Lesson Summary

- A dot plot provides a graphical representation of a data distribution, helping us to visualize the distribution.

- The mean and the median of the distribution are numerical summaries of the center of a data distribution.

- When the distribution is nearly symmetrical, the mean and the median of the distribution are approximately equal. When the distribution is not symmetrical (often described as skewed), the mean and the median are not the same.

- For symmetrical distributions, the mean is an appropriate choice for describing a typical value for the distribution. For skewed data distributions, the median is a better description of a typical value.

Problem Set

Consider the following scenario. The company that created a popular video game, "Leaders," plans to release a significant upgrade of the game. Users earn or lose points for making decisions as the leader of an imaginary country. In most cases, repeated playing of the game improves a user's ability to make decisions. The company will launch an online advertising campaign, but at the moment, they are not sure how to focus the advertising. Your goal is to help the company decide how the advertising campaign should be focused. Five videos have been proposed for the following target audiences:

Video 1: Target females with beginning level scores

Video 2: Target males with advanced level scores

Video 3: Target all users with middle range level scores

Video 4: Target males with beginning level scores

Video 5: Target females with advanced level scores

1. Why might the company be interested in the developing different videos based on user score?

2. Thirty female users and twenty-five male users were selected at random from a database of people who play the game regularly. Each of them agreed to be part of a research study and report their scores. A leadership score is based on a player's answers to leadership questions. A score of 1 to 40 is considered a beginning level leadership score, a score of 41 to 60 is considered a middle level leadership score, and a score of greater than 60 is considered an advanced level leadership score.

   Use the following data to make a dot plot of the female scores, a dot plot of the male scores, and a dot plot of the scores for the combined group of males and females (plot female and male together).