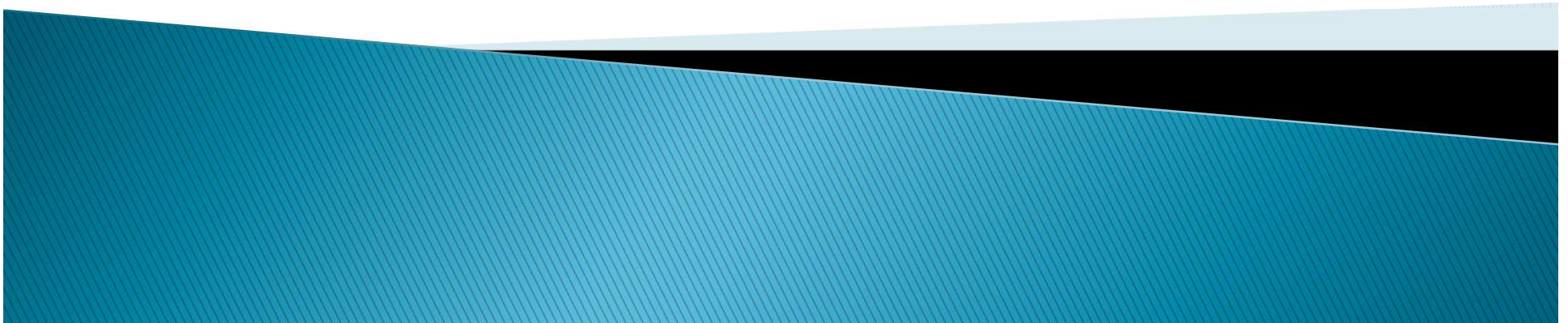


Analysis of the Off-Campus Housing Search for CMU Students

36-303 | Team E

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Agenda

- Intro
 - Research Question
 - Motivation
- Method
 - Questionnaire
 - Survey Setup
 - Sample
- Results
- Conclusion
 - Strengths and Weaknesses
 - Take Home Messages
 - Advice



Research Question

- Research Question
 - What are the common platforms used in the search of off-campus housing?
 - What are your preferences for off-campus housing?
 - How satisfied are you with your searching experience?
 - Do you think this searching experience can be improved, if so, in what ways?



Motivation

- Motivation
 - Survey intended to identify the existing difficulty in the search process
 - Looking for possible ways to improve off-campus housing search process
 - Survey result will be of great interest for the community



Questionnaire

- Part 0 : Resident Status
- Part 1 : General Information
- Part 2 : Identifying Difficulties in Off-Campus Housing Search
- Part 3 : Identifying Preferences in Off-Campus Housing Search



Survey Setup

- Survey posted on website
 - Promotional page with raffle details
- Emails
 - Email for preliminary information and selection
 - Email with the survey link
 - Studies have shown that this raises the response rate
 - Follow up email to be sent out in future



Sample Selection

- Sampling Frame: students from C-book
- Stratified SRS : Graduate and Undergraduate
- Randomly generate 1200 numbers each for undergraduate and graduate (page, column, row)
- Sample size of 737
 - 318 Graduate Students, 419 Graduate Students
- 23.0% response rate
 - Higher response rate from graduate students



Results: Graduate vs Undergraduate

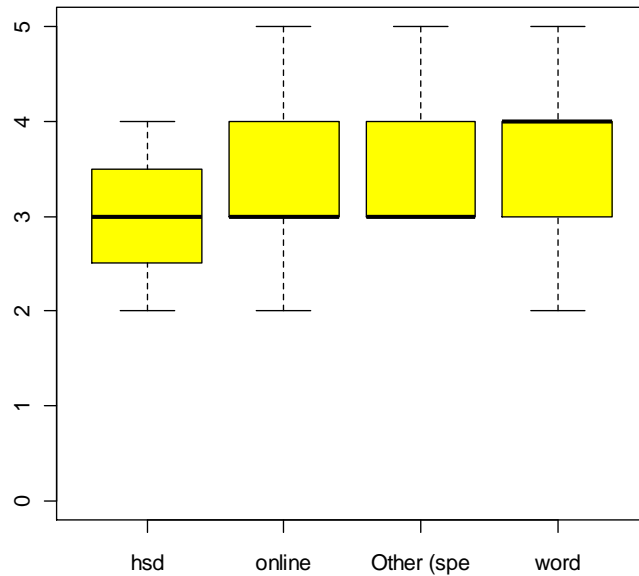
- Not weighted
- Primary variable of interest: **Satisfaction**
- Number of students who have searched for off-campus housing
 - Graduate: 77/82
 - Undergraduate: 45/88
- Both: Satisfaction vs. Platforms
- Graduate: Satisfaction vs. Attributes of platforms
- Undergraduate: Expectation vs. Reality



