggeler. By tracing how this object was handed down, it is possible to illustrate continuities in the history of adult education.

Bärbel Fürstenau: **Concept maps in the teaching-learning context** (pp. 46–48)
Concept maps are understood to mean two-dimensional structural presentations of knowledge or information in the form of a network. This article explains the principle of the concept map, including in relation to the mind map, and sums up results of teaching-learning research for its use. Readers find out what purposes concept maps can be used for (e.g. knowledge diagnostics), how their learning efficacy is assessed and what factors can boost this.