1. Theoretical problems

The garbage can model examines theoretical reasons for the choice of a theoretical problem that involve the other variables in the garbage can model. The model assumes that nontheoretical reasons for the selection of a research problem can be treated separately from the theoretical justification of the selection of that problem.

However, according to the rational model, researchers typically derive hypotheses deductively through critically reviewing literature on a narrowly specialized topic.

2. Resources

The issue of participation is determined by what resources a given research project requires (e.g., money or financial contributions; abilities). The rational model considers the different types of resources separately, whereas the garbage can model of the research process includes resource availability as a single variable.

3. Methods (s)

The point at which a researcher selects a method or methods is a choice that can be influenced by many factors.

However, according to the rational model, the nature of the theoretical problem should determine the choice of the most appropriate research method, and an even more ideal solution being triangulation, which means using several different methods to address the same theoretical questions.

4. Solutions

In the research context, solutions have two components: the empirical results of a given data collection effort and the theoretical interpretations given to those results.

1. Resources

The rational model believes that resources are important only as an enabling condition of the research process. It either excludes mention of resources or discusses resources only as enabling factors that must be present before the desired study can be conducted. That is to say, the rational model assigns a passive role to resources.

However, the garbage can model allows resources to function actively, as a determining factor in the selection of a theoretical problem, the choice of a method, and even the interpretation of a solution.

2. Theoretical problem

The rational model, the researcher begins by choosing a theoretical problem, and then matches the demands of that problem to the capabilities of a given methodology. However, according to the garbage can model, methods are often selected for reasons that have little to do with theoretical considerations (e.g., resource availability), and it is also possible that a method may be available and be put to use without theoretical considerations. In addition, some theoretical problems are seldom addressed because of methodological difficulties.

3. Methodology

The rational model believes that if research is conducted appropriately, any methodological choice should lead to the same set of theoretical conclusions.

However, the garbage can model does not agree with this overly optimistic myth. Researchers often underestimate the extent to which their methodological choices influence which variables in a theoretical model are measured, which variables are left out, and/ or which theoretical conclusions are drawn from the data.

4. Results

According to the rational model, the final step in the research process is a feedback loop, where the empirical results of a study are interpreted in light of the theoretical problem they were designed to address.

In the garbage can model, however, the empirical results and their theoretical interpretations are labeled a “solution”. The garbage can model makes no sequential assumptions about the relationship between that solution and the other variables in the model. Rather than the solution necessarily functioning as the end-point of the research process, the garbage can model permits the solution to function as a starting point.