Results: Satisfaction vs Platforms

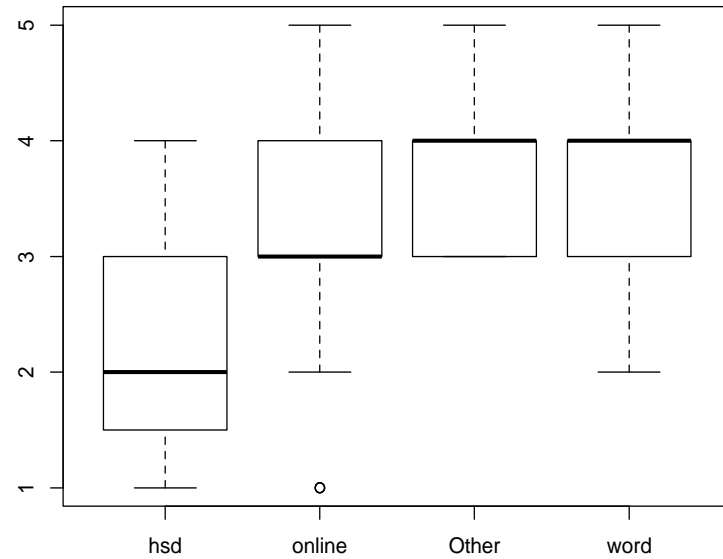
Undergraduate

Satisfaction by platforms



Graduate

Satisfaction by Platforms



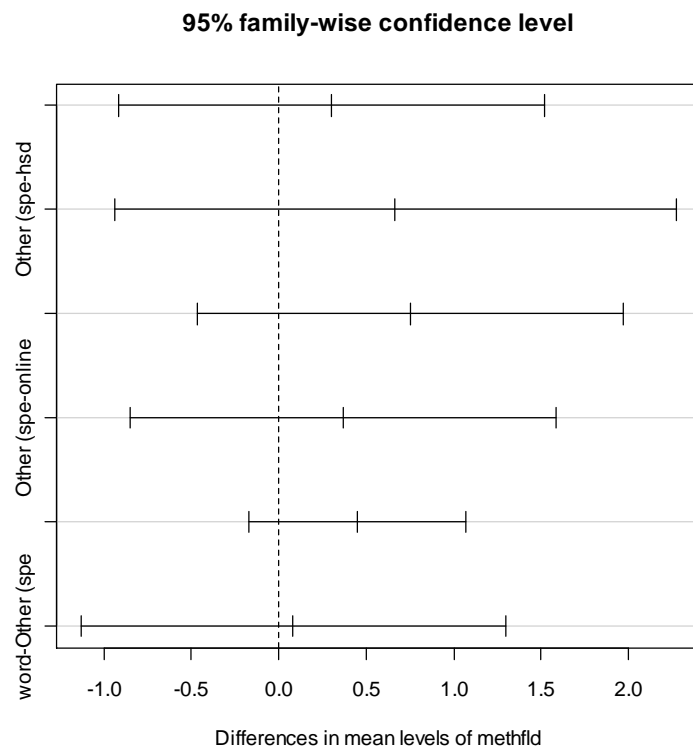
Results: Tukey Test

- Test
 - H_0 : Mean difference between any of the platforms is zero.
 - H_A : At least one of the differences is different from zero.

