

Mental Accounting in College: Students' use of Free Money

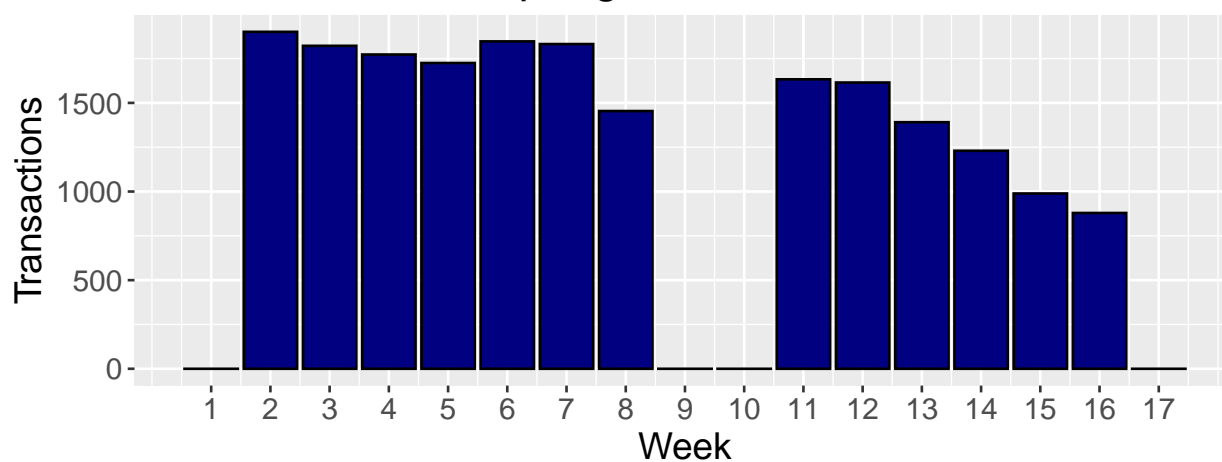
Connor Woods

May 7, 2020

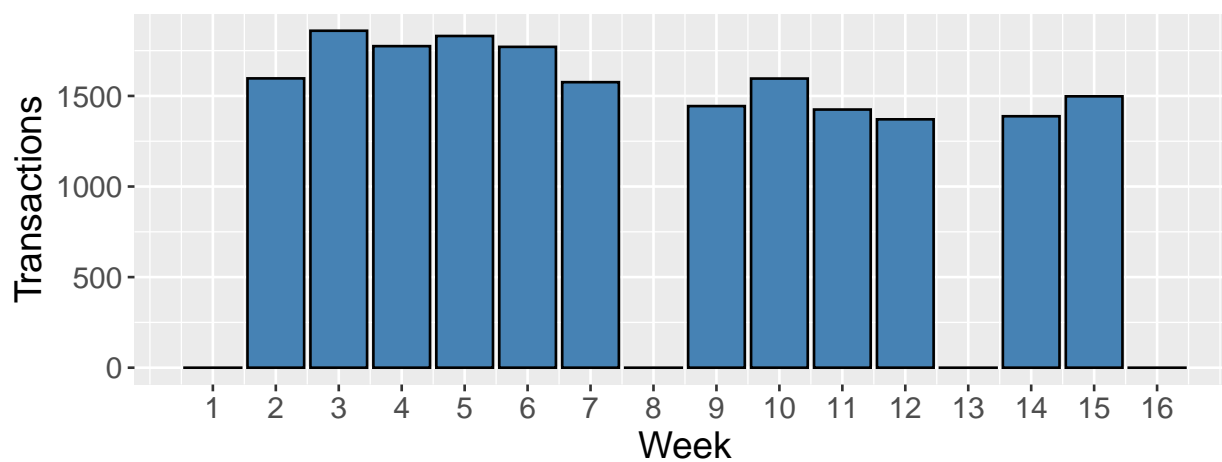
Spring Semester Dates Campus Open: 1/20/19, Start: 1/22/19, End: 5/8/19, Campus Closed: 5/20/19

