#### **Research Article**

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# Conceptualizing Success And Performance for Adult Learners: Merging the Contexts of Adult Educationa nd Professional Training

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**Abstract:** This article examines the concepts of learning performance and learning success within the context of adult learners. The focus is on how these concepts have been defined in the literature, as they are anchored in different didactic theories and how they can effectively be applied to learning contexts with adults. Due to the divergent approaches and definitions in the literature, this article compares, categorizes and merges the literature, providing an overview and recommendations for practice. The overview refers to a critical examination of constructivism based approaches compared to other didactic learning theories such as cognitivism or behaviorism. Adult education presents itself as a dynamic area that can develop progressively, in both the professional and educational environments. Nowadays, it is important to be able to collect and use information quickly. This makes it possible to gain an advantage and deal with problems or questions in more focused ways. One must deal with increasing demands and a higher number of competitors not only in professional life. A synthesis of the literature can be presented by examining the terms of learning performance and learning success in different approaches, regarding implementations, definitions, historical developments as well as continuative and connected concepts, tendencies or point of views.

Keywords: learning performance, learning success, adult education

#### Introduction

Learning performance and learning success play an important role in adult education. In professional trainings, in consultancy and, of course, in school education – recording, interpreting, converting and application of information is a decisive aspect. Gaining new knowledge is strongly linked with learning performance and learning success. In order to present results, learning performance and learning success will be considered in connection with constructivism, cognitivism and behaviorism. For this purpose, it is useful to know the core elements and important representatives of the learning theories, analyze possible weaknesses and figure out differences. In further course, definitions for learning performance and learning success will be presented. After that, all contents will be linked together and ways will be shown how learning performance and learning success can be promoted based on the mentioned theories.

# Aim of the Study

The aim of this article is to show scientifically-based learning theories, such as constructivism, behaviorism and cognitivism, in relation with learning success and learning performance. The question arises how

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these didactic approaches influence or define learning success and learning performance. On the basis of constructivist, behaviorist and cognitive approaches, attempts will be made to adapt and improve learning success and learning performance.

### Methodology

This article is based on literature review, which analyses possible correlations between didactic learning theories and the aspects of learning success and learning performance. It will be shown how constructivism, behaviorism and cognitivism effect learning performance and learning success.

#### **Methods and Materials**

In order to be able to present corresponding results, this section deals with definitions of classical learning theories and the concepts of learning performance and learning success. Furthermore, the main representatives, differences and weaknesses will be shown.

Learning, in a constructivist way, is not the converting of information; instead, it is much more than its (subjective) interpretation. This interpretation is much less determined than in the cognitive psychological models by structural and procedural parameters of the cognitive apparatus, but rather by the current situations, contexts and preconditions under which it takes place (cf. Hasselhorn, Gold, 2009, p. 221). Furthermore, constructivist learning is not controllable from the outside. Therefore, learning processes can only be foreseen in a limited way. Whether instructions in teaching-learning situations are impossible or even harmful, is quite controversial. Moderate constructivists assume that learning can be initiated and facilitated from the outside, that is, by designing the learning environment (cf. Hasselhorn, Gold, 2009, p. 221). That every teaching must assume existing knowledge, is the core statement of constructivist didactics. It is already formulated in Piaget's structural-genetic theory of development (cf. Hasselhorn, Gold, 2009, p. 221).

Hanisch (2009, p. 19) also places the person as the input in the center of constructivist theory, because he classifies constructivism as an epistemic-theoretical position. The core idea is, the reality that one believes to perceive with the sensory organs objectively is a subjective construction of the brain, because the sensory organs only have an indirect access to the reality. How a person constructs reality and what impact this may have on the learning process is a research object of constructivism.

