

# Exploration of BMF Camp and Achievement of Goals

## *Executive Summary*

### **Overview:**

The Blue Mountain Festival Summer Camp has been an integral part of Stretto's involvement in the summer season. Students are invited to a high-quality, two-week intensive camp led by prominent faculty. Our goal is to examine the relationship between attending Blue Mountain Festival Summer Camp and if students achieve their goals both inside and outside of the music classroom.

### **Approach and Findings:**

- 98.3% of campers indicated that attending Blue Mountain Festival Summer Camp helped them achieve their goals over the past 6 years.
- Fisher's Exact Test on a two-way table was used to find the key factors that have impact on achieving overall goals.
- Coming into camp with **specific** parts of music to improve led to campers achieving their goals better.
- The percentage of campers with a specified area of improvement remained consistently high throughout 2017-2020.

### **Next Step:**

- Encourage pre-camp workshops to structure student's work.
- Stress the fact that campers should come into camp with an area of study to tackle with their mentor.

# **Full Report: Does Attending Blue Mountain Festival Summer Camp Help You Achieve Your Goals**

## **Introduction:**

In this report we attempt to examine if Blue Mountain Festival Summer Camp has allowed students to achieve their goals. In solving this question, we can understand if the organization is taking the proper measures to provide a constructive environment for campers to learn in. Upon learning the results, the necessary changes can be made to help satisfy the needs of the students attending camp.

To help solve this question, data collected from over 6 years was examined. Said data contained answers to both a pre-survey taken before camp and a post-survey taken after the camp from students. Pre-survey questions included basic questions surrounding age, instrument, teacher, familiarity with Blue Mountain Festival Summer Camp, current repertoire, self-evaluation, and areas for improvement. On the other hand, post-survey questions included questions surrounding reflection on the experience attending camp as well as more self-evaluation.

## **Analysis:**

Firstly, an analysis of goals achieved throughout 2015-2020 was completed. Please view Figure 1 and Figure 2 for an overview of the percentage of survey respondents who indicated that they had accomplished their goals in the post-survey. Figure 1 shows the percentages in each of the six years, and Figure 2 shows the overall percentage.

