

Subjects Data of Toward Evaluating Progressive Rendering Methods in Appearance Design Tasks

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1 Overview

This is document the supplemental material of *Toward Evaluating Progressive Rendering Methods in Appearance Design Tasks*. This include all the graphs presented in the papers and additional graphs for interested reader. In all graphs, error bars represent standard error.

It also contains all the tests for statistical significance in tables. All p values are computed using a standard one-way ANOVA, except for ranking. The ANOVA for ranking data is conducted using the *Kruskal–Wallis* test, which is a nonparametric alternative that does not rely on an assumption of normality. A p value below 0.1 indicates a 90% confidence that the two population means differ given the measure of the sample. All the p values below 0.1 are written with italic font.

2 Errors by Task

Figure 1, Figure 2, Figure 3, and Figure 4 are the error plots for light matching task 1, task 2, task 3, and task 4. The y axis is L^2 errors while the x axis is time in seconds.

Figure 5, Figure 6, Figure 7, and Figure 8 are the error plots for material matching task 1, task2, task3, and task4. The y axis is L^2 errors while the x axis is time in seconds.

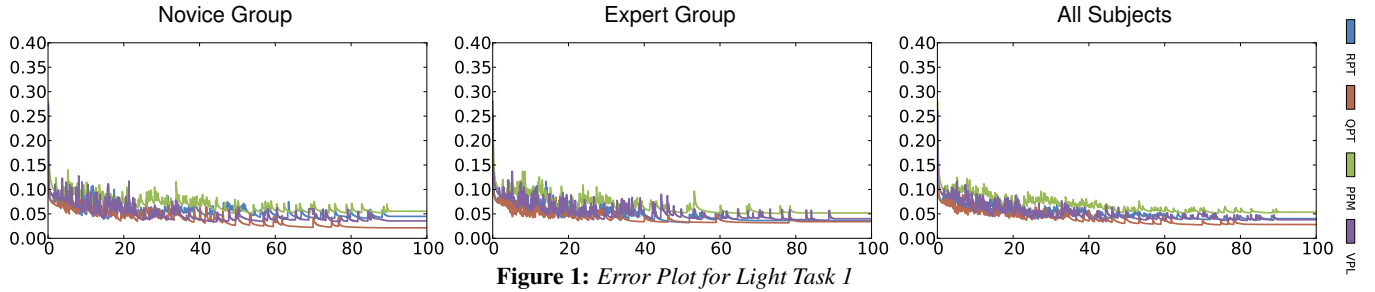


Figure 1: Error Plot for Light Task 1

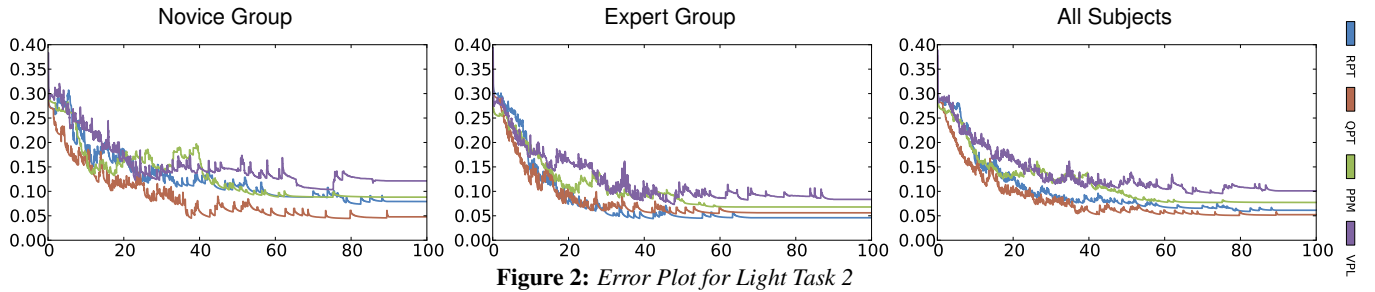


Figure 2: Error Plot for Light Task 2

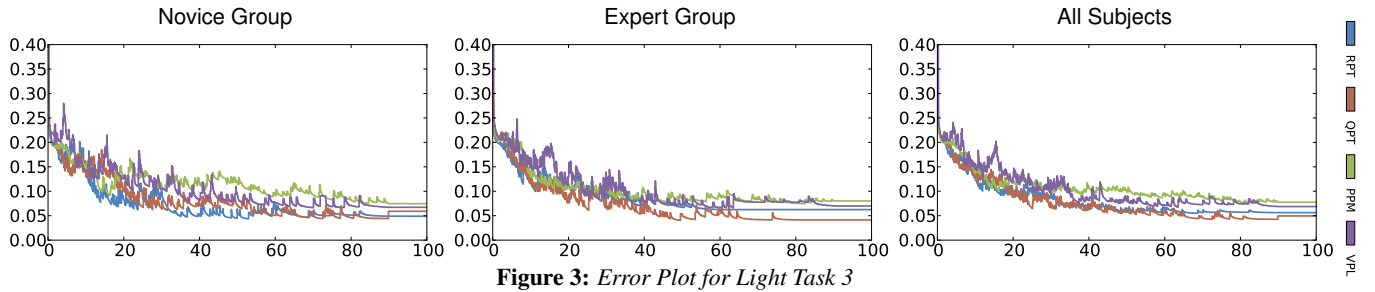


Figure 3: Error Plot for Light Task 3

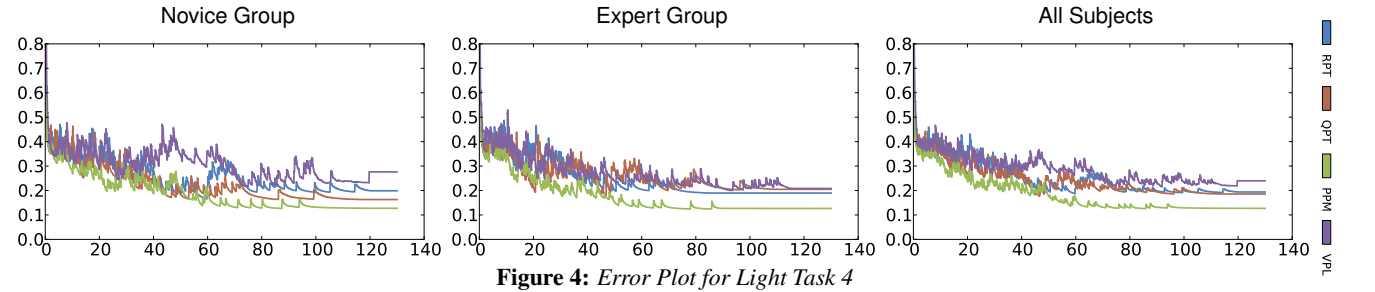
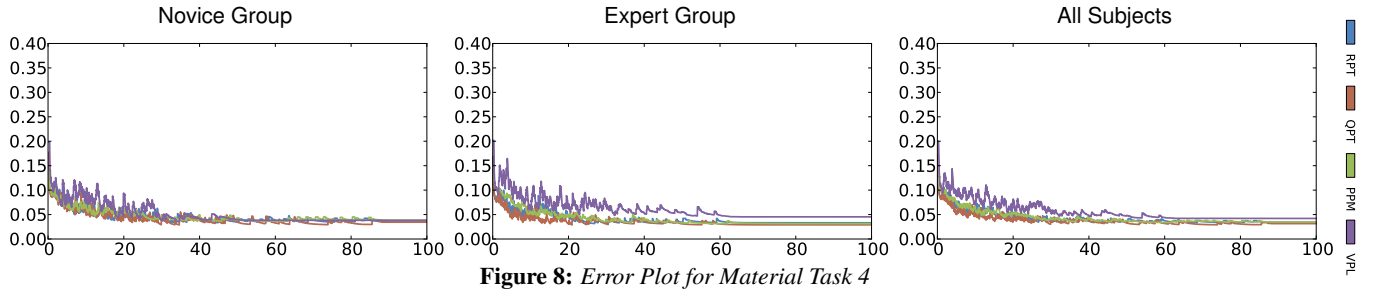
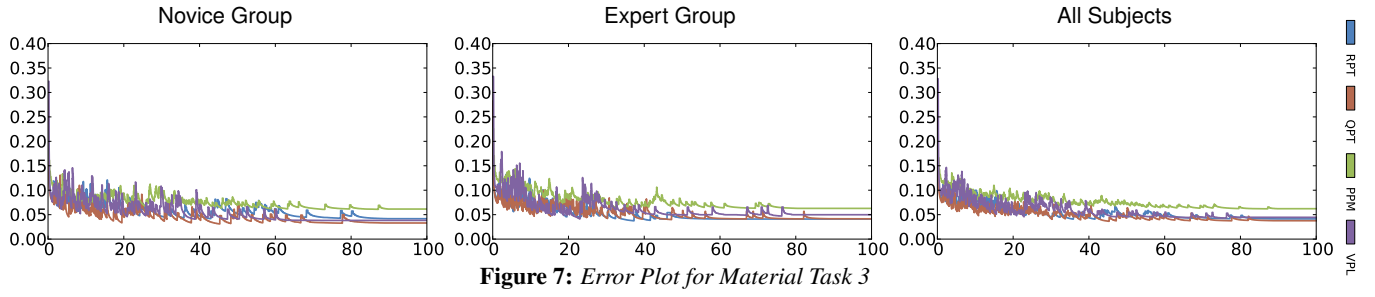
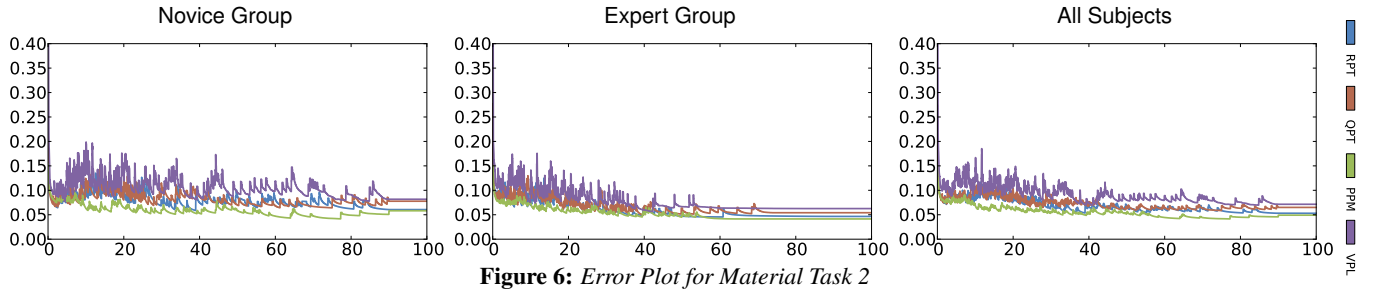
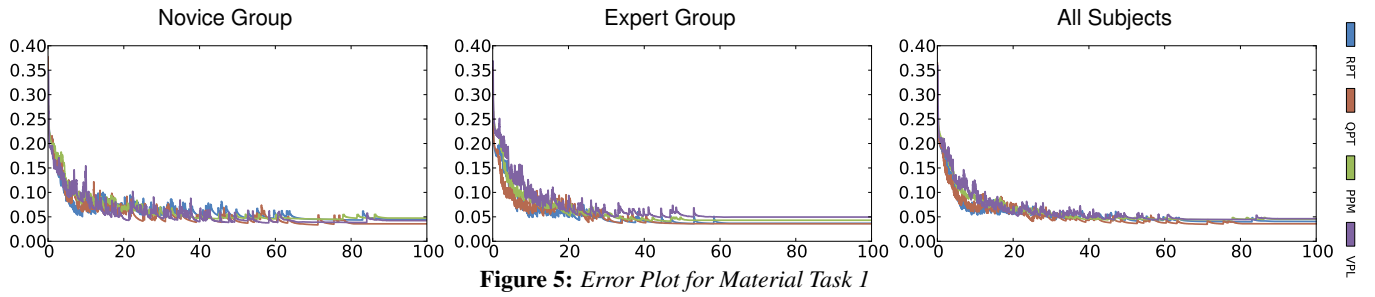


Figure 4: Error Plot for Light Task 4



3 Errors by Subject

Figure 9 to Figure 20 are error plots for novice subjects for each matching task. The y axis is L^2 errors while the x axis is time in seconds.