Behaviorism can be regarded as a strictly empirical discipline of psychology. Thus, the goal of behaviorism is to predict and control behavior (cf. Apelojg, 2010, p. 56). In the 20th century, behaviorism had a major influence on earning definitions. It is assumed that human behavior (output) is scientifically researchable and explainable. In addition, there have been attempts to divide the behavior into an impulse-reaction chain, and intra-psychological processes are not seen as possible explanation of behavior (cf. Göhlich, Zirfas, 2007, p. 19). The impulse-reaction chain is founded on the research of Ivan Pavlov. With his research, he established the classical conditioning and contributed substantially to behaviorism. His attempts were to stimulate the salivation of dogs in the absence of food, by ringing a bell before each meal. During further procedure, the dogs' salivation started when the bell was rung, even though the food was not present. Thus, by a conditioned impulse, a conditioned reaction was triggered (cf. Zisler, p. 2010, 47).

In comparison to constructivism, behaviorism focuses on the output (behavior) and considers the person and all thinking processes as a black box. Internal thinking processes are not conceivable and behavior can be controlled by external stimulation and amplifications. Therefore, learning is also understood as the formation of impulse-reaction chains (cf. Meier, 2006, p. 82).

Unlike the theories mentioned above, cognitivism understands knowledge as the image of an objective reality, which is represented by the human brain through information-converting processes. This makes clear that cognitivism focuses the part between input (person) and output (behavior). The cognitivist approach understands information-converting systems (e.g., brain, computer) as cognitive systems (cf. Spelsiek, 2015, p. 9). Here the learning process will be interpreted as a permanent adaptation performance.

Learning is understood as an active process of individuals that leads to a representation of knowledge. Thereby, a great importance is assigned to the persons' individual conversion during the learning process (cf. Humbert, 2007, 35-36).

#### **Results and Discussion**

Table 1 (cf. Hasselhorn, Gold, 2009, p. 221; cf. Hanisch, 2009, p. 19; cf. Apelojg, 2010, p. 56; cf. Göhlich, Zirfas, 2007, p. 19; cf. Zisler, p. 2010, 47; cf. Meier, 2006, p. 82; cf. Spelsiek, 2015, p. 9; cf. Humbert, 2007, 35-36) summarizes the mentioned core elements of the theories of constructivism, behaviorism and cognitivism. Based on this information, attempts will be made to link these theories to learning performance and learning success in the section *Results and Discussion*. Before that, a few of the most important representatives of different theories and differences will be discussed.

Table 1. Core elements of constructivism, cognitivism and behaviorism

Core elements		
Constructivism	Cognitivism	Behaviorism
Input ► Converting ► Output	Input ► <u>Converting</u> ► Output	Input ► Converting ► <u>Output</u>
Input = constructed, objective	Objective, cognitive, really existing input	Analyze behavior
Input changes with experience	What happens inside?	Why behave how one behaves?
Subject/Input (person) is most important	Cognitive converting	Objective impulse, objective reaction

A radical representative of constructivism is Humberto Maturana. Every external experience is determined in a specific way by the structure of the person itself. In addition, Maturana goes into the question: what recognition means for the organization of the concerning person (cf. de Haan, Rülcker, 2009, p. 34). In comparison, the representatives of social constructivism Lev Vygotsky and Jerome Bruner regard knowledge based on social conditions and assume a subjective reality (cf. Talja, Tuominen, 2005, p. 82). John Dewey is another rather pragmatic representative of constructivism (cf. Pörksen, 2014, p. 392).

Co-founders of behaviorism include others – John B. Watson, Ivan Pavlov and Burrhus Frederic Skinner. In Watson's opinion, only what you perceive can be regarded as given. He focused methods for measuring and analyzing behavior and incorporated only objective behavior in his studies. Pavlov is known for his impulse-reaction experiments with dogs and was able to offer insights for classical conditioning. Skinner is a representative of descriptive behaviorism. He found that certain behaviors are learned through positive feedback (reward) or negative feedback (punishment). Only the rewarded or successful behavior will be repeated (cf. Zisler, p. 2010, 47).