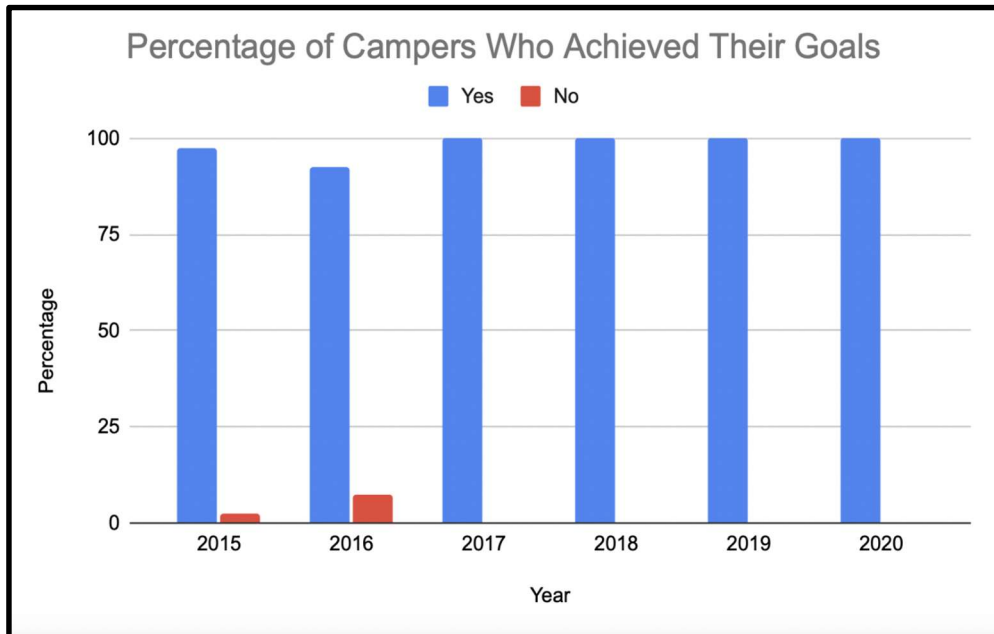


Figure 1. Summary of Percentage of Campers Who Achieved Goals by Year

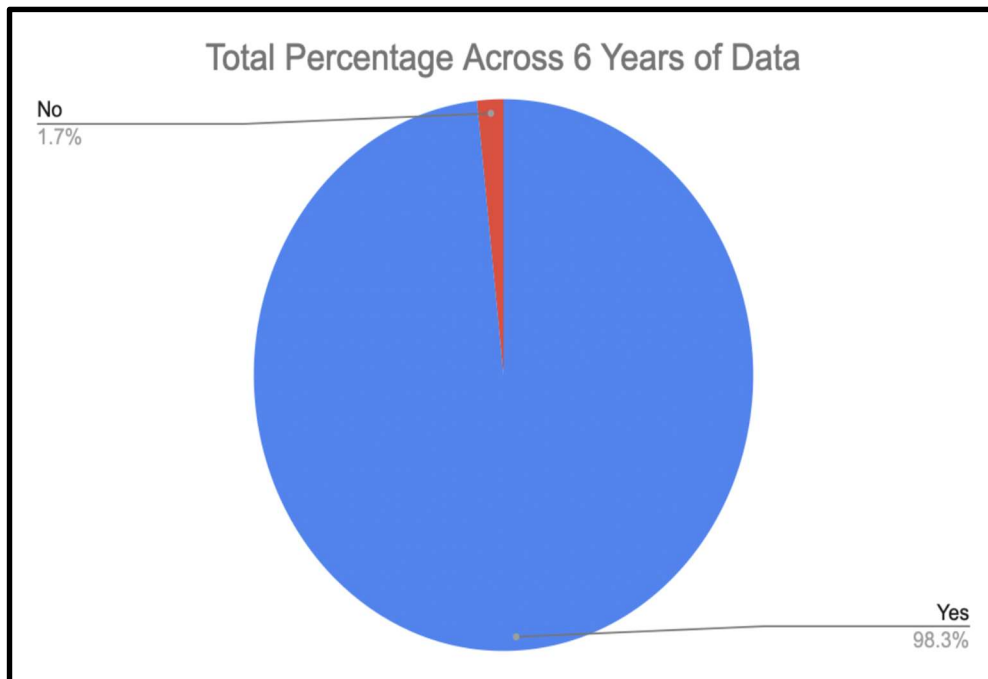


Figure 2. Complete Summary of Percentage of Campers Who Achieved Goals

As we can see, Blue Mountain Festival campers have consistently been able to achieve their goals across the 6 years of data collected. In 2015, 1 out of 42 people reported that they did not achieve their goals, while in 2016, 3 out of 41 people reported that they did not achieve their goals. Note that the person who reported “no” in 2015 also did so the following year in 2016.

The next section of work refers to the data gathered in the year 2016. A deeper analysis into the participants who indicated that their goals were not achieved was explored. Multiple factors were examined to see what could possibly explain who accomplished their goals or not, including type of instrument (string / wind), level of play (beginner/intermediate/high), previous number of years at the camp were all explored, but none were significant.

However, there was an important factor that was discovered that impacted whether the campers were able to accomplish their goals: having a **specific** area of improvement in mind before camp (collected in the pre-survey). Refer to the two-way table below for a summary of the relationship between campers' pre-camp goals and if they were able to accomplish them<sup>1</sup>.

	Achieved Goals (Post)	Did Not Achieve Goals (Post)	Total
Had Specific Areas of Improvement (Pre)	34	0	34
No Specific Areas of Improvement (Pre)	2	3	5
Total	36	3	39

Normally, a chi-square test of independence would suffice in analyzing a two-way contingency table. However, our data does not have the necessary size in some of the slots to satisfy the conditions of a chi-square test. Therefore, Fisher’s Exact Test is used to obtain a result for the significance test.

**The Null Hypothesis** is that achieving and not achieving your goals after attending Blue Mountain Festival Camp are equally likely no matter if one had a specific, desired area of improvement.

---

<sup>1</sup> Note that 2 people who participated in the post-survey didn’t complete the pre-survey questions, so the total number in the table is 39.

**The Alternative Hypothesis** is that having a specific, desired area of improvement helps one achieve their goals after attending Blue Mountain Festival Camp.

The exact hypergeometric probability of observing this particular arrangement of the

data under the null hypothesis is:  $p = \frac{\binom{34}{34} \binom{5}{2}}{\binom{39}{36}} = 0.001$

Under the given contingency table, the resulting p-value is 0.001, which less than 0.05; we reject the null hypothesis and instead claim that there is significant evidence that having an idea of an area of improvement does indeed help one achieve their goals after attending Blue Mountain Festival Camp. In the future, Blue Mountain Festival will look to prepare students to reflect on what they want out of the camp before attending in order to maximize their intellectual and musical capacity.