Figure 21 to Figure 34 are error plots for novice subjects for each matching task. The y axis is L^2 errors while the x axis is time in seconds.

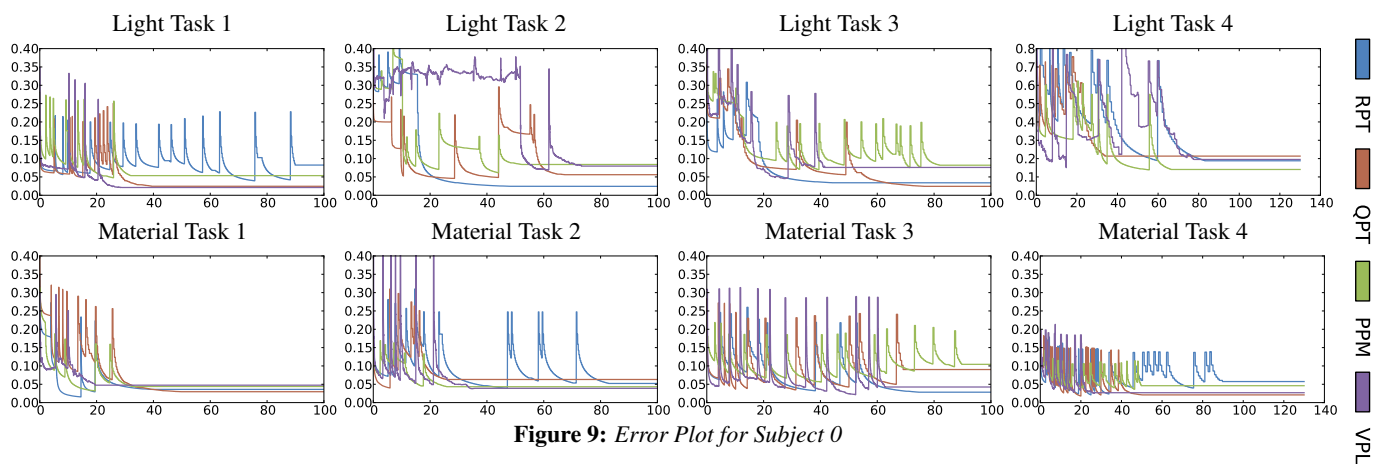


Figure 9: Error Plot for Subject 0