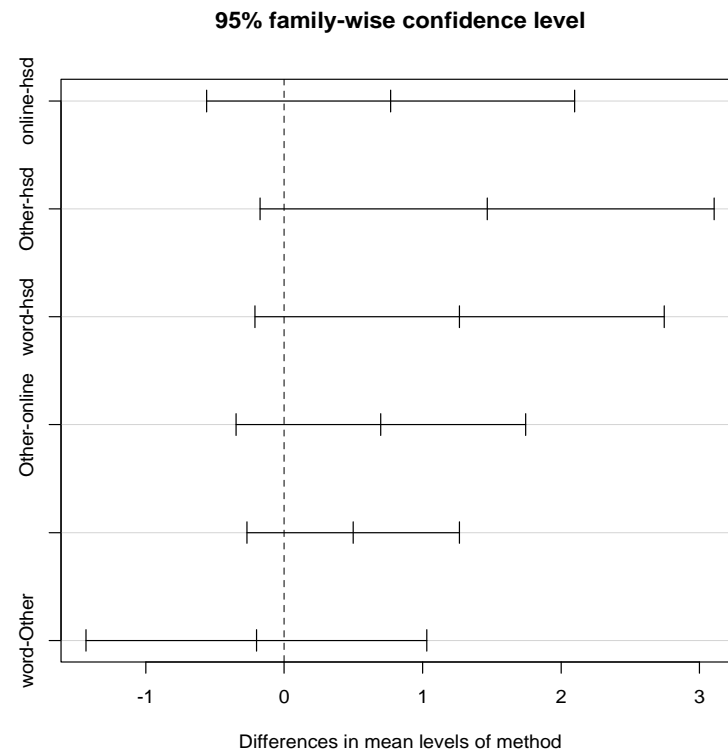


Results: Tukey Test

Undergraduate

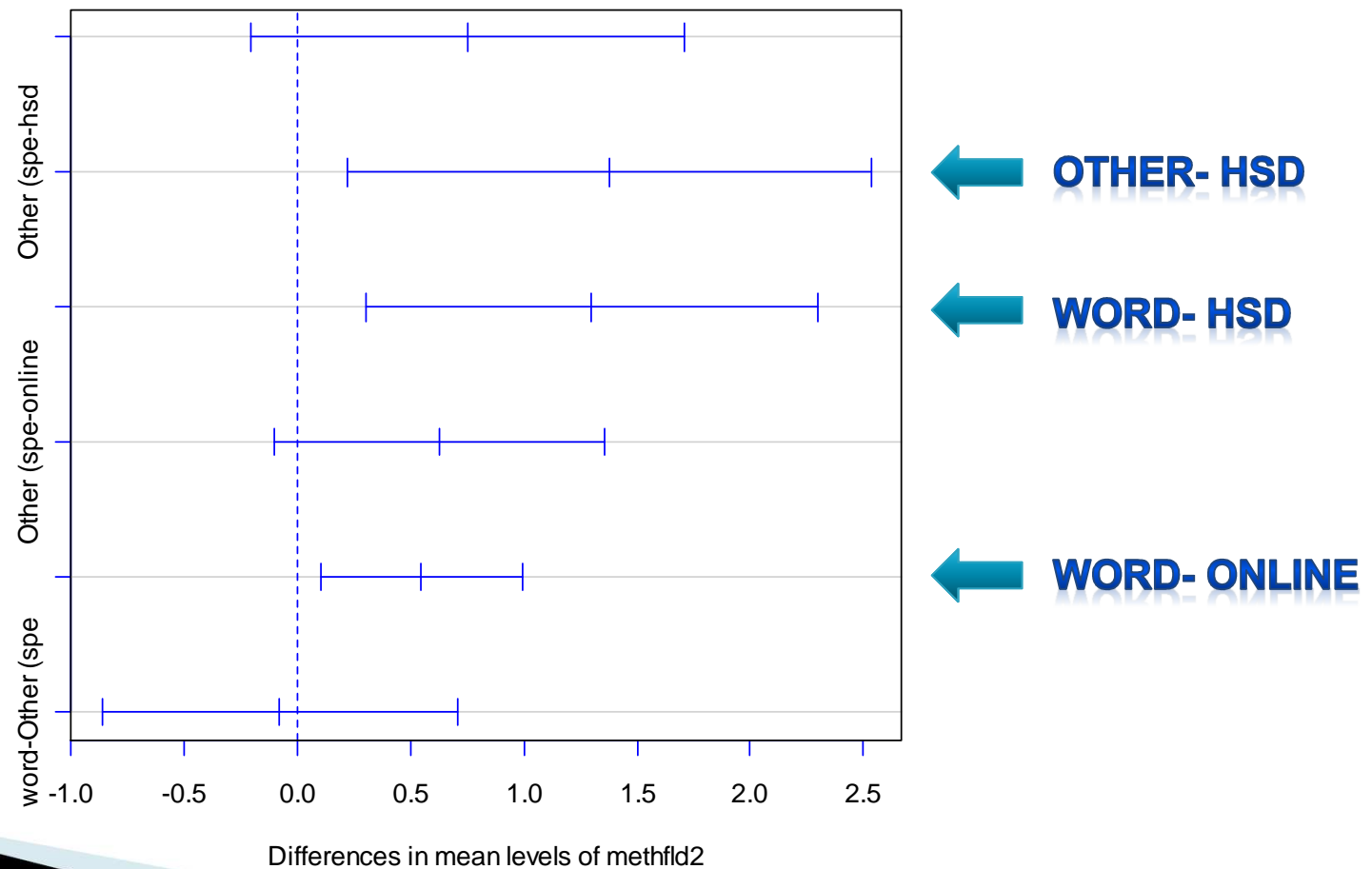


Graduate



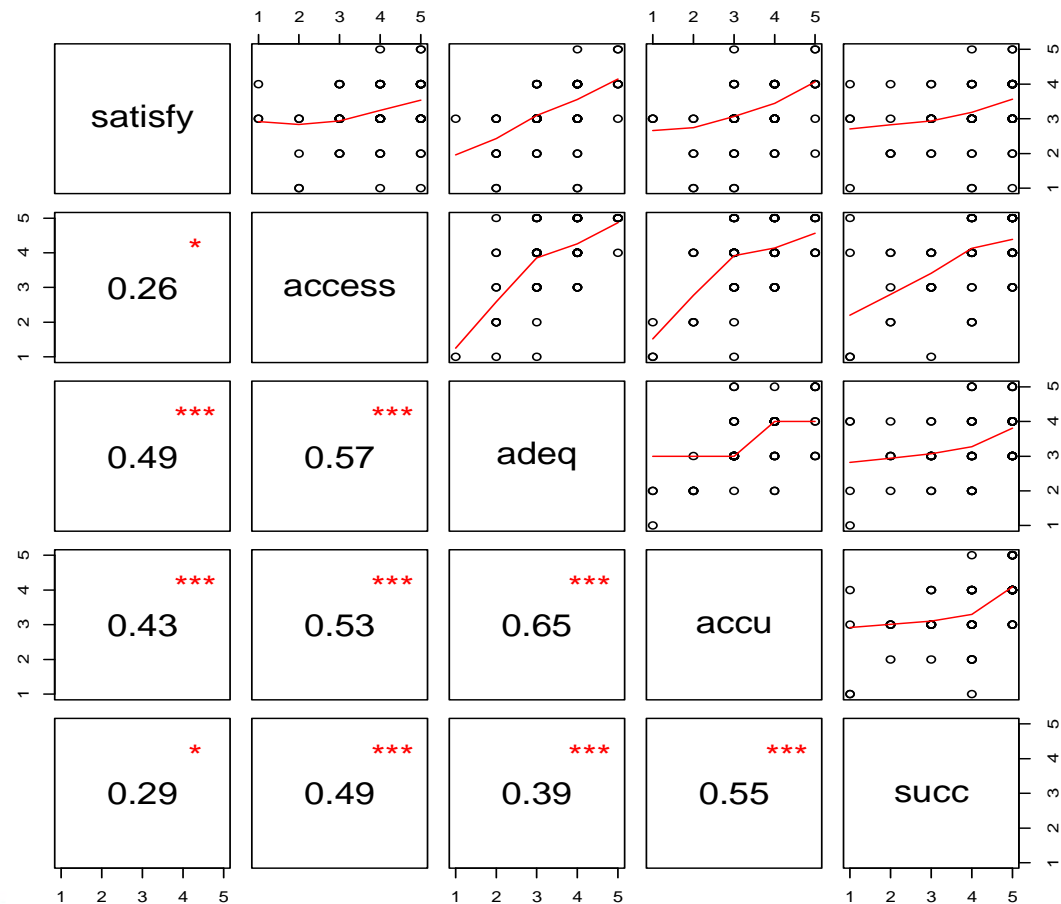