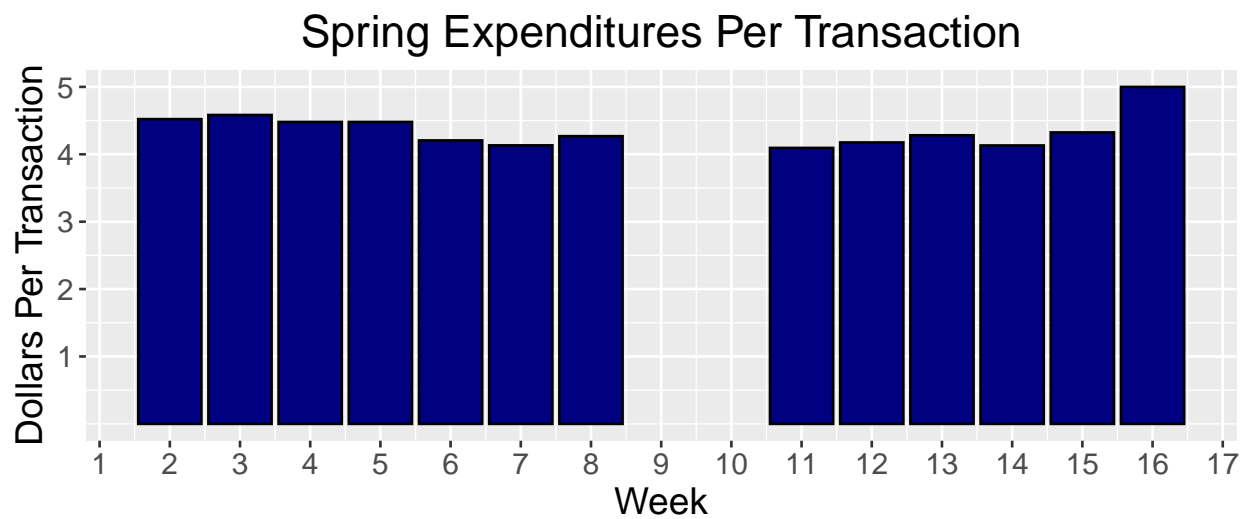
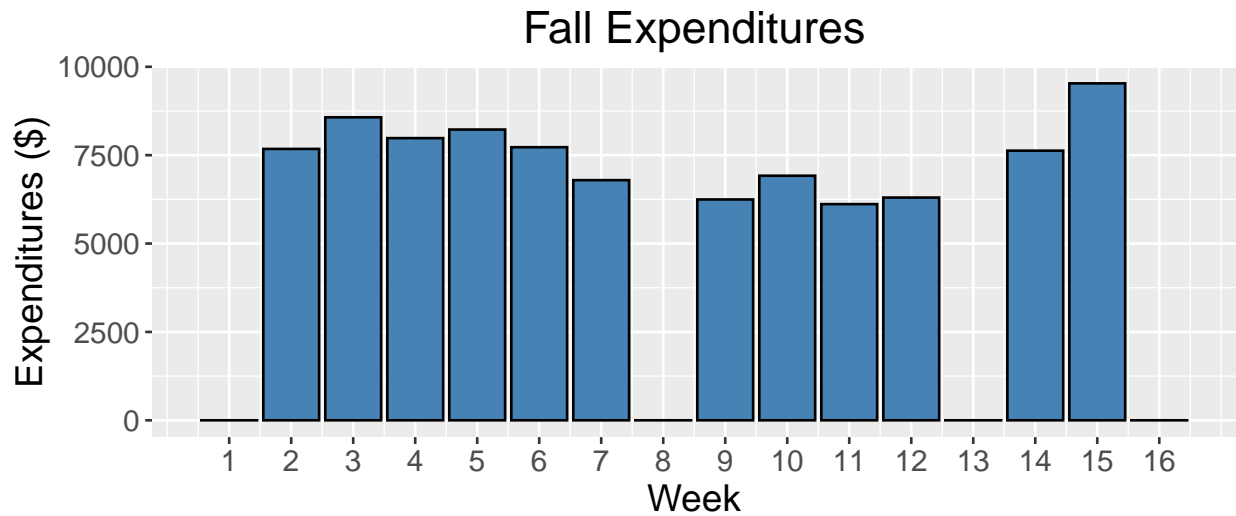
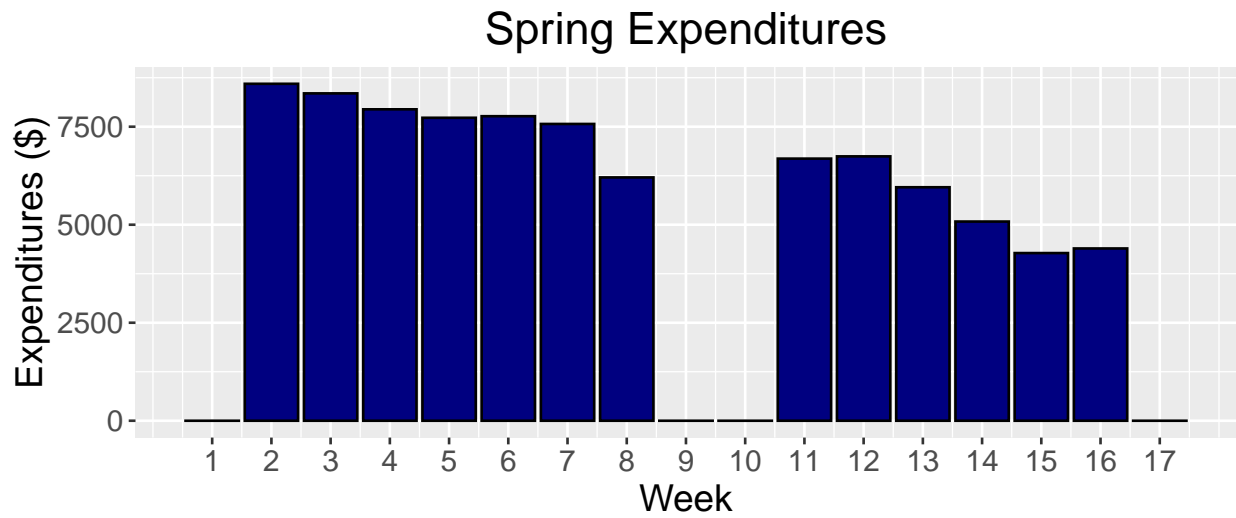
Fall Semester Dates Campus Open: 8/31/19 Start: 9/3/19, End: 12/11/19, Campus Closed: 12/21/19