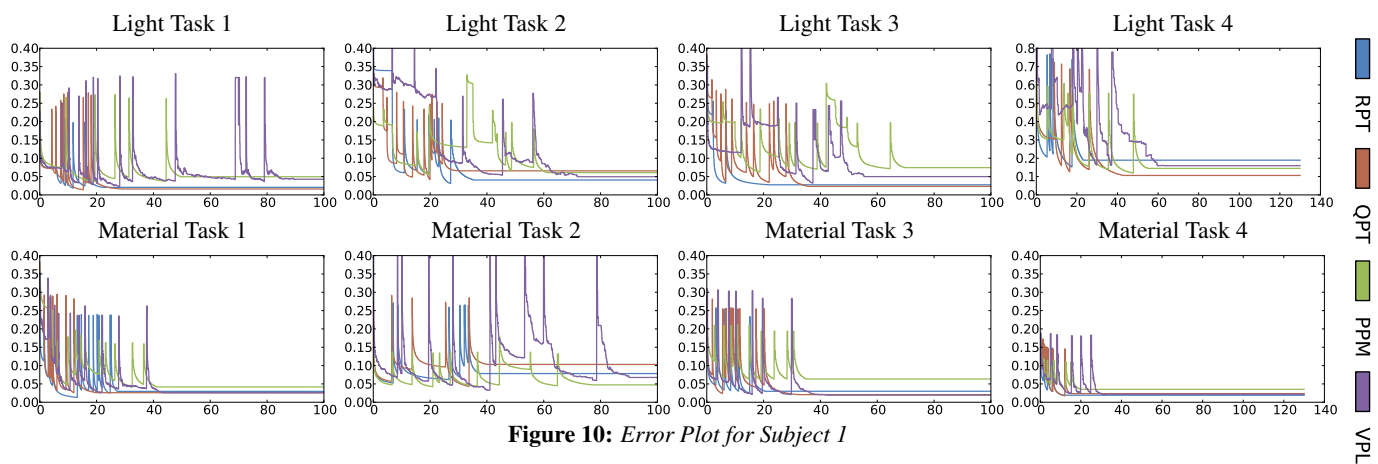


Figure 10: Error Plot for Subject 1

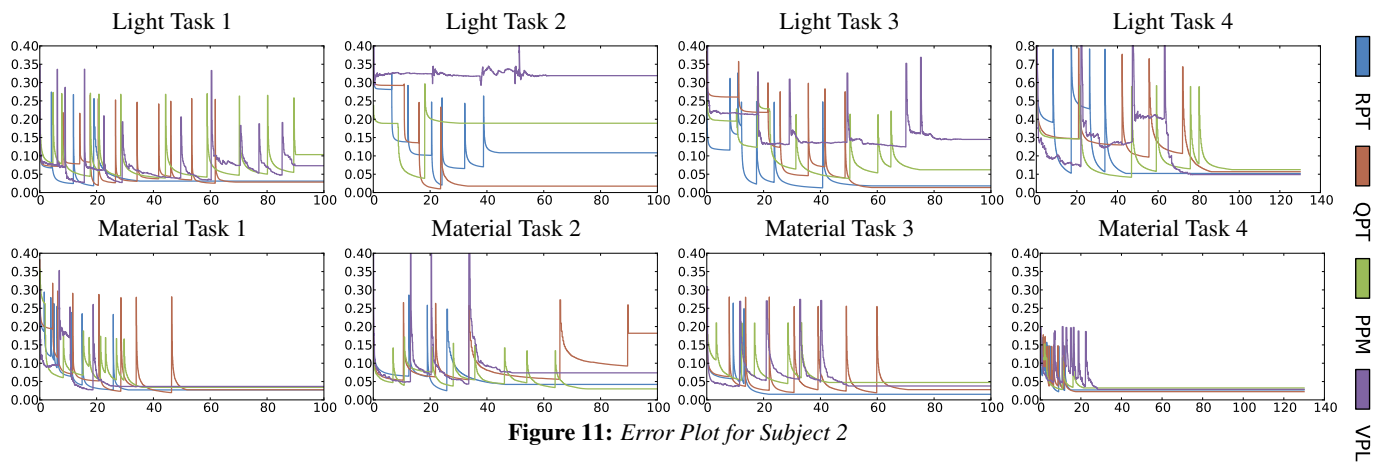


Figure 11: Error Plot for Subject 2

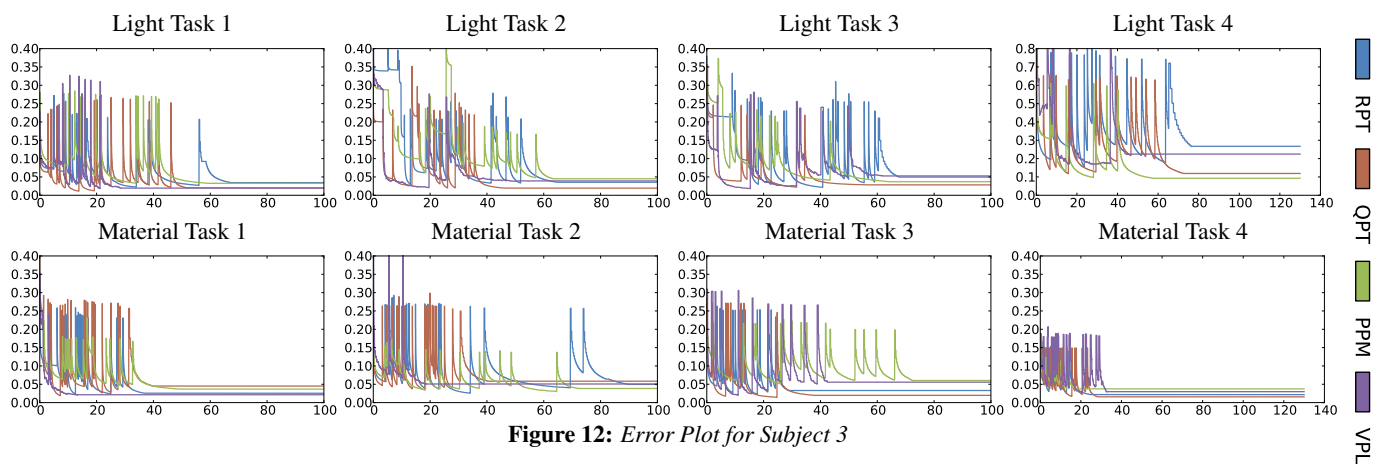