Results: Tukey Test for Both Groups

95% family-wise confidence level

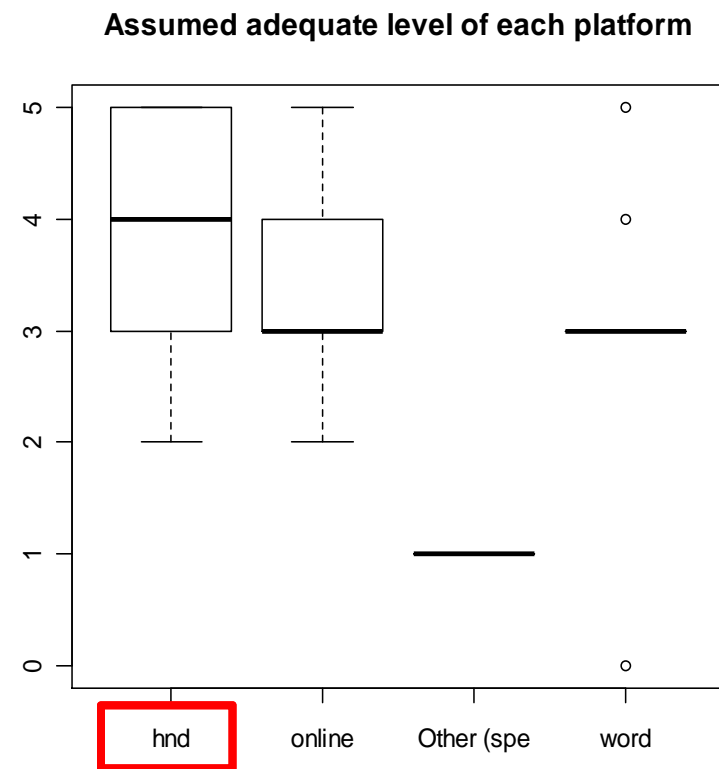
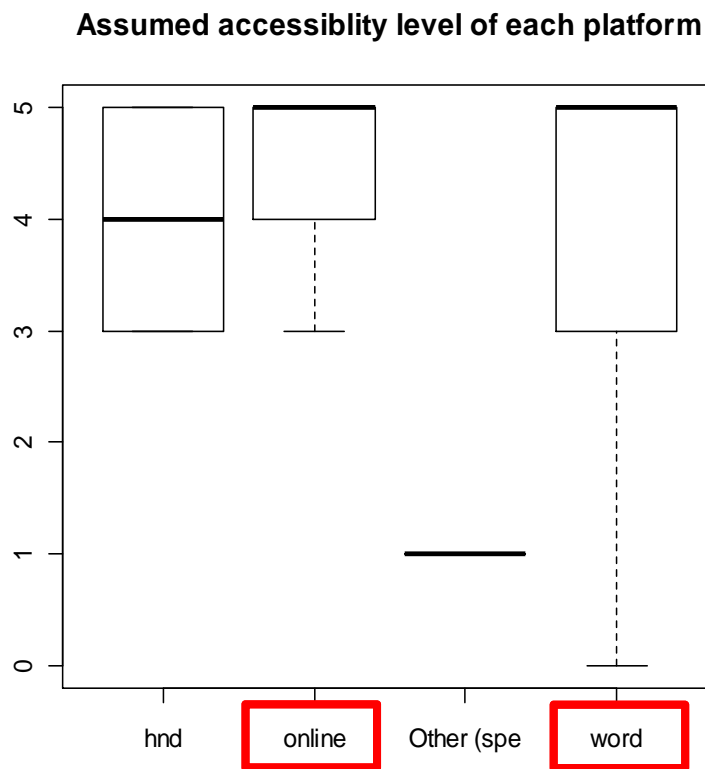