Spring Transactions

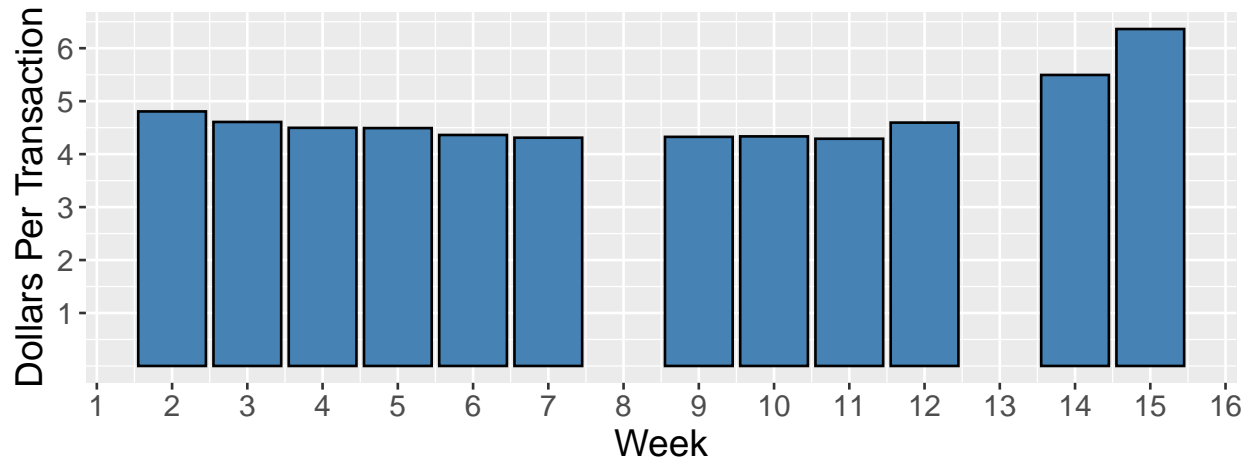


Fall Transactions

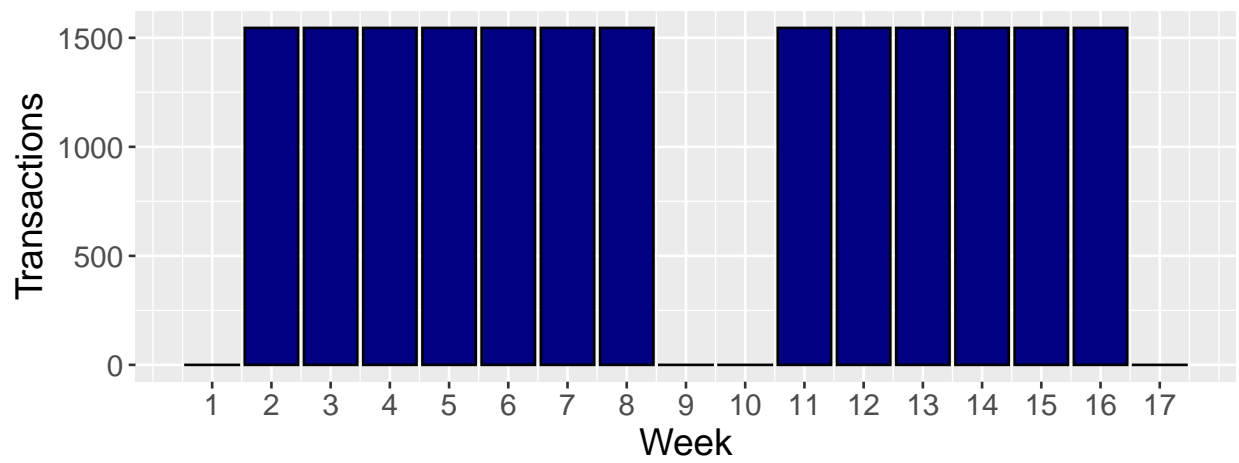


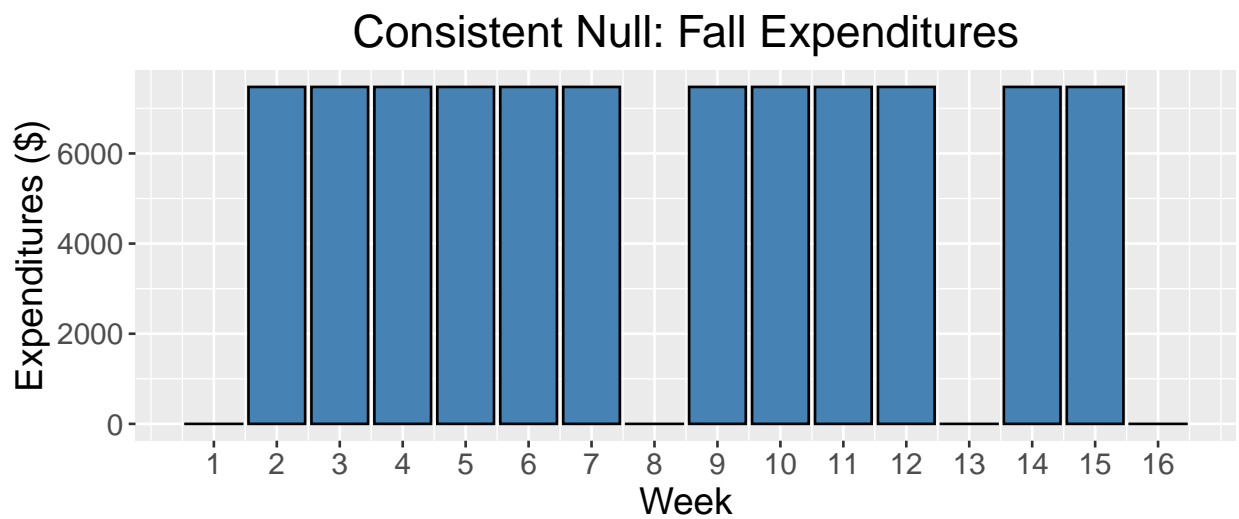
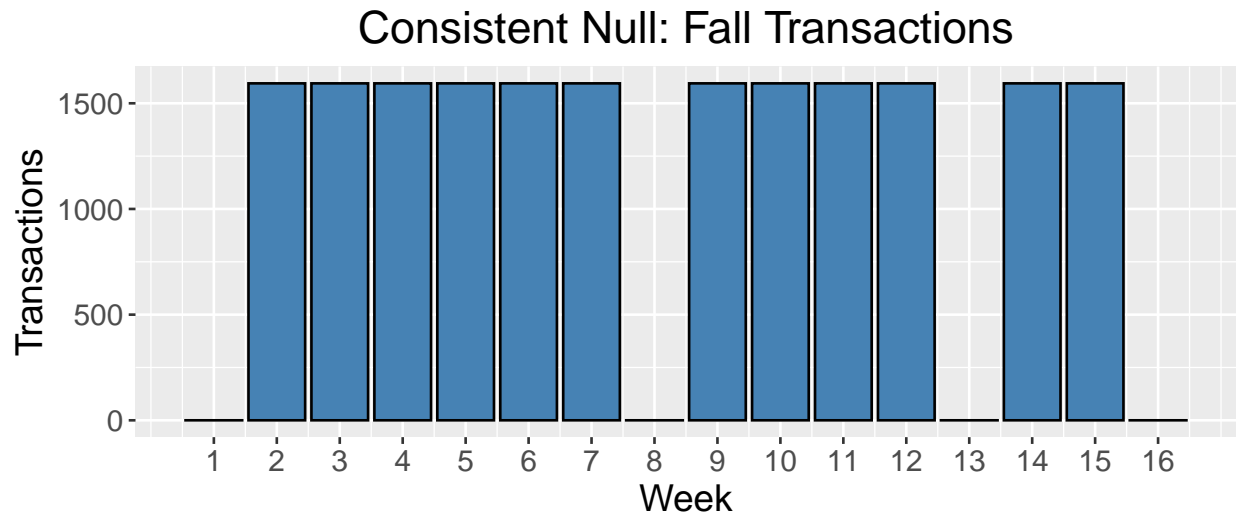
