

Are the Most Popular Holes the Best at Testing Skill?

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April 28, 2020

The DGPT recently concocted a “Dream 18” course by re-mixing the holes from fifteen courses. (Choose one of the fifteen hole #1s, choose one of the fifteen hole #2s, etc.) Was the result the best possible course for determining the skill of highly skilled players?

To answer that, we need to quantify the ability of a course to measure skill. The measure I choose is to look at how often a course would correctly rank a set of 6 hypothetical players who are rated 970 to 1020. Specifically, for each pair of players, did the course give the better player the lower score? Since there are 15 pairs of players (1020 vs. 1010, 1020 vs 1000, ..., 980 vs 970) a perfect tally would be 15. Randomly assigning scores to players would get a tally of a little over 7. Details of the calculation are in the appendix.

The course which was made up of the Dream 18 had an effectiveness tally of 10.76. This is not the highest possible effectiveness. The Dream 18 is more effective than nine of the fifteen courses that the holes were chosen from, but less effective than the other six.

For some reason, the Dream 18 was not made of the 18 holes which got the most votes. The course which was made of the 18 holes which got the most votes had an effectiveness tally of 10.73.

By looking at the number of votes cast, we can make fifteen courses ranked by popularity of their holes. The 15th ranked course is made up entirely of holes which got zero votes.

The Dream course was not the most effective, as some courses which were composed of less popular holes were more effective.

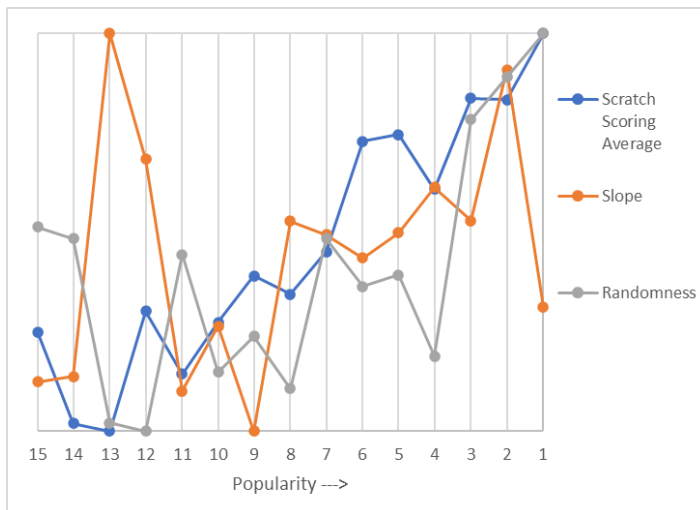
(Side note: A course made up of the highest scoring of each hole number would have an effectiveness of 11.23. An effectiveness of 11.86. could be achieved with perfect selection from each hole number.)

The effectiveness of these mashed-together courses, compared to the popularity of their holes, is as follows.

Popularity	Effectiveness
1st	10.73
2nd	10.96
3rd	10.78
4th	10.86
5th	10.85
6th	10.81
7th	10.40
8th	10.50
9th	10.14
10th	10.21
11th	9.76
12th	10.60
13th	10.39
14th	9.59
15th	9.87

So there is some tendency for courses which are made up of more popular holes to be more effective.

Effectiveness is a function of three things: High scores (Scratch Scoring Average), the Slope of those scores in relation to Ratings, and a lack of randomness. These are inter-related it is easier for a high-scoring course to have a steeper slope, and easier for a course with a steeper slope to have less randomness. By isolating each factor, we can see what attributes are more popular. The following chart scales each of these measures from zero to one.



What the chart shows is that high scores are most closely tied to popularity, with high randomness also strongly tied to popularity. How well the scores vary by rating is not a strong factor.