Quantifying the Effects of Working in VR for One Week - Appendix
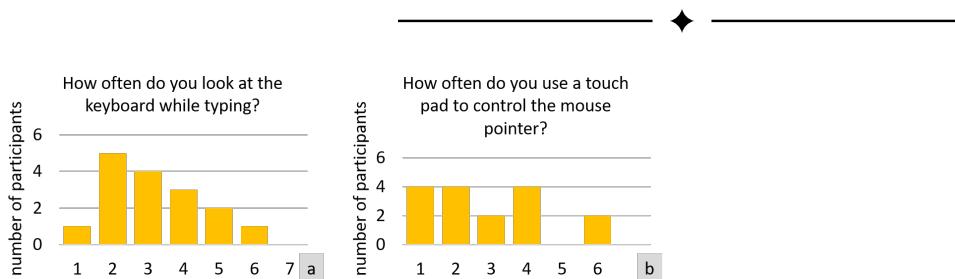

Fig. 1. How often participants usually look at keyboard while typing (a) and how often they use a touch pad to control the mouse pointer (b). Scale from 1 (never) to 7 (all the time).
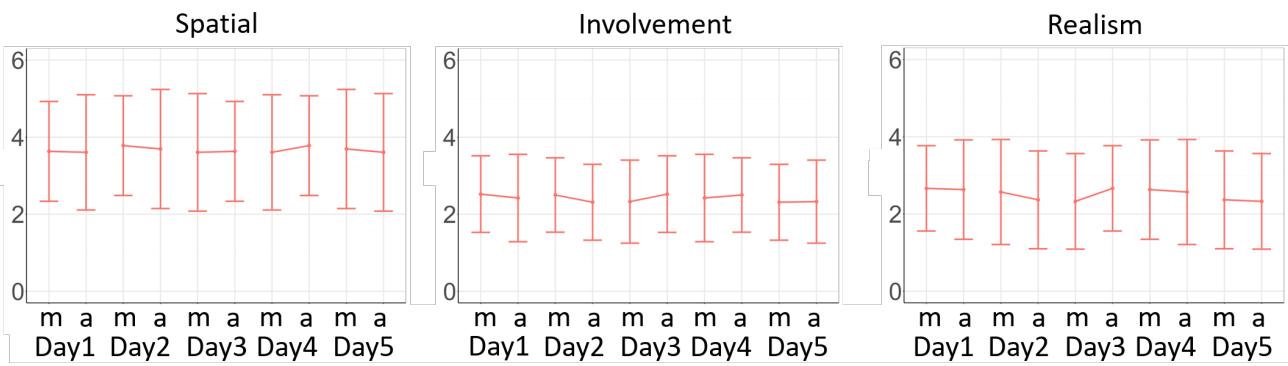
Fig. 2. Subscales of Presence Questionnaire (IPQ).

Table 1. RM-ANOVA results for Task Load, system Usability, Flow, Productivity, Frustration, Positive and Nnegative Affect. $df_1 = df_{effect}$ and $df_2 = df_{error}$.

	Task Load					System Usability					Flow				
	df_1	df_2	F	p	η_p^2	df_1	df_2	F	p	η_p^2	df_1	df_2	F	p	η_p^2
Environment	1	14	12.03	0.003	0.46	1	15	21.14	<0.001	0.58	1	12	7.72	0.02	0.39
Day	4	56	1.42	0.24	0.09	4	60	0.12	0.97	0.01	4	48	0.71	0.59	0.06
Time	1	14	3.71	0.07	0.21	1	15	0.48	0.50	0.03	1	12	0.75	0.40	0.06
Environment*Day	4	56	2.04	0.10	0.13	4	60	0.75	0.57	0.05	4	48	1.37	0.26	0.10
Environment*Time	1	14	0.08	0.78	0.01	1	15	0.01	0.91	<0.001	1	12	0.33	0.57	0.03
Day*Time	4	56	1.62	0.18	0.10	4	60	0.66	0.62	0.04	4	48	0.29	0.88	0.02
Environment*Day *Time	4	56	1.28	0.29	0.08	4	60	0.32	0.86	0.02	4	48	0.96	0.43	0.07