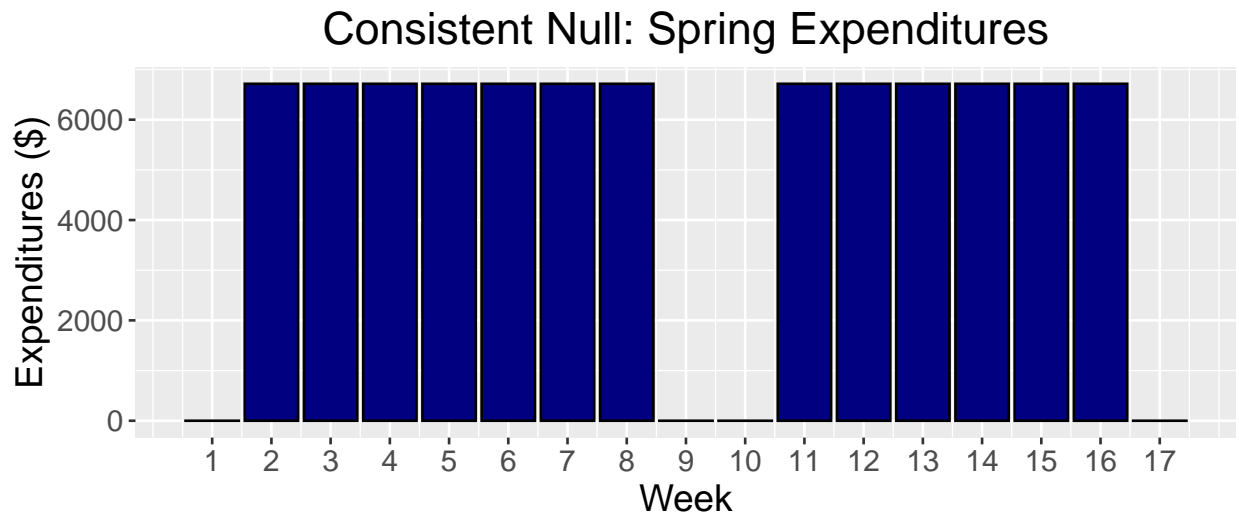


Fall Expenditures Per Transaction



Consistent Null: Spring Transactions





Which of the following best describes your FLEX usage during the semester?