Figure 12: Error Plot for Subject 3

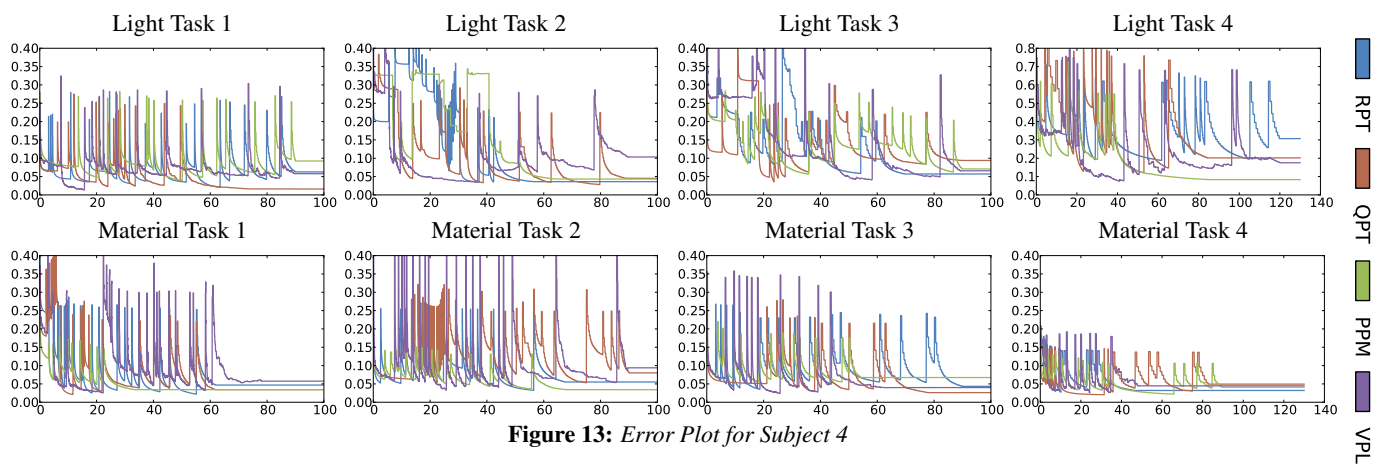


Figure 13: Error Plot for Subject 4

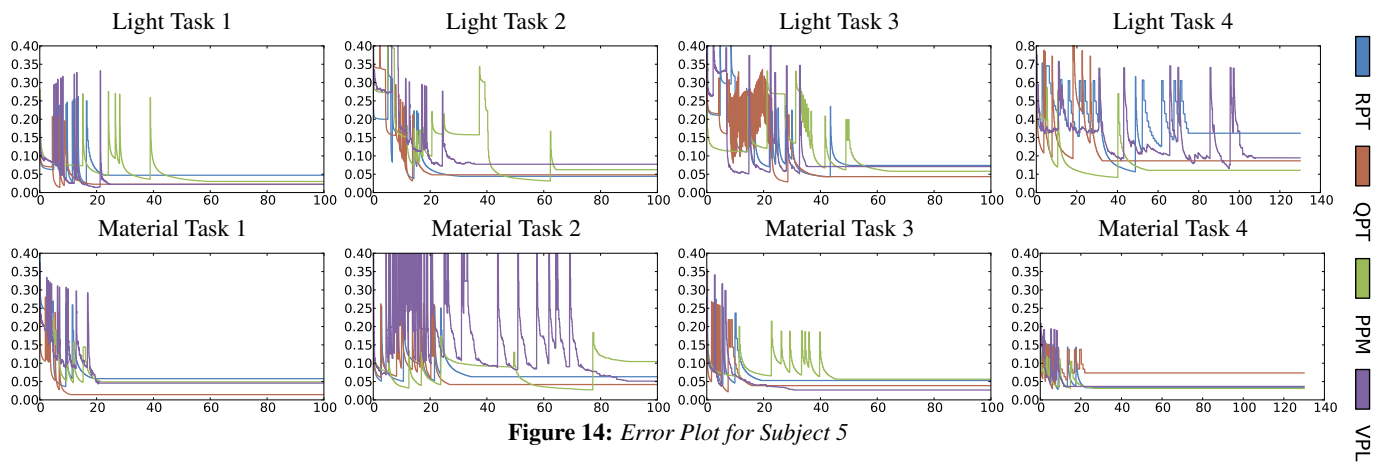
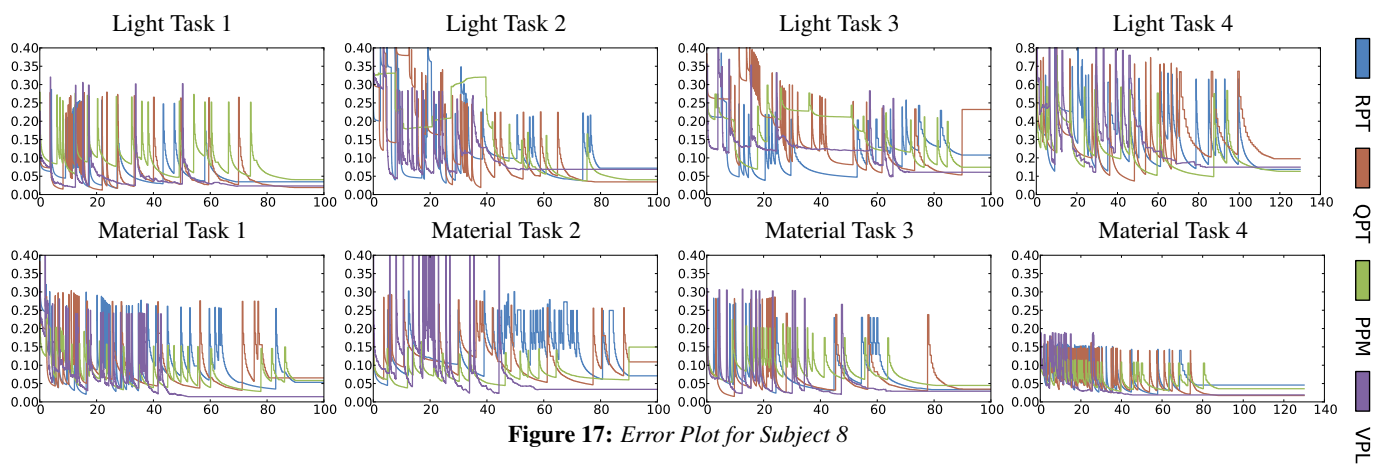
