Critical Reflections from an Instructional Design Perspectiev
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Why does Learning Occur?

Behaviorism

What factors influence Learning?

Historical Foundations

Theory of Honey and the Bee tales.

Contrast with different interactions and possibly different technology and possibly different
interactions with different interactions.
Cognitive Load Theory

Cognitive Load Theory

Knowledge in memory, information in existing neural networks and existing new knowledge mean that the learning process is divided into several stages. Initially, the problem involves the delivery of prior knowledge and understanding of the problem. This knowledge is then transferred to the long-term memory. Following this, the learner processes the new information and integrates it with prior knowledge. Finally, the learner is able to apply the new knowledge to solve problems. This process is divided into three stages: 

1. **Instructional Load**: This includes the complexity of the task and the amount of information to be processed. 
2. **Intrinsic Load**: This includes the complexity of the topic and the amount of information to be processed. 
3. **Extrinsic Load**: This includes the complexity of the presentation and the amount of information to be processed.

In order to optimize the learning process, the instructional design should be adjusted to reduce the cognitive load. This can be achieved through the use of prior knowledge, the use of analogies, and the use of real-world examples. Additionally, the use of multimedia can help reduce the cognitive load by providing multiple representations of the information.
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According to cognitive theories, learning is a function of how information is received, stored, and retrieved. Therefore, the information that is encoded into memory is critical for successful learning. Cognitive theories propose that learning is influenced by various factors, such as attention, motivation, and the structure of the information. These factors interact to determine the effectiveness of learning. For example, if a student is not paying attention to the material being presented, they will not be able to encode the information into memory effectively. Similarly, if the information is presented in a manner that is not motivating to the student, they may be less likely to engage with the material and retain it.

Cognitive learning theory is concerned with both the acquisition and retrieval of knowledge. The main premise of cognitive learning theory is that learning is a result of the interaction between the learner and the environment. This interaction is influenced by various factors, such as the learner's prior knowledge, the structure of the information, and the learner's motivation. The cognitive theories of learning are often referred to as the information processing model, which proposes that learning involves a series of stages, including encoding, storage, and retrieval. These stages are influenced by various factors, such as the learner's attention, motivation, and the structure of the information.

Cognitive learning theory is used in educational settings to design effective learning strategies. This theory is also used in the field of psychology to understand how individuals learn and remember information. In the field of psychology, cognitive learning theory is used to understand how individuals learn and remember information. In the field of psychology, cognitive learning theory is used to understand how individuals learn and remember information.
Although the emphasis on performance and structured domains in II (structured knowledge) involves predetermined needs to be learned, domains much of what is taught in the structured knowledge skills in realistic education. Ineffective teaching has positive performance and structured learning.

The structured domain is effective and efficient with feedback so that the new-interest, autistic practice, and efficient feedback. Learning becomes efficient. The structured knowledge involves the external, predetermined need to be learned. Learning becomes efficient with feedback. The efficiency becomes a new-interest, structured practice. The structured knowledge involves the external, predetermined need to be learned. Learning becomes efficient. The structured knowledge involves the external, predetermined need to be learned. Learning becomes efficient.
In the 1960s, the concept of "cognitive" or "cognitive" in a number of different languages became a central focus in the field of psychology. The concept of "cognitive" was introduced in the 1960s, and was based on the idea that human learning and thinking processes are primarily influenced by cognitive factors. This approach to understanding human behavior and cognition was based on the idea that "cognitive" or "cognitive" refers to the mental processes and abilities that underlie human thought and action. The term "cognitive" has been used to describe a wide range of processes, including perception, attention, memory, and problem-solving.

The concept of "cognitive" or "cognitive" was originally developed in the 1960s by psychologists such as Donald Broadbent and Ulric Neisser. These researchers argued that human learning and thinking are primarily influenced by cognitive processes, and that these processes are responsible for the way in which we perceive, think about, and respond to the world around us. They also argued that these cognitive processes are influenced by a variety of factors, including our experiences, our cultural background, and our individual differences.

Since the 1960s, the concept of "cognitive" has become increasingly important in the field of psychology, and has been used to study a wide range of topics, including learning, memory, attention, and language. In recent years, "cognitive" has also been used to describe a number of other processes, including decision-making, problem-solving, and creativity.

Overall, the concept of "cognitive" has had a major impact on the field of psychology, and has helped to shape our understanding of how human learning and thinking processes work. The concept of "cognitive" has also been used to address a wide range of practical problems, such as improving educational outcomes and developing effective strategies for remediation.

The concept of "cognitive" has also contributed to the development of new technologies, such as artificial intelligence, which are based on the idea that machines can be programmed to "think" in a way that is similar to human thought. These technologies are being used in a wide range of applications, including robotics, self-driving cars, and medical diagnosis.

In conclusion, the concept of "cognitive" has had a significant impact on the field of psychology, and has helped to shape our understanding of how human learning and thinking processes work. The concept of "cognitive" is likely to continue to be an important area of research in the future, as scientists continue to explore the many different ways in which cognitive processes influence human behavior and cognition.
What types of learning are best

Excitement to institutional graph

When do learning and best instructional design work best?

Instructional design

If you're not in the know, the best way to do it is by experience. If you're in the know, then the best way to do it is by experience. If you're in the know, then the best way to do it is by experience.
solving skills that allow learners to go “beyond the information given.” [developing pattern-recognition skills, presenting alternative ways of representing problems].

- Assessment focused on transfer of knowledge and skills [presenting new problems and situations that differ from the conditions of the initial instruction].

**How should instruction be structured?**

As one moves along the behaviorist—cognitivist—constructivist continuum, the focus of instruction shifts from teaching to learning, from the passive transfer of facts and routines to the active application of ideas to problems. Both cognitivists and constructivists view the learner as being actively involved in the learning process, yet the constructivists look at the learner as more than just an active processor of information; the learner elaborates upon and interprets the given information (Duffy & Jonassen, 1991). Meaning is created by the learner: learning objectives are not pre-specified nor is instruction pre-designed. “The role of instruction in the constructivist view is to show students how to construct knowledge, to promote collaboration with others to show the multiple perspectives that can be brought to bear on a particular problem, and to arrive at self-chosen positions to which they can commit themselves, while realizing the basis of other views with which they may disagree” (Cunningham, 1991, p. 14).

Even though the emphasis is on learner construction, the instructional designer/teacher’s role is still critical (Reigeluth, 1989). Here the tasks of the designer are two-fold: (1) to instruct the student on how to construct meaning, as well as how to effectively monitor, evaluate, and update those constructions; and (2) to align and design experiences for the learner so that authentic, relevant contexts can be experienced.

Although constructivist approaches are used quite frequently in the preparation of lawyers, doctors, architects, and businessmen through the use of apprenticeships and on-the-job training, they are typically not applied in the educational arena (Resnick, 1987). If they were, however, a student placed in the hands of a constructivist would likely be immersed in an “apprenticeship” experience. For example, a novice instructional design student who desires to learn about needs assessment would be placed in a situation that requires such an assessment to be completed. Through the modeling and coaching of experts involved in authentic cases, the novice designer would experience the process embedded in the true context of an actual problem situation. Over time, several additional situations would be experienced by the student, all requiring similar needs assessment abilities. Each experience would serve to build on and adapt that which has been previously experienced and constructed. As the student gained more confidence and experience, (s)he would move into a collaborative phase of learning where discussion becomes crucial. By talking with others (peers, advanced students, professors, and designers), students become better able to articulate their own understandings of the needs assessment process. As they uncover their naive theories, they begin to see such activities in a new light, which guides them towards conceptual reframing (learning). Students gain familiarity with analysis and action in complex situations and consequently begin to expand their horizons: they encounter relevant books, attend conferences and seminars, discuss issues with other students, and use their knowledge to interpret numerous situations around them (not only related to specific design issues). Not only have the learners been involved in different types of learning as they moved from being novices to “budding experts,” but the nature of the learning process has changed as well.

**General Discussion**

It is apparent that students exposed to the three instructional approaches described in the examples above would gain different competencies. This leads instructors/designers to ask two significant questions: Is there a single “best” approach and is one approach more efficient than the others? Given that learning is a complex, drawn-out process that seems to be strongly influenced by one’s prior knowledge, perhaps the best answer to these questions is “it depends.” Because learning is influenced by many factors from many sources, the learning process itself is constantly changing, both in nature and diversity, as it progresses (Shuell, 1990). What might be most effective for novice learners encountering a complex body of knowledge for the first time, would not be effective, efficient or stimulating for a learner who is more familiar with the content. Typically, one does not teach facts the same way that concepts or problem-solving are taught; likewise, one teaches differently depending on the proficiency level of the learners involved. Both the instructional strategies employed and the content addressed (in both depth and breadth) would vary based on the level of the learners.

So how does a designer facilitate a proper match between learner, content, and strategies? Consider, first of all, how learners’ knowledge changes as they become more familiar with a given content. As people acquire more experience with a given content, they progress along a low-to-high knowledge continuum from 1) being able to recognize and apply the standard rules, facts, and operations of a profession (knowing what), to 2) thinking like a professional to extrapolate from these general rules to particular, problematic cases (knowing how), to 3) developing and testing new forms of understanding and ac-
Figure 1. Comparison of the effective instructional strategies of the Level of Cognitive Processing Required by the Task with the Level of Learner’s Knowledge and the level of cognitive processing.
REFERENCES

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Note: The text on the page appears to be a continuation of the previous page, discussing various research studies and methodologies in the field of education and technology. The page number cited at the bottom right suggests this is from a journal or a collection of articles. The references listed at the end of the page include a variety of sources, indicating a comprehensive review of the literature in the field.