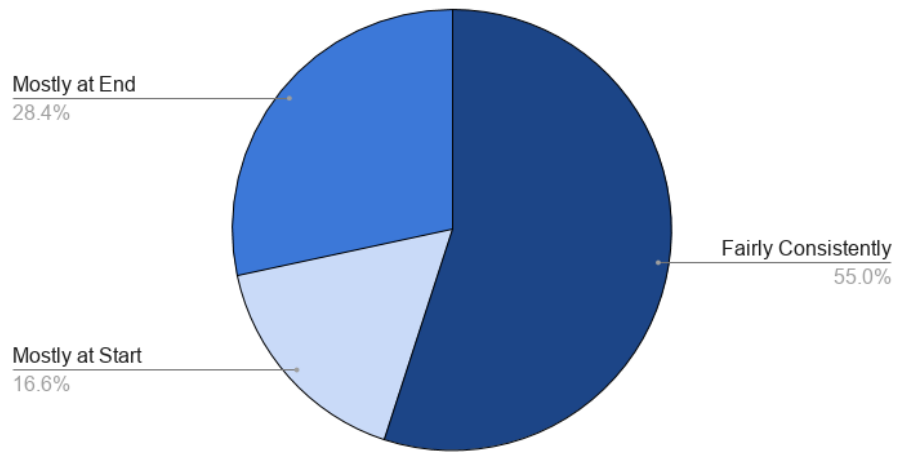
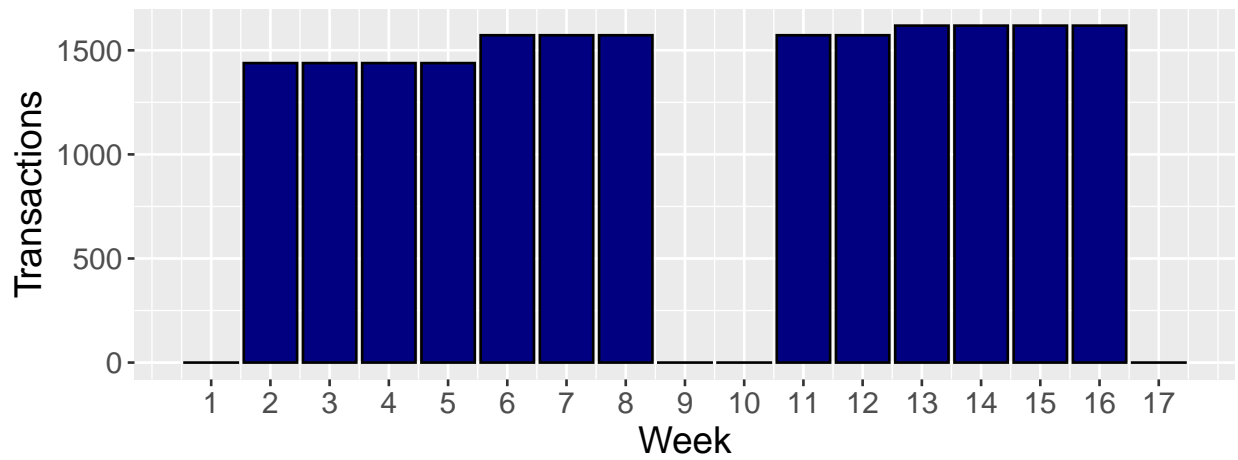
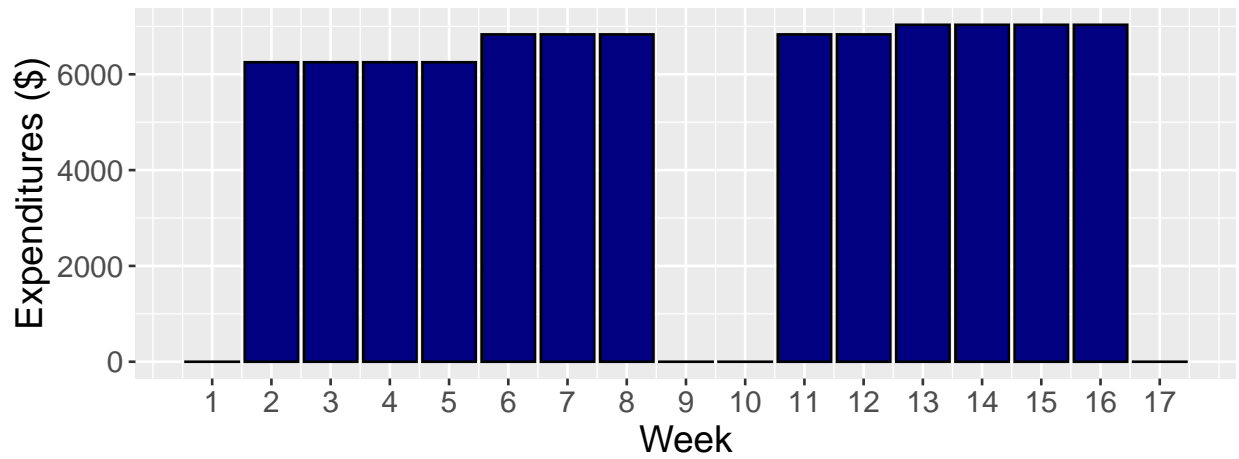