	Productivity					Frustration					Positive Affect					Negative Affect				
	f_1	df_2	F	p	η_p^2	df_1	df_2	F	p	η_p^2	df_1	df_2	F	p	η_p^2	df_1	df_2	F	p	η_p^2
Environment	1	15	1.01	0.01	0.46	1	15	11.70	0.003	0.44	1	12	2.14	0.17	0.15	1	12	14.44	0.003	0.55
Day	4	60	3.06	0.23	0.17	4	60	0.92	0.46	0.06	4	48	3.23	0.02	0.21	4	48	9.70	<0.001	0.45
Time	1	15	0.37	0.55	0.02	1	15	5.01	0.04	0.25	1	12	17.12	0.001	0.58	1	12	3.78	0.08	0.24
Environment*Day	4	60	1.16	0.34	0.07	4	60	0.19	0.94	0.01	4	48	0.83	0.52	0.06	4	48	4.11	0.006	0.25
Environment*Time	1	15	6.96	0.02	0.32	1	15	0.02	0.88	0.001	1	12	0.05	0.82	0.004	1	12	3.15	0.10	0.21
Day*Time	4	60	0.54	0.70	0.04	4	60	0.47	0.76	0.03	4	48	2.69	0.04	0.18	4	48	0.27	0.89	0.02
Environment*Day *Time	4	60	0.21	0.93	0.01	4	60	1.71	0.16	0.10	4	48	2.88	0.03	0.19	4	48	0.57	0.69	0.05

Table 2. RM-ANOVA results for Wellbeing, Anxiety, Simulator Sickness and Visual Fatigue. $df_1 = df_{effect}$ and $df_2 = df_{error}$.

	Wellbeing					Anxiety					Simulator Sickness					Visual Fatigue			
	df_1	df_2	F	p	η_p^2	df_1	df_2	F	p	η_p^2	df_1	df_2	F	p	η_p^2	df_1	df_2	F	p
Environment	1	14	13.34	0.002	0.49	1	15	6.29	0.02	0.30	1	15	24.34	<0.001	0.62	1	15	26.30	<0.001
Day	4	56	4.62	0.002	0.25	4	60	6.27	<0.001	0.29	4	60	8.32	<0.001	0.36	4	60	16.24	<0.001
Time	2	28	38.82	<0.001	0.73	2	30	0.06	0.94	0.003	2	30	38.48	<0.001	0.72	2	30	24.41	<0.001
Environment*Day	4	56	0.70	0.59	0.05	4	60	1.97	0.11	0.12	4	60	10.32	<0.001	0.41	4	60	12.98	<0.001
Environment*Time	2	28	5.70	0.008	0.29	2	30	0.81	0.46	0.05	2	30	19.06	<0.001	0.56	2	30	27.10	<0.001
Day*Time	8	112	0.72	0.67	0.05	8	120	2.35	0.02	0.14	8	120	1.20	0.30	0.07	8	120	1.70	1.12
Environment*Day *Time	8	112	0.84	0.57	0.06	8	120	0.59	0.79	0.04	8	120	2.21	0.03	0.13	8	120	1.28	0.26

Table 3. RM-ANOVA results for number of breaks, duration of breaks, heart rate and typing speed. $df_1 = df_{effect}$ and $df_2 = df_{error}$.

	Number of Breaks					Break Duration					Heart Rate					Typing Speed				
	df_1	df_2	F	p	η_p^2	df_1	df_2	F	p	η_p^2	df_1	df_2	F	p	η_p^2	df_1	df_2	F	p	η_p^2
Environment	1	13	0.87	0.37	0.06	1	13	12.26	0.004	0.49	1	9	0.08	0.78	0.009	1	15	8.46	0.011	0.36
Day	4	52	2.7	0.04	0.17	4	52	2.18	0.08	0.14	df_1	df_2	F	p	η_p^2	1	15	8.38	0.011	0.36
Time	1	13	0.46	0.51	0.03	1	13	0.04	0.84	0.003	df_1	df_2	F	p	η_p^2					
Environment*Day	4	52	1.57	0.20	0.11	4	52	2.08	0.11	0.13	4	36	1.77	0.16	0.17	1	15	0.31	0.57	0.0
Environment*Time	1	13	0.71	0.41	0.05	1	13	<0.001	0.98	<0.001										
Day*Time	4	52	0.88	0.48	0.06	4	52	0.89	0.48	0.06										
Environment*Day *Time	4	52	2.30	0.07	0.15	4	52	1.62	1.18	0.11										