Results: Search Platform Attributes

- Satisfaction vs Attributes of Searching Platform

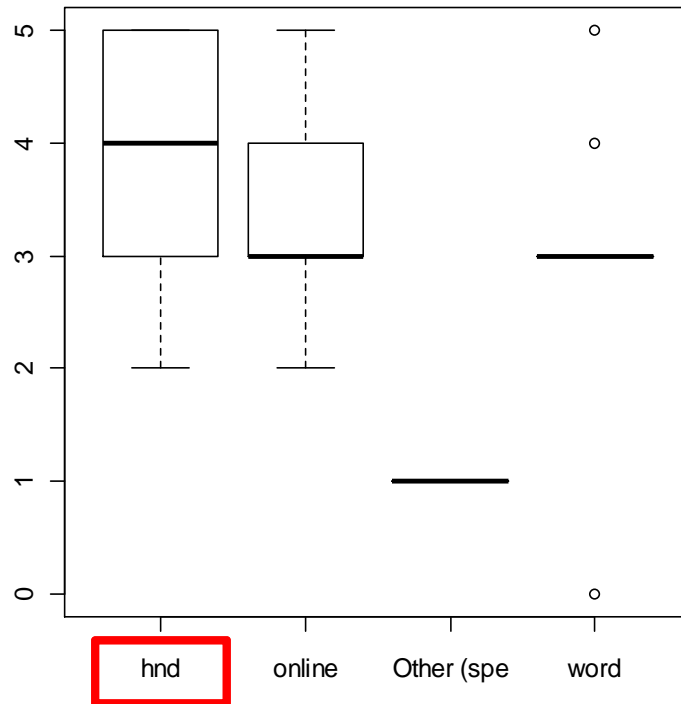


Results: Undergraduate Expectation of Searching Experience

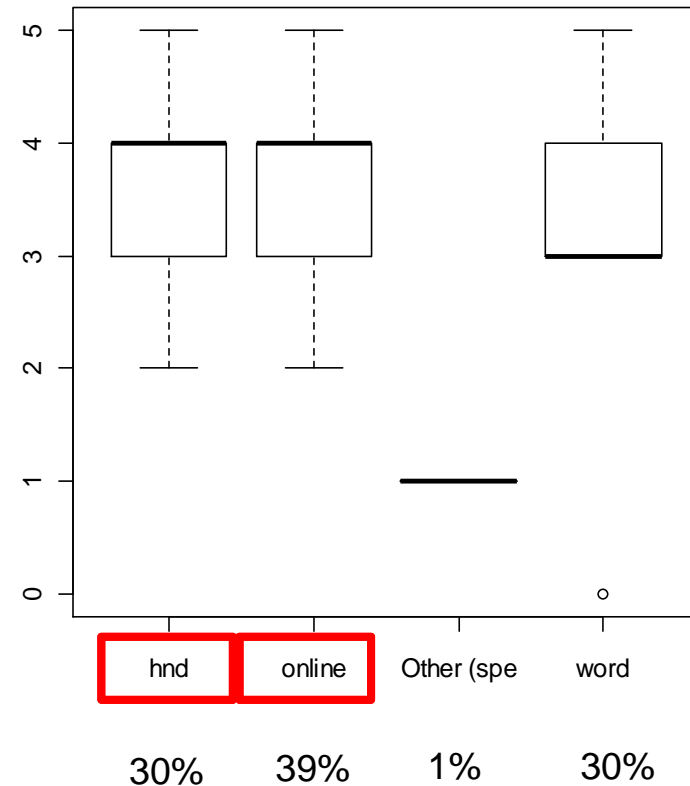


Results: Undergraduate Expectation of Searching Experience

Assumed accuracy level of each platform

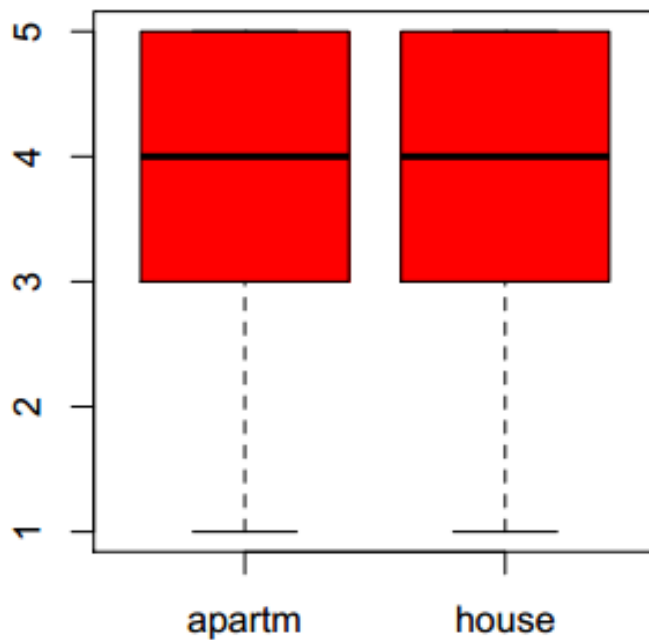


Assumed likelihood of success of each platform

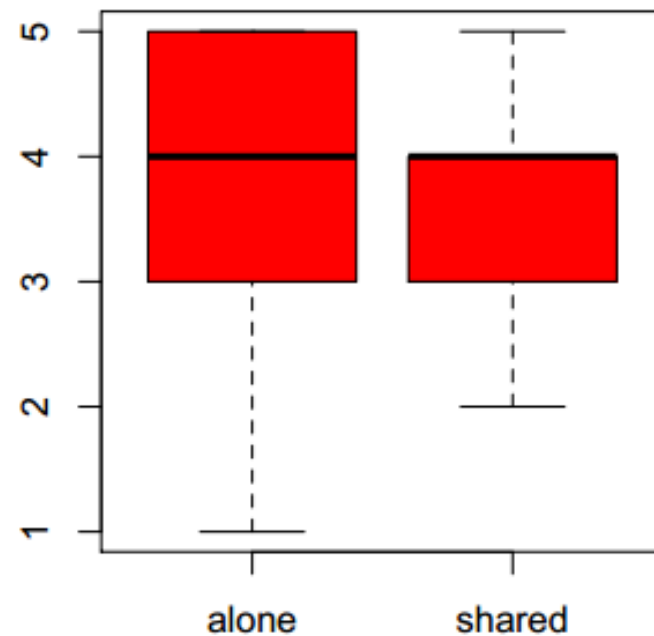


