# CATME SMARTER Teamwork 5 

## Student Ranking Preferences

## Explaining how student ranking preferences can increase team effectiveness and satisfaction

Using the newly introduced Student Preference question in conjunction with pre-existing Team-Maker questions allows for the creation of balanced teams that account for the desires of the student. With student preferences being taken into consideration, the algorithm hopes to improve student project passion and success.

To access the student ranking preference questions, click on the "Question Manager" button from the CATME instructor home page. Once on the Basic Question Information page, select "Add Question" and change the question type to "Rank". From this menu, shown below, you can ask the question and name the question for future use.

## Basic Question Information

```
    Title: Student Preference
Question: What subject do you want to work on?
    Type:Rank v
```

After entering the basic question information, the instructor can specify the answer choices that students can rank. The name of the project is written next to "Display Text:" and the project number is put in the "Stored As:" field. After completing this step, the ranking question is ready to use.

| Answers |  |
| :---: | :---: |
| Display Text: | Stored As: |
| Display Text: | Stored As: |
| Display Text: | Stored As: |
| Display Text: | Stored As: |
| Display Text: | Stored As: |

## Percent Students Matched to Top Project with Different Sized Teams



The matching algorithm was tested with a randomized test set of 50,000 students. All student responses were automatically randomized uniformly.

Results showed that students were matched to a team in which most teammates had the same first choice over fifty percent of the time. In the future we hope to implement the Gale-Shapley algorithm, which should provide even better matching of students to their most desirable projects.