Inspired by this finding, the columns of data containing information about the camper's indication of a specific pre-survey area of improvement for 2017, 2018, 2019, and 2020 were analyzed. Figure 3 shows the percentage of campers who had specified an area of improvement in the pre-survey.

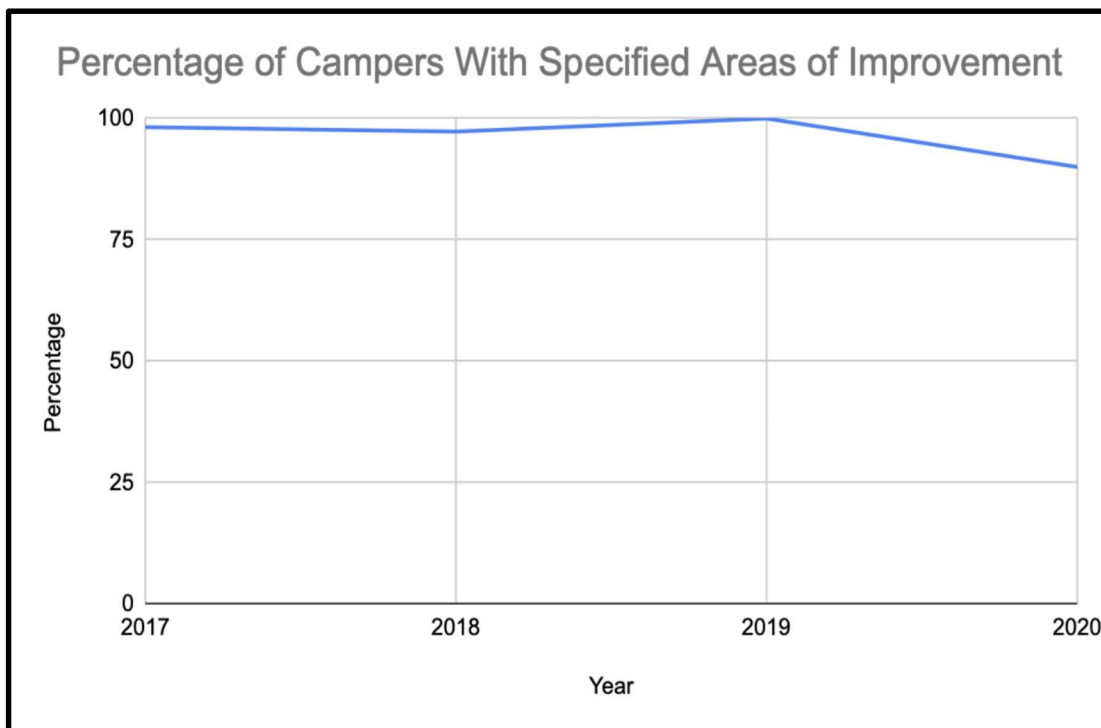


Figure 3. Trend of Percentage of Campers with Specified Areas of Improvement

The percentage of campers who indicated an area for improvement in the pre-survey has not staggered significantly since 2016. Note that for each year other than 2019, only 1 person did not have an explicit area for improvement. Furthermore, camp in 2020 was conducted online due to the Coronavirus pandemic, and only 10 people completed the pre-survey, so the percentage in that year had a large margin of error compared to other years.

Additionally, we found that 2 of the 3 campers who reported that they did not achieve their goals in 2016 did achieve their goals after attending camp in 2018; the third person did not participate in camp that year<sup>2</sup>. This shows that with previous camping experiences and with guidance of bearing specific areas to improve in mind, these campers achieved more than before.

Overall, Blue Mountain Festival Campers have continued to demonstrate musical interest and the desire to improve, which, based on our previous findings with the Fisher Test, should yield high amounts of students achieving their goals after attending camp in the future.

## **Conclusion:**

Blue Mountain Festival Summer Camp has continued to serve as a blooming place of music for all campers and volunteers. The prominent faculty not only facilitate strong means of learning through rigorous performance and theory training, but also provide fun, engaging activities to cool down with. Through creating bar and pie charts, an overwhelming amount of evidence points towards the fact that campers achieve their goals after attending Blue Mountain Festival Summer Camp. Additionally, using Fisher's Exact Test, there is significant evidence that shows that campers who had a specific area of improvement in mind to tackle during camp were able to achieve their overall goals.

---

<sup>2</sup> Surveys from 2017 did not include names, so no further analysis can be done for that year