Edward C. Tolman, Albert Bandura and Jean Piaget are regarded as influential representatives of cognitivism. Although Tolman is often associated with neo-behaviorism, his interpretations between impulse and reaction show clear cognitive approaches (cf. Gröschke, 2005, p. 118). Bandura is also regarded as an important mediator between behaviorism and cognitivism with his social cognitive approaches. Piaget also has a great influence on cognitivism. Despite strong cognitive approaches, constructivist tendencies cannot be completely excluded from his epistemology (cf. Gröschke, 2005, p. 136-137).

After important representatives of the theories have been presented, it can be said that, despite different currents, every theory pursues a clear goal. Constructivism aims to generate knowledge by interpreting with individual experience. The cognitivism focuses on converting the information and the behaviorism changes or intensifies the behavior. Fig. 1 summarizes differences of the theories based on previous information and Fig. 2 (cf. Rechlin, Vliegen, 2013, p. 63-66; cf. Riedl, 2004, p. 42-44; cf. Janetzko, 2007, p. 35-36) shows possible weaknesses before learning performance and learning success will be defined.





Each learning performance is a result of a learning activity and indicates self-development. Thus, learning performance is the result of an activity. Learning performance can be a partial, an intermediate or the final result of a learning activity. Performance can only be described as a learning performance when it demonstrates learning results in the areas of acquisition, retention and reactivation in comparison to previous performances. It requires many learning activities with many learning performances in order to achieve the corresponding results. Whether the learning performance has improved can only be determined by comparing it to earlier learning performances (cf. Grzesik, 2002, p. 299-300). Learning performance is also defined by a combination of the learning ability, the learning will and the assessment of a newly acquired knowledge. When the new knowledge correlates with the already existing knowledge, it can also have a positive effect on the learning performance (cf. Eckert, 2009, p. 61-63).

To be able to assess and observe learning success, it is important to involve the learner in this process. Therefore, it is advisable, from a pedagogical point of view, to allow the learner to confirm or to comment on the appropriate behavioral observations. Tödt (2008, p. 83) assumes that the learning success depends strongly on physical, emotional, motivational, situational and cognitive aspects, and the influence of these cannot be determined reliably (cf. Tödt, 2008, p. 80-83). It is not sufficient to regard learning success as a measuring instrument of reproduction and/or application of theoretical knowledge. Learning success is seen as a result of didactic activities and is dependent on the stimulation of cognitive and emotional learning processes (cf. Sindler, 2006, p. 76-77).

Now, after all the necessary terms have been explained, Tab. 2 considers the implementation into practice. For this, the learning performance and learning success will be linked to the theories of constructivism, cognitivism and behaviorism.

To increase the learning performance on the basis of a constructivist point of view, it is helpful to provide individually adapted learning material. For example, the level of knowledge or background of the learner can have an important impact. Thereby, the learning success is able to show good results and individual targets can support the process.

To promote learning performance in cognitivism, the learner himself should find a possible approach to promote the converting process of knowledge and new information. Furthermore, putting theory into practice can initiate further converting processes and ensures the learning success.

In the field of behaviorism, the classical conditioning is a suitable instrument to support learning performance. This provides a clear way for the learner. By focusing on improvements, learning success can be intensified.

Table 2. Practice combination between learning performance / learning success and scientific theories

	Learning Performance	Learning Success
Constructivism	Individual learning material; background, knowledge	Define individual goals
Cognitivism	Learner should find solutions	Put theory into practice
Behaviorism	Conditioning	Focus on improvements

## Conclusion

There is no single explicit learning achievement or one single learning success. There are different definitions for these two terms, which makes the research in this area even more challenging. If these terms are combined with the described learning theories, there are different possibilities to support learning performance or learning success. These two terms are important elements for professional trainings, consultancy and, of course, for school education. By focusing learning performance and learning success in combination with didactic/scientific theories, all three areas of learning process (input - converting - output) can be promoted.

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