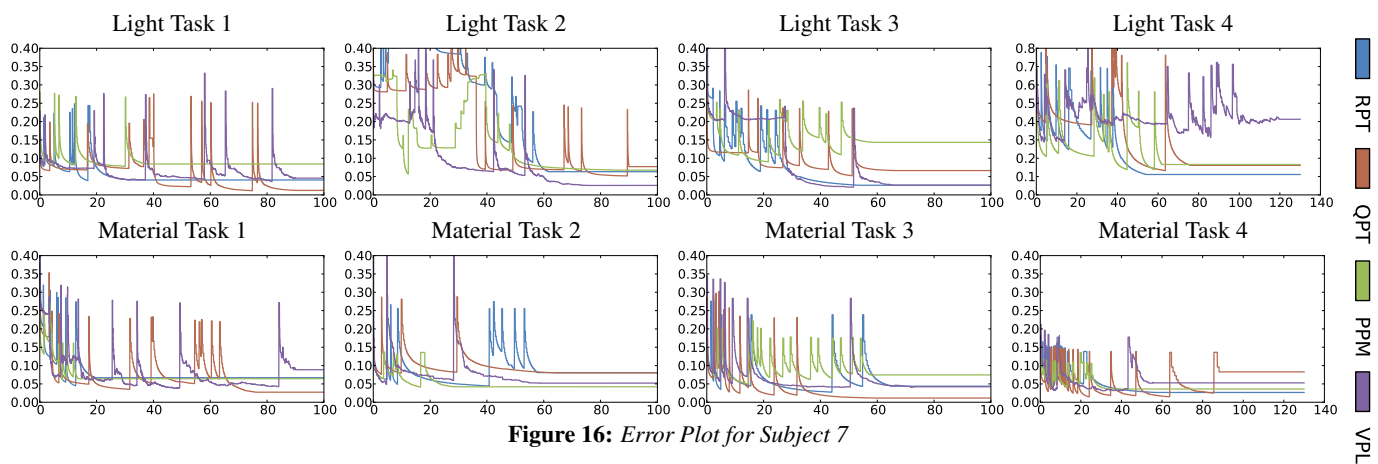
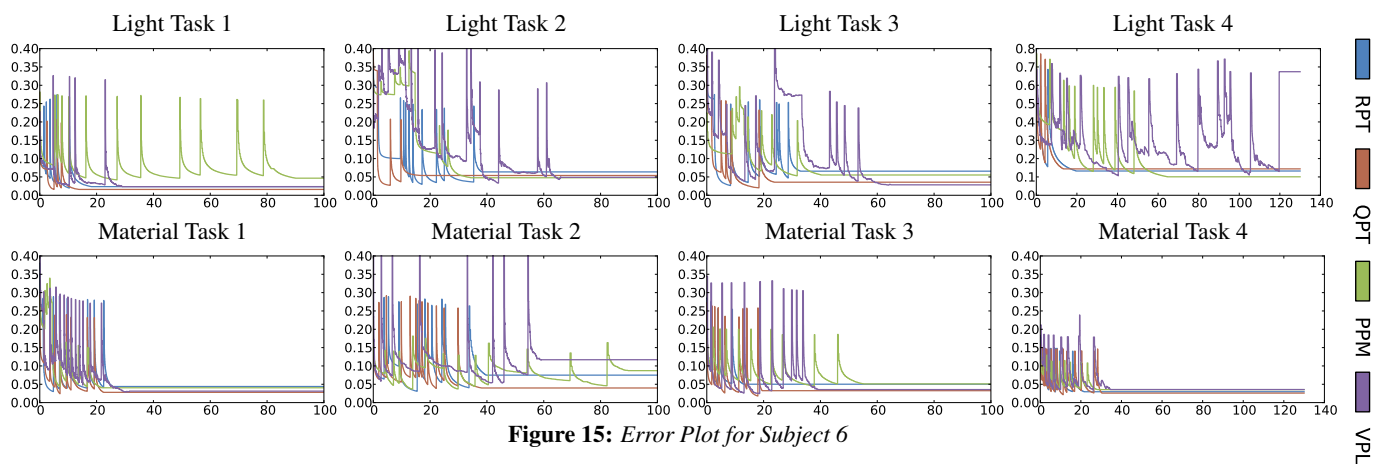
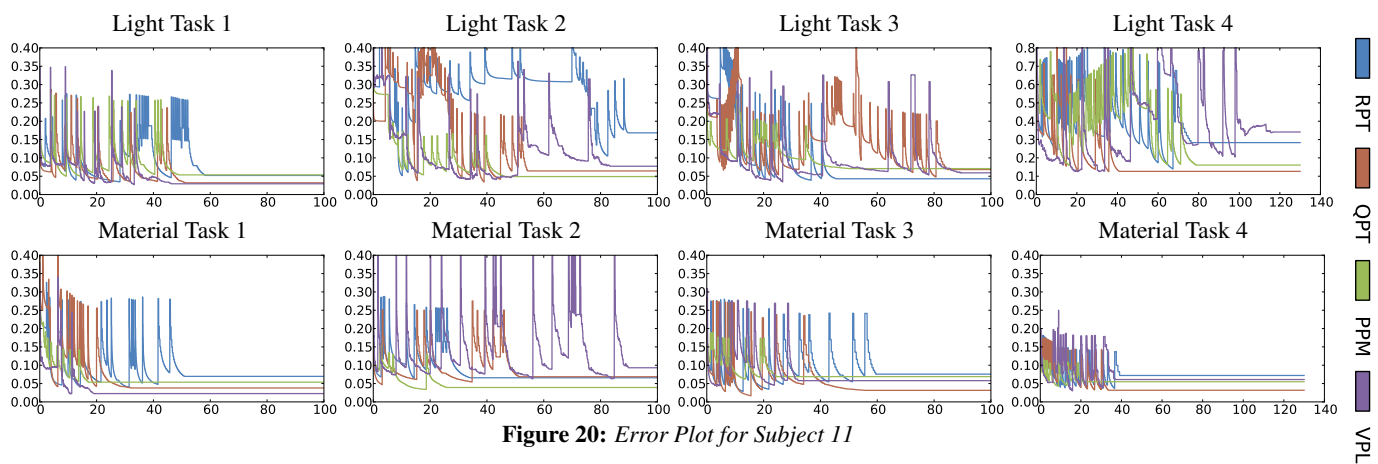
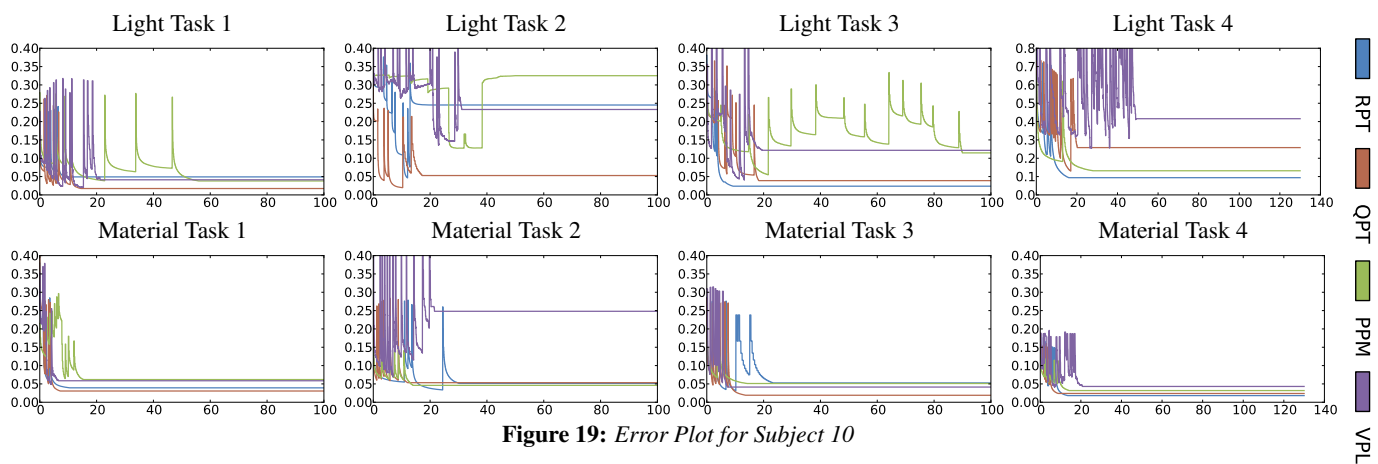
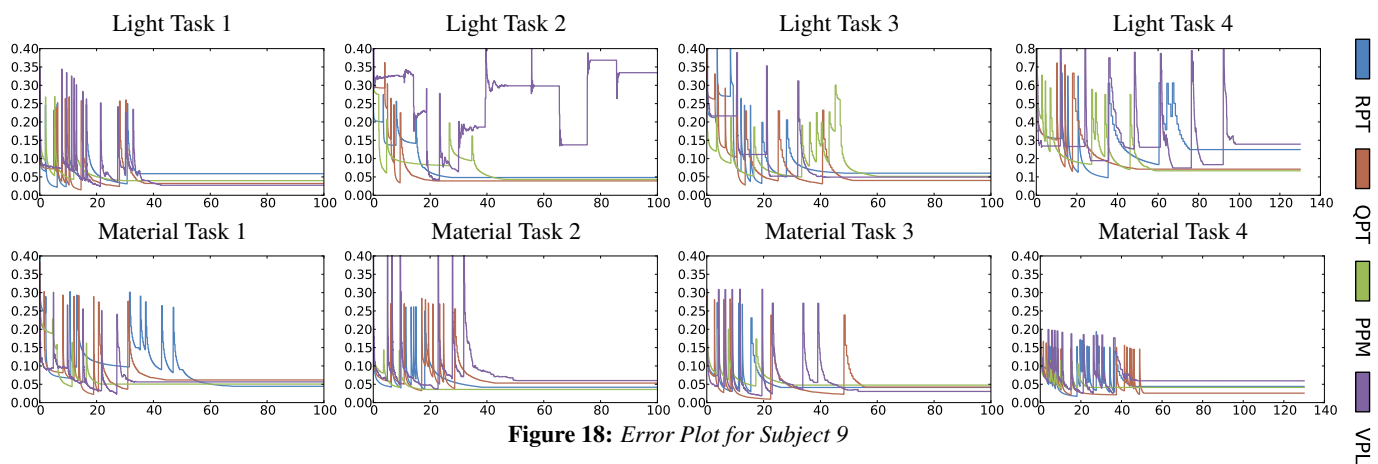