Figure 1: “Figure XXX: Student Responses to FLEX Usage”

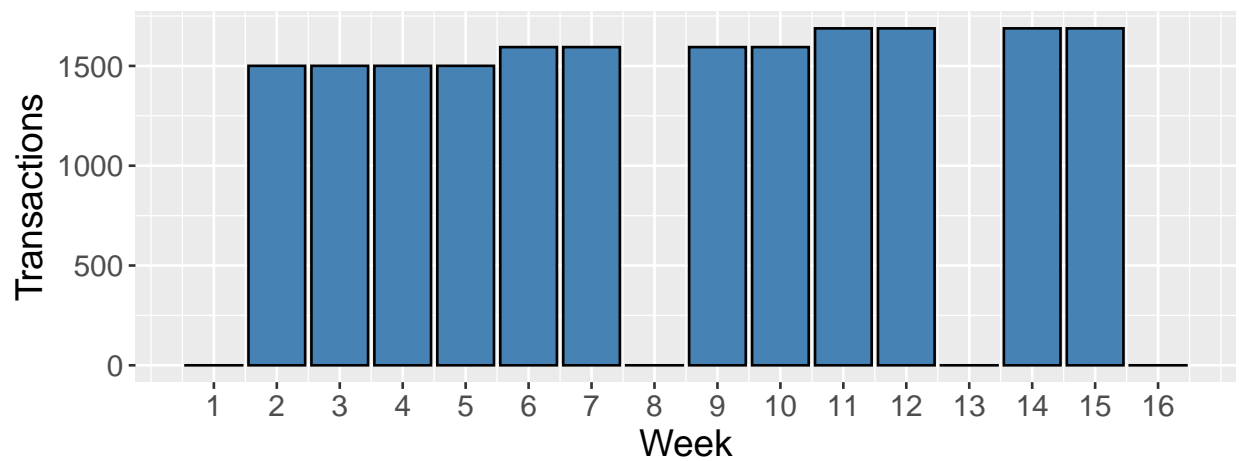
Weighted Null: Spring Transactions



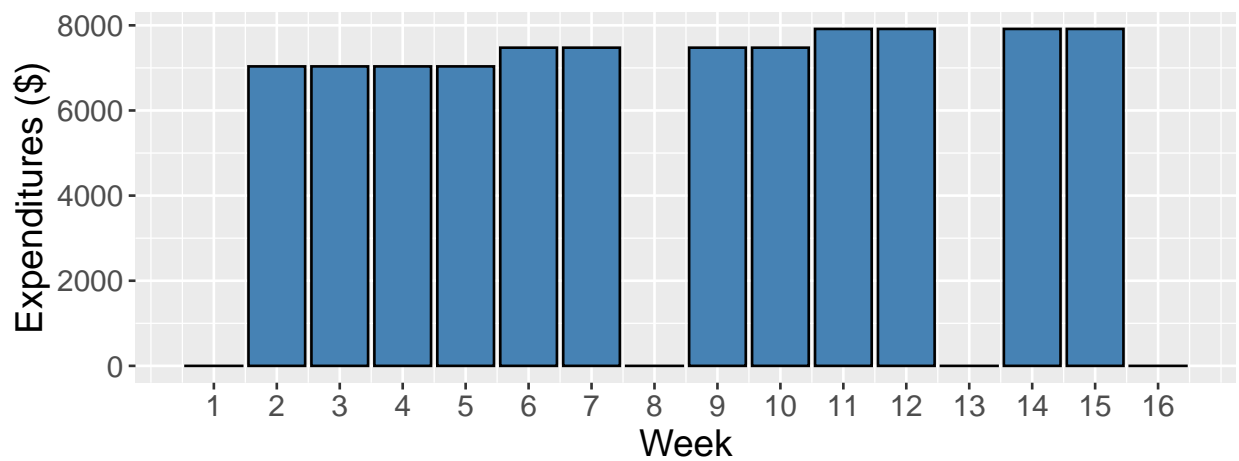
Weighted Null: Spring Expenditures



Weighted Null: Fall Transactions



Weighted Null: Fall Expenditures



Chi Squared Models

#Two Nulls Against Each Other

```
chisq.test(sprnullweighted$Transactions, p = sprnullconsistentprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: sprnullweighted$Transactions  
## X-squared = 45.792, df = 12, p-value = 7.535e-06
```

```
chisq.test(sprnullweighted$Purchases, p = sprnullconsistentprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: sprnullweighted$Purchases  
## X-squared = 198.98, df = 12, p-value < 2.2e-16
```

```
chisq.test(fallnullweighted$Transactions, p = fallnullconsistentprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: fallnullweighted$Transactions  
## X-squared = 44.249, df = 11, p-value = 6.574e-06
```

```
chisq.test(fallnullweighted$Purchases, p = fallnullconsistentprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: fallnullweighted$Purchases  
## X-squared = 207.48, df = 11, p-value < 2.2e-16
```

#Spring Transactions Chi Squared

```
chisq.test(springtransactions$Transactions, p = sprnullconsistentprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: springtransactions$Transactions  
## X-squared = 878.69, df = 12, p-value < 2.2e-16
```

```
chisq.test(springtransactions$Transactions, p = sprnullweightedprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: springtransactions$Transactions  
## X-squared = 1197, df = 12, p-value < 2.2e-16
```

```
#Spring Purchases Chi Squared
```

```
chisq.test(springpurchases$TotalPurch, p = sprnullconsistentprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: springpurchases$TotalPurch  
