Are You Sure That's The Right Controller?: Gauging Frustration Success Rate in Rhythm Based Games

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Our Experiment

- Our focus is to study how changing the controller input for a rhythm game can gauge frustration and satisfaction. Does the right controller input device have a major effect in performance?

- Controller input type has many varying factors on how a person will use for a game, especially if there is a change in button layout that can affect usability.

- Compared 3 different controller input types with our rhythm game application

Experimental Design

- Within-subjects, 15 participants
  - Majority computer science students, about 6 participants being current 464 students
- Process
  - Explain how to play game with controller type
    - Show controller mapping if Playstation or Xbox
 - Have participant play game
  - Post-play survey

Keyboard Group Summary Statistics

	Sum	Average	Sample Variance	Standard Deviation
Normal Hits	304	25.333	83.333	9.129
Good Hits	558	46.5	172.455	13.132
Perfect Hits	149	12.417	55.174	7.428
Miss Hits	285	23.75	261.295	16.165
Total Hits	1011	84.25	245.477	15.668
Percent Hit	927.522	77.293	206.613	14.374

Playstation Group Summary Statistics

	Sum	Average	Sample Variance	Standard Deviation
Normal Hits	312	26	62	7.87400787401181
Good Hits	531	44.25	137.659	11.7328210976342
Perfect Hits	159	13.25	38.205	6.18098256384415
Miss Hits	292	24.333	284.242	16.8594906282018
Total Hits	1002	83.5	248.818	15.7739716564403
Percent Hit	919.26604	76.606	209.425	14.4715321064705

Xbox Group Summary Statistics

	Sum	Average	Sample Variance	Standard Deviation
Normal Hits	297	24.75	56.568	7.52118220881411
Good Hits	602	50.1666666666667	77.061	8.77841705893529
Perfect Hits	124	10.3333333333333	29.879	5.46614927337224
Miss Hits	285	23.75	135.477	11.6394704659307
Total Hits	1023	85.25	135.477	11.6394704659307
Percent Hit	938.53311	78.211	114.031	10.6785290847749
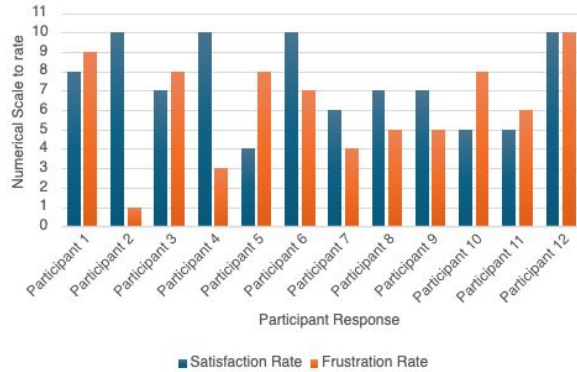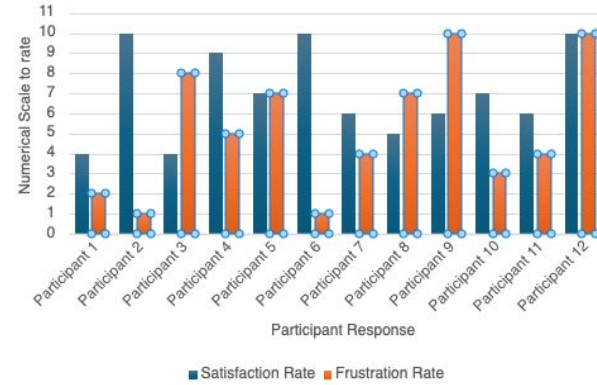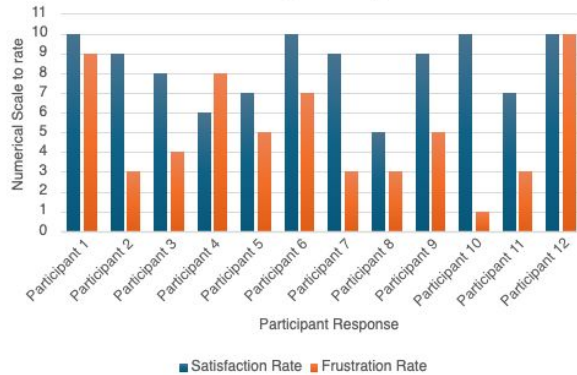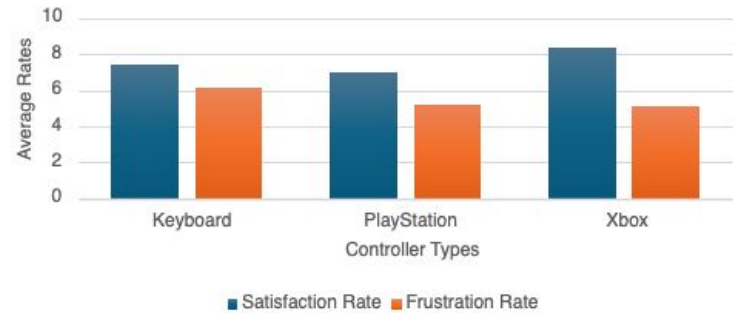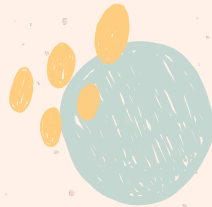
Conclusion

- Data was not statistically significant that frustration and satisfaction rate is gauged by different controller inputs when using rhythm games
- But from survey data we can clearly see some differences in the results
  - The Xbox One controller had the highest satisfaction rate out of the three
  - The keyboard arrow keys on the Macbook had the highest frustration rate out of the three

Thanks!