Figure 14: Error Plot for Subject 5





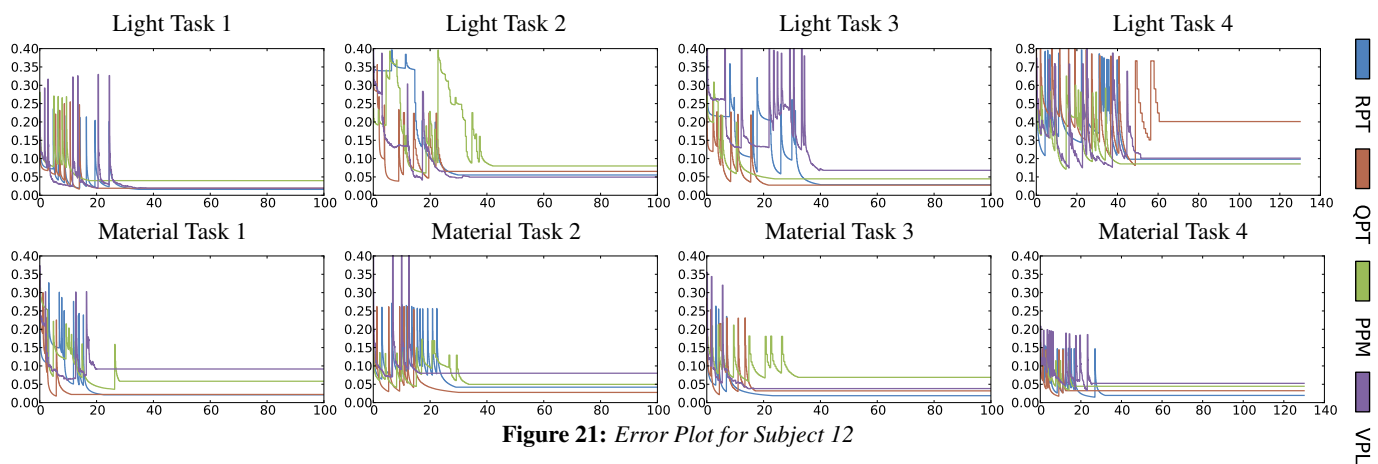


Figure 21: Error Plot for Subject 12

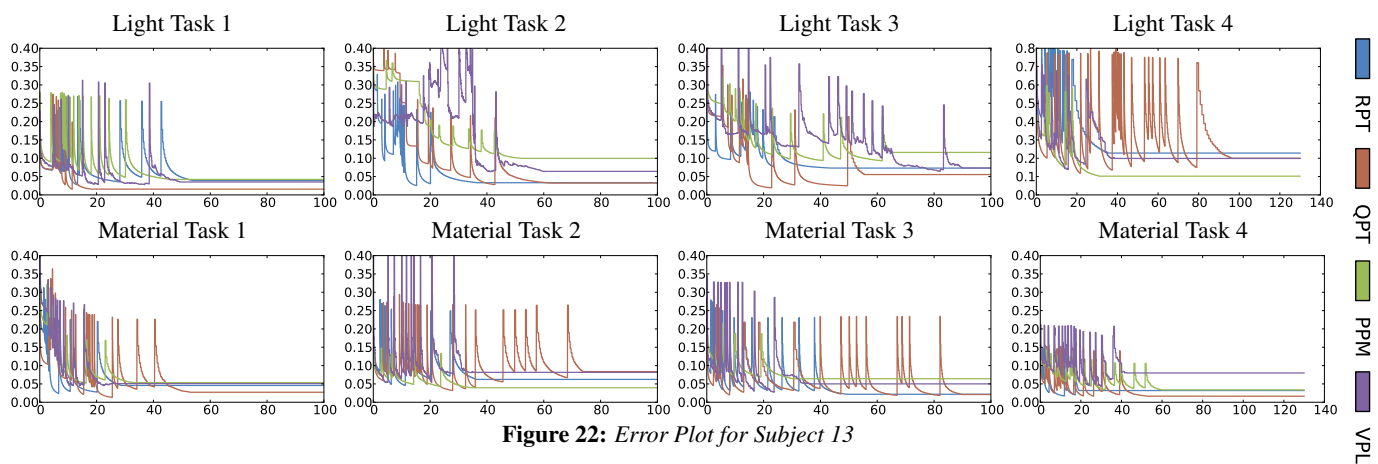