## X-squared = 3785.5, df = 12, p-value < 2.2e-16
```

```
chisq.test(springpurchases$TotalPurch, p = sprnullweightedprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: springpurchases$TotalPurch  
## X-squared = 5438.5, df = 12, p-value < 2.2e-16
```

```
#Fall Transactions Chi Squared
```

```
chisq.test(falltransactions$Transactions, p = fallnullconsistentprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: falltransactions$Transactions  
## X-squared = 215.63, df = 11, p-value < 2.2e-16
```

```
chisq.test(falltransactions$Transactions, p = fallnullweightedprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: falltransactions$Transactions  
## X-squared = 424.92, df = 11, p-value < 2.2e-16
```

```
#Fall Purchases Chi Squared
```

```
chisq.test(fallpurchases$TotalPurch, p = fallnullconsistentprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: fallpurchases$TotalPurch  
## X-squared = 1590.2, df = 11, p-value < 2.2e-16
```

```
chisq.test(fallpurchases$TotalPurch, p = fallnullweightedprob$Probability)
```

```
##  
## Chi-squared test for given probabilities  
##  
## data: fallpurchases$TotalPurch  
## X-squared = 2115.8, df = 11, p-value < 2.2e-16
```



```
#Testing the Fall and the Spring semesters against one another
springtransactions <- springtransactions %>% filter(Week != 16)
springpurchases <- springpurchases %>% filter(Week != 16)
#chisq.test(falltransactions$Transactions, p = springtransactions$ProbWeight, rescale.p = TRUE)
#chisq.test(fallpurchases$TotalPurch, p = springpurchases$ProbWeight, rescale.p = TRUE)
#chisq.test(springtransactions$Transactions, p = falltransactions$ProbWeight, rescale.p = TRUE)
#chisq.test(springpurchases$TotalPurch, p = fallpurchases$ProbWeight, rescale.p = TRUE)
```