LEARNING THEORIES

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The knowledge about learning is young compared to other sciences. Research of learning began at the end of the 19th Century with Ebbinghaus, who in self-experiments observed his forgetting curve. More than one hundred years of scientific research has been done since then. The following graphic gives an overview (Fuchs 2005)

	Germany		Russia	United States			Switzerland
1885	Neuro science	Form psychology	Reflexology	Behaviorism	Pragmatism	Humanistic psychology	Cognitive development theory
	Ebbinghaus 1850-1909 Forgetting curve ➡ **Remembering through repetition**				James 1842-1910 Foundations of modern psychology 1890		
		Köhler 1887-1967 "Aha-experience" Restructure Experiments with primates: Wertheimer 1880-1943 Insightful learning and understanding Experiments with perception and cognitive problems ➡ **Understanding through restructure**	Pawlow 1849-1936 Signal learning Classical conditioning. Experiments with dogs ➡ **Respond to signals**	Watson 1878-1958 Thorndike 1874-1949 Learning on success Trial and error Law of effect and frequency Skinner 1904-1990 Reinforced learning. Experiments with cats, rats, pigeons ➡ **Form and support behavior**	Dewey 1859-1952 Learning is practical, automatic acting and searching 'Laboratory School' ➡ **Learning by doing and reflecting** **Problem solving**	Rogers 1902-1987 Person changing and pervasive learning ➡ **Participation, holistic learning, learning to learn**	Piaget 1886-1980 Assimilation and accommodation, elaboration, watching and interviewing children at learning ➡ **Thinking as inner action**

<table>
<tr><th></th><th colspan="2">Germany</th><th>Russia</th><th>Untied States</th><th>Switzerland</th></tr>
<tr><td>1960</td><td colspan="4">Cognitive turn</td><td></td></tr>
<tr><td></td><td>Atkinson/Craik/ Baddeley/Klintsch/ Roth/Markovitsch and others.

Multiple memory model, memory, processing depth

➡ Information processing</td><td>Klix und Dörner

Algorithms, heuristics, strategies

Met cognitive knowledge, control processes

➡ Problem solving</td><td>Wygotski 1896-1934 take effect

Social-cultural learning

➡ language and social bound learning</td><td>Müller/Galanter/Pribram:

Plans and strategies, TOTE-Model

Bruner
Structural, discovering learning

➡ Discovery

Bandura
Social-cognitive learning theory: Model- and imitation learning, self-efficacy research

➡ Learning by watching
➡ self-efficient learning</td><td>Aebli/Steiner/ Reusser

Cognitive structure
Semantic networks

➡ Understanding, elaborating, met cognition</td></tr>
<tr><td>1990</td><td colspan="2">Constructivistic influences</td><td rowspan="2"></td><td rowspan="2">Radical constructivism

Maturana/Varela/von Foerster/ Watzlawick/Luhmann/Schmidt/ G. Roth/Glasersfeld

Knowledge as result of subjective, observational and method-depending awareness action. Tying to the tradition of ancient skeptics

➡ Knowledge and learning is construction, that proves itself in life</td><td rowspan="2"></td></tr>
<tr><td></td><td colspan="2">Critical-subjectivistic learning theory

Holzkamp

➡ expansive learning</td></tr>
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Literature

Bodenmann/Perrez/Schär/Trepp (2004). Klassische Lerntheorien. Bern: Huber
Fuchs, Carina (2005). Selbstwirksam lernen. Bern: hep
Gasser, Peter (2000). Lernpsychologie für eine wandelbare Praxis. Aarau: Sauerländer