Results: Graduate Likelihood of Success vs. Preferences

Success by Type of Residence

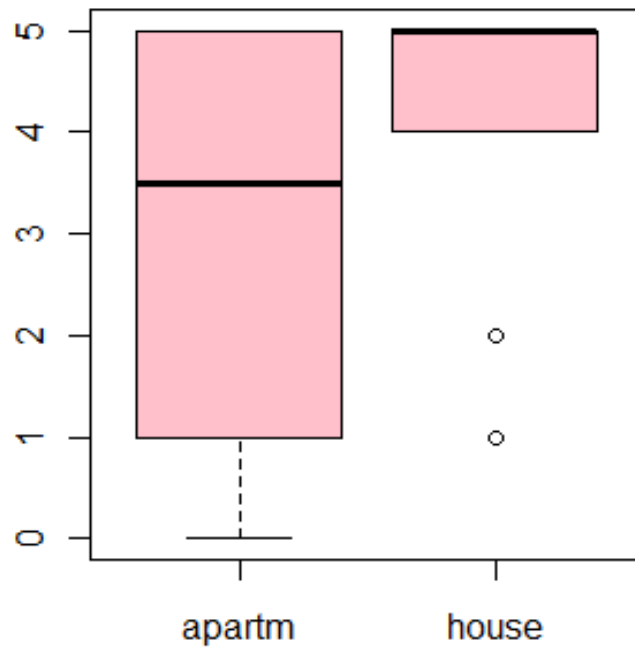


Success by Share Check

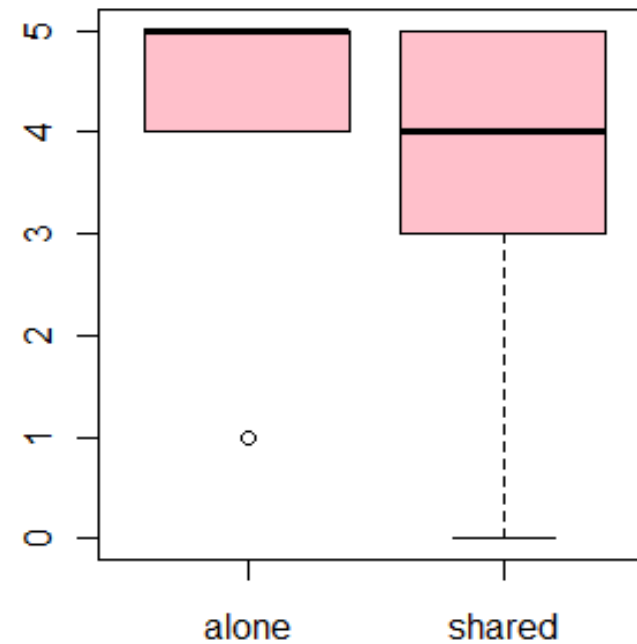


Results: Undergraduate Likelihood of Success vs. Preferences

Success by Type of Residence



Success by Share Check



Summary of Preferences

Graduate

- Apartment 72%
- House 28%
- Alone 53%
- Shared 47%
- Walk time average
20 min
- Monthly rent average
(\$375, \$696)
- Preferred method of payment
Online (67%)
Check (62%)

Undergraduate

- Apartment 54%
- House 46%
- Alone 20%
- Shared 80%
- Walk time average
15min
- Monthly rent average
(\$287,\$582)
- Preferred method of payment
Online (79%)
Credit Card (55%)

Conclusion

- Strengths
 - 25% response rate
 - Pre testing with diversified group
- Weaknesses
 - Incomplete surveys
 - Sampling error with C-Book



Conclusion

- Take Home Messages
 - No overall satisfactory platform
 - Housing and Dining Services
- Advice
 - Computerized version of C-Book
 - Expect delays and difficulties when working with human subjects
 - Prizes do not necessarily ensure a larger response rate



Thank You

Questions?

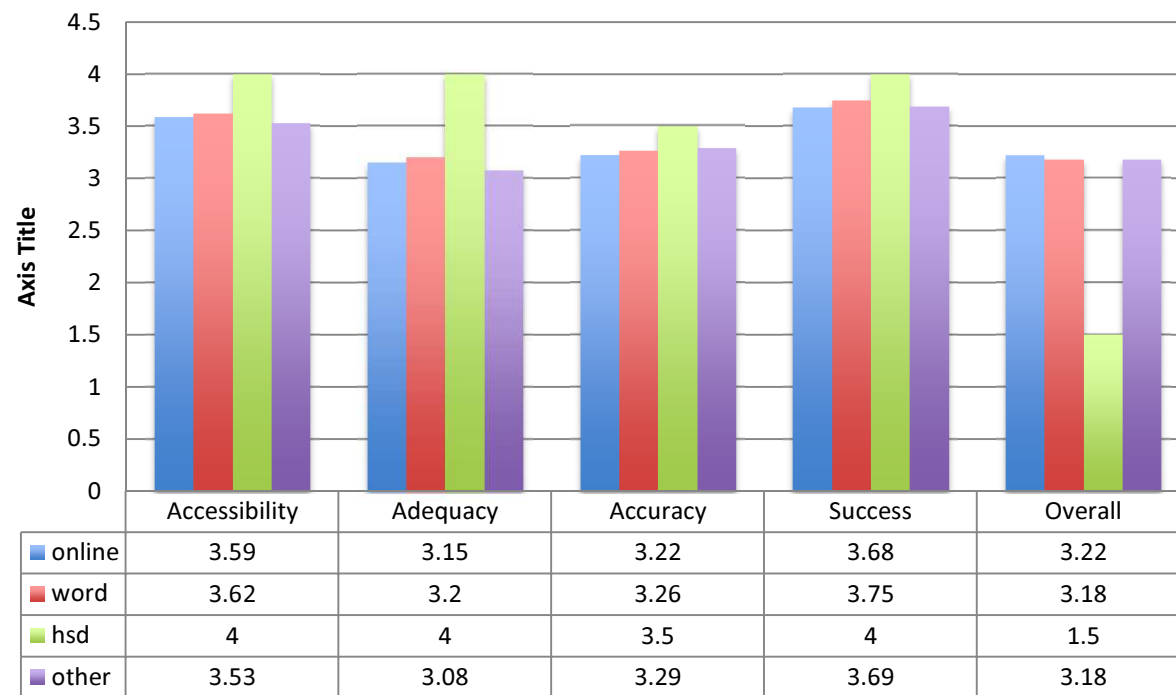


Backup Slides



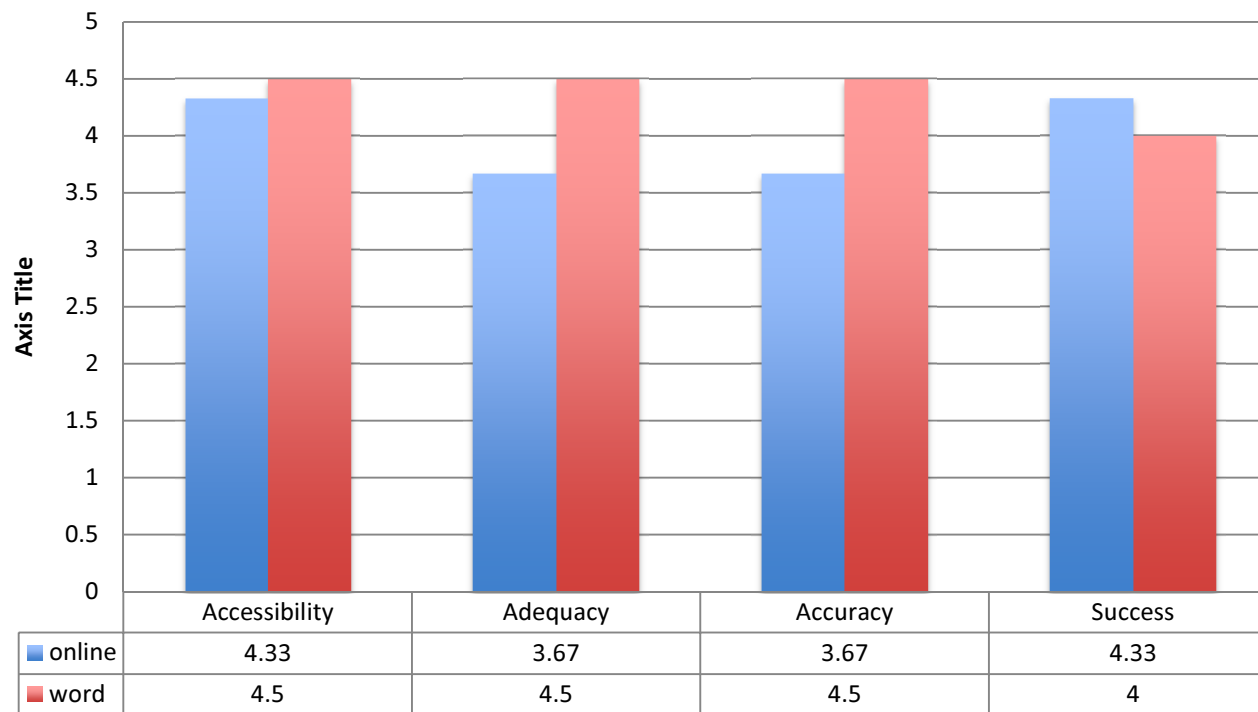
Results

**Average Ratings of Platforms
(Searched)**



Results

Average Ratings of Platforms (Haven't Searched)



Results

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	1.28459	0.41668	3.083	0.00291	**
access	-0.09292	0.10996	-0.845	0.40090	
adeq	0.41110	0.14190	2.897	0.00499	**
accu	0.16732	0.13753	1.217	0.22773	
succ	0.06834	0.09673	0.706	0.48218	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.7737 on 72 degrees of freedom

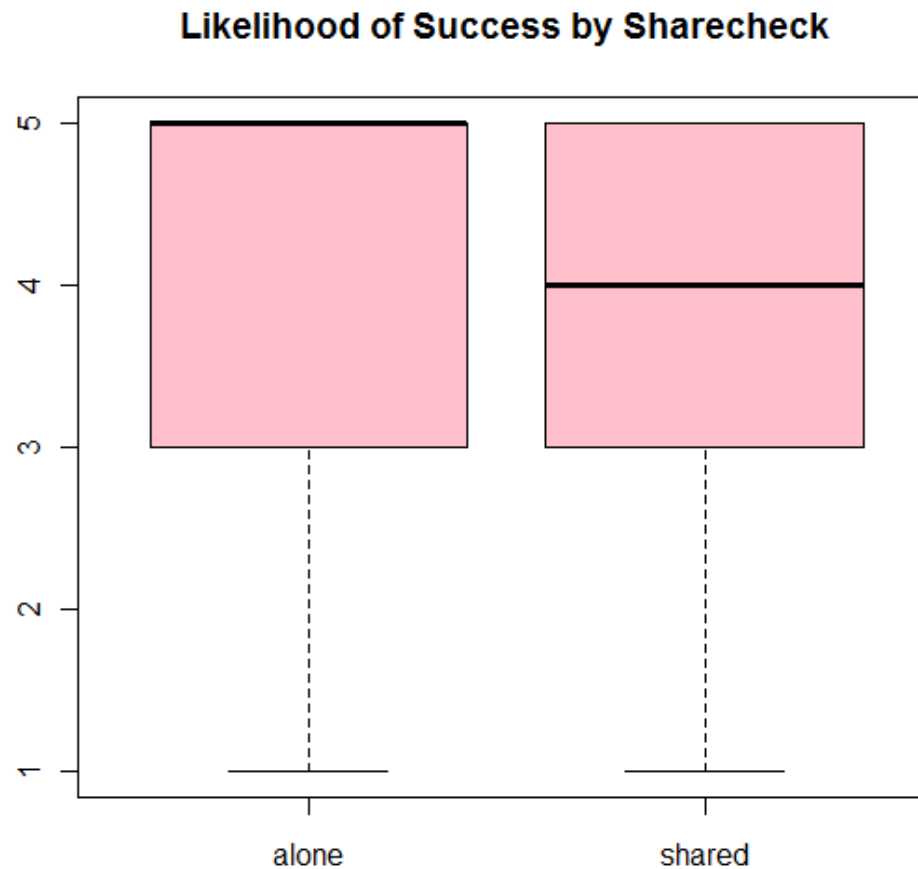
Multiple R-squared: 0.2751, Adjusted R-squared: 0.2348

F-statistic: 6.831 on 4 and 72 DF, p-value: 0.0001017



Results:

Likelihood of Success vs. Preferences



Results:

Likelihood of Success vs. Preferences

