

Case Study

Usability Test

Slack Vs Discord

Problem:

There was a need to determine if there is a significant difference in the time it takes to complete the same management tasks in both Discord and Slack, to determine which application has as a more effective interface and how a user's experience with the software affects the time needed to complete tasks within it.

Roles:

User Experience Researcher.

Time:

20 weeks

Solution:

Usability testing by gathering Quantitative data through a controlled laboratory experiment in which the participants' screens were recorded while performing the same tasks in both applications. These recordings were then coded to determine the start and finish time for each task, which was then used to calculate the actual task completion time.

Activities:

Observation, Interview, Survey

Tools used: SPSS, Google Survey, MS word

Requirements gathering and Research

- 9 User interviews
- Usability testing lab
- Two-way screen
- Activity tracker

Results:

There is no significant difference in the time taken to complete the same tasks across Discord and Slack (with varying levels of experiences in those applications).

The data gathered from the tests do indicate to a falsity to the null hypothesis and a trend behind the data point to a possible rejection of the null hypothesis, this can be seen in the Q-Q plots to some variables as some of them meet the prerequisite assumptions of a T-test, that is to say, that normality is observed in some of the gathered data of task completion time and somewhat close to **0.05** p-values for certain variables such as the D-Mean.

Ultimately, however, the null hypothesis at this point of time in the study cannot be rejected due to the high two-tailed significance values of the independent samples test, and the high p-values of the data gathered for each of the TCT variables for Slack and Discord. Therefore, a conclusion cannot be reached to if there is a significant difference in the time taken to complete the same tasks across both applications.

This does not necessarily mean that the UTP test has been a pointless pursuit, but that following the recommendations proposed in later sections of this document may lead to a definitive answer to the null hypothesis.

Appendix:

Pre-Test questionnaire

A few short questions before we begin.

* Required

What is your name

Your answer

Do you regularly use Slack? (at least once a week) *

- ☐ Yes
☐ No

Do you regularly use Discord? (at least once a week) *

- ☐ Yes
☐ No

Do you regularly use another communication software? (at least once a week) *

- ☐ Yes
☐ No

If yes, which one?

Your answer

SUBMIT

Never submit passwords through Google Forms.

Pre-test questionnaire

Consent Form for Participation in a Research Study Uppsala University

Description of the research and your participation

You are invited to participate in a research study conducted for the Usability Evaluation Methods course. The purpose of this research is examining ease of use of the software packages Slack and Discord.

Your participation will involve following a set of tasks and recording of the screen and your voice while performing them.

Protection of confidentiality

All data gathered in this study is strictly for the purposes of the Usability Testing Project. And as such we will do everything we can to protect your privacy. Your identity will not be revealed in any publication resulting from this study

Voluntary participation

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

Consent

**I have read this consent form and have been given the opportunity to ask questions.
I give my consent to participate in this study.**

Participant's signature_____ Date:_____

A copy of this consent form should be given to you.

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
S_MEAN	Equal variances assumed	,121	,738	,102	7	,921	1.631399	15.931115	-36.039703	39.302501
	Equal variances not assumed			,102	6,443	,922	1.631399	16.007350	-36.893117	40.155915
D_MEAN	Equal variances assumed	,497	,504	-1,502	7	,177	-13,01349	8,66232	-33,49662	7,46964
	Equal variances not assumed			-1,451	5,518	,201	-13,01349	8,96608	-35,42612	9,39913

Table 1 Independent sample t-test for mean task completion time grouped by Discord experience

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
S_MEAN	Equal variances assumed	,654	,445	-,885	7	,405	-13.381830	15.119482	-49.133724	22.370063
	Equal variances not assumed			-,903	6,941	,397	-13.381830	14.813106	-48.469957	21.706296
D_MEAN	Equal variances assumed	1,304	,291	,240	7	,817	2,38381	9,92053	-21,07452	25,84214
	Equal variances not assumed			,248	7,000	,811	2,38381	9,61428	-20,35036	25,11798

Table 2 Independent sample t-test for mean task completion time grouped by Slack experience