Figure 22: Error Plot for Subject 13

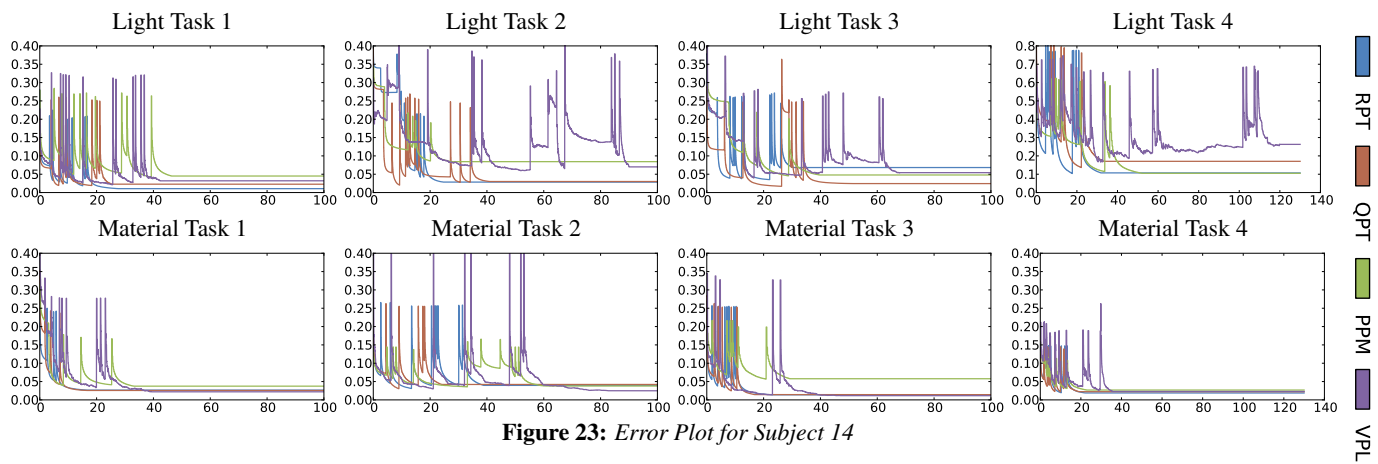
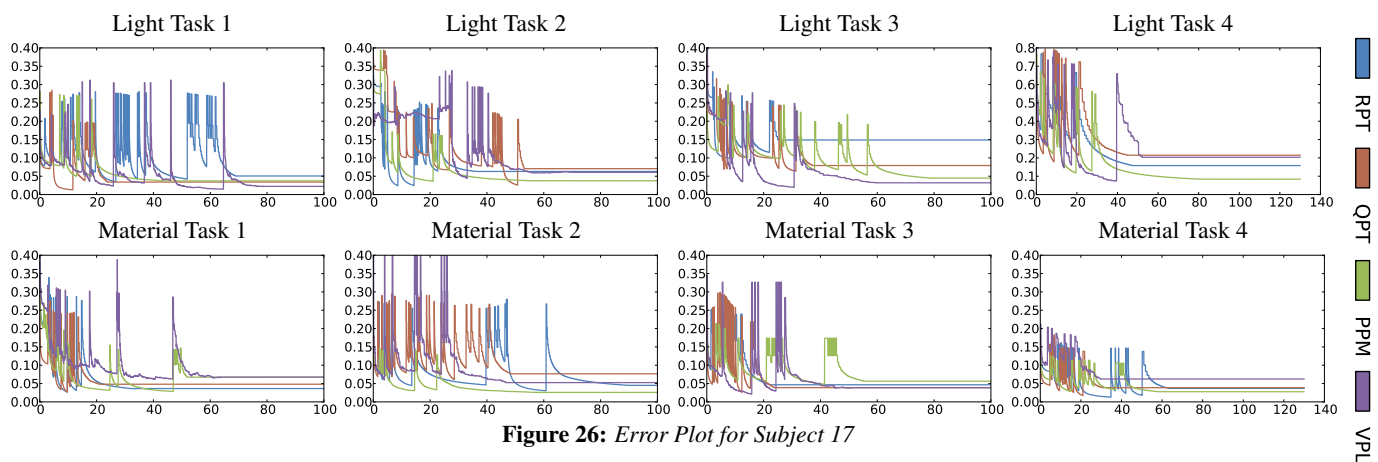
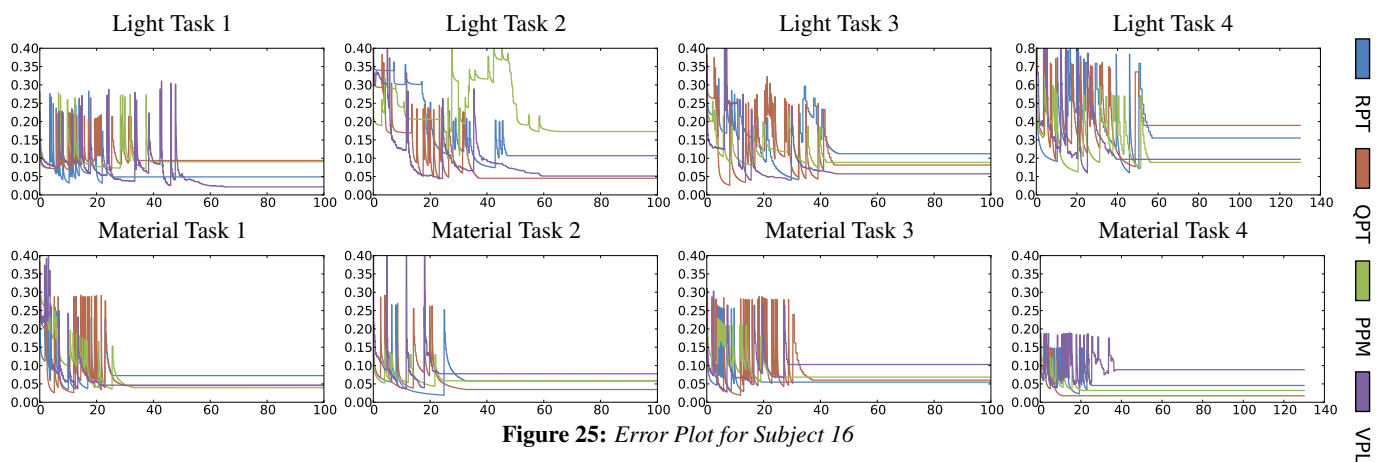
