1. We expect $\mathbf{E}[X]$ to be higher than $\mathbf{E}[Y]$ since if we choose the student, we are more likely to pick a bus with more students.

2. To solve this problem formally, we first compute the PMF of each random variable and then compute their expectations.

   The PMF of X is

   $$p_X(x) = \begin{cases} 40/148, & x = 40, \\ 33/148, & x = 33, \\ 25/148, & x = 25, \\ 50/148, & x = 50, \\ 0, & \text{otherwise,} \end{cases}$$

   and $\mathbf{E}[X] = 40\frac{40}{148} + 33\frac{33}{148} + 25\frac{25}{148} + 50\frac{50}{148} = 39.28$.

   Similarly, the PMF of Y is

   $$p_Y(y) = \begin{cases} 1/4, & y \in \{40, 33, 25, 50\}, \\ 0, & \text{otherwise,} \end{cases}$$

   and $\mathbf{E}[Y] = 40\frac{1}{4} + 33\frac{1}{4} + 25\frac{1}{4} + 50\frac{1}{4} = 37$.

   Clearly, $\mathbf{E}[X] > \mathbf{E}[Y]$.