Usability Study

Title: Usability Study for Student Behavior Analysis During Lecture

Introduction

- The purpose of this usability study is to evaluate the effectiveness and user satisfaction of a software tool designed to analyze student behavior during lectures. The study aims to identify the points of problems students face and provide teachers with guidance and tracking capabilities. This document outlines the methodology, tasks, and measurements involved in the usability testing process.

Objectives

The key objectives of this usability study are as follows:

- Measure typical users' performance on typical tasks related to student behavior analysis during lectures.
- Identify and document the types and frequency of errors made by users.
- Record the time taken by users to complete each task.
- Observe and analyze users' interactions with the software through video recording and system logs.
- Gather user satisfaction feedback through questionnaires and interviews.
- Summarize the findings and create a usability specification for the software.

Analysis and Evaluation Results

We conducted an analysis and evaluation of our system by involving 10 participants, including friends and family members. The participants varied in their familiarity with technologies, with some being experienced users, some having moderate knowledge, and others being less familiar. Our objective was to track their progress and observe their interactions with the system. The participants provided feedback on the system's various interaction methods, including gestures, TUIO, and AR. Here are the summary results and evaluation feedback:

	Gestures	TUIO	AR
p1	5	4	2
p2	3	2	0
p3	4	6	2
p4	2	3	3
p5	6	1	4
p6	7	0	3
p7	1	0	0
p8	3	2	1
p9	4	4	1
p10	7	5	1
Avg	4.2	2.7	1.7

Anova Result

Anova: Single Factor					
SUMMARY					
Groups	*Count*	*Sum*	*Average*	*Variance*	
Gestures	10	42	4.2	4.177778	
TUIO	10	27	2.7	4.233333	
AR	10	17	1.7	1.788889	
ANOVA					
rce of Varia	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between G	31.66667	2	15.83333	4.656863	0.0183	3.354131
Within Gr	91.8	27	3.4			
Total	123.4667	29			

Conclusion

- The usability study outlined in this document aims to evaluate the software's effectiveness in analyzing student behavior during lectures. By conducting usability tests, gathering user feedback, and analyzing the data, we can identify areas for improvement and provide guidance to teachers for better student tracking and guidance during lectures.