

Problem Solving Concepts and Strategies

by Sophia



WHAT'S COVERED

This lesson will help you identify and discuss aspects of problem solving. You will learn more about how to develop your personal problem-solving skill and why it is important to employers. You will do this by covering:

1. Problem Solving

According to cognitive psychology, **problem solving** is concerned with the mental processes in which one engages to uncover, examine, and solve problems.

It is not unusual for humans to experience difficulty in problem solving. **Functional fixedness**, for example, is an inability to view a problem from a new or alternate perspective. Such a dilemma prevents viewing alternate options for securing a solution.



Problem Solving: Why Employers Care

Employers seek employees with strong problem solving skill. More than 91% of employers feel it is the most important trait they look for in a new hire. They want to know a candidate can not only meet the job requirements as listed, but that they can also adapt and find solutions as needed.



TERM TO KNOW

Functional Fixedness

The inability to view a problem from a new perspective.

2. Mental Set

One's mental set reflects a tendency to handle a problem with the mentality of what has worked for us in the past. Heuristics fall into this category. Although the employed approach may work, this can be an obstacle to problem solving as it can restrict thinking and creativity.

Securing a solution requires one's ability to distinguish between relevant and irrelevant information. As irrelevant information and misleading information can be easier to focus on within a complex circumstance, this must be avoided due to its potential to lead to flawed solutions.

Assumptions are defined as unexplained beliefs. As they have not been critically rationalized, they often incorrect and misguided.

3. Problem Solving Strategies

A number of strategies exist for the solving of problems. A couple of the most common of these are listed below:

- *Algorithms*: Involve the use of a step-by-step procedure that will result in a solution. The downside of algorithms is that they tend to be complicated and intense. In response to this, humans tend to rely on simpler methods such as heuristics.
- *Heuristics*: Considered to be a “rule of thumb” approach, heuristics may or may not work. Different from algorithms, there is no guarantee of a correct solution.



TERMS TO KNOW

Algorithm

A step-by-step procedure for solving a problem.

Heuristic

A strategy derived from previous experience with similar problems.

4. Intuition

Within problem solving, it is not uncommon to rely upon tactics, such as intuition and insight. **Intuition** refers to knowledge that is represented in consciousness but is automatic without obvious reflection. People rely on intuition to make many decisions throughout the day. An example of this is deciding whether to take an umbrella to work in case it rains.

Insight is a quick and often abrupt presentation of a solution. Insight can occur due to the recognition of having encountered a similar problem in the past. Generally, the mental processes that contribute to insight occur outside of awareness. It can be viewed as an “aha” moment.

Trial and error is a common technique employed for problem solving when limited options are available. It involves attempting several possibilities and eliminating the ones that do not work.



TERMS TO KNOW

Intuition

Decisions made without reflection.

Insight

An understanding based on intuition or similar past experiences.

Trial and Error

An attempt to use several possible solutions to a problem until one works.



SUMMARY

Often, people get locked into a fixed mindset when faced with difficult problems. You can use problem solving strategies like algorithms and heuristics to plan a solution. Sometimes you can also lean on intuition for quick insights into possible solutions to try. These situations are opportunities to use and strengthen your problem solving skill! Employers will appreciate your ability to find solutions and that makes you valuable to their organization.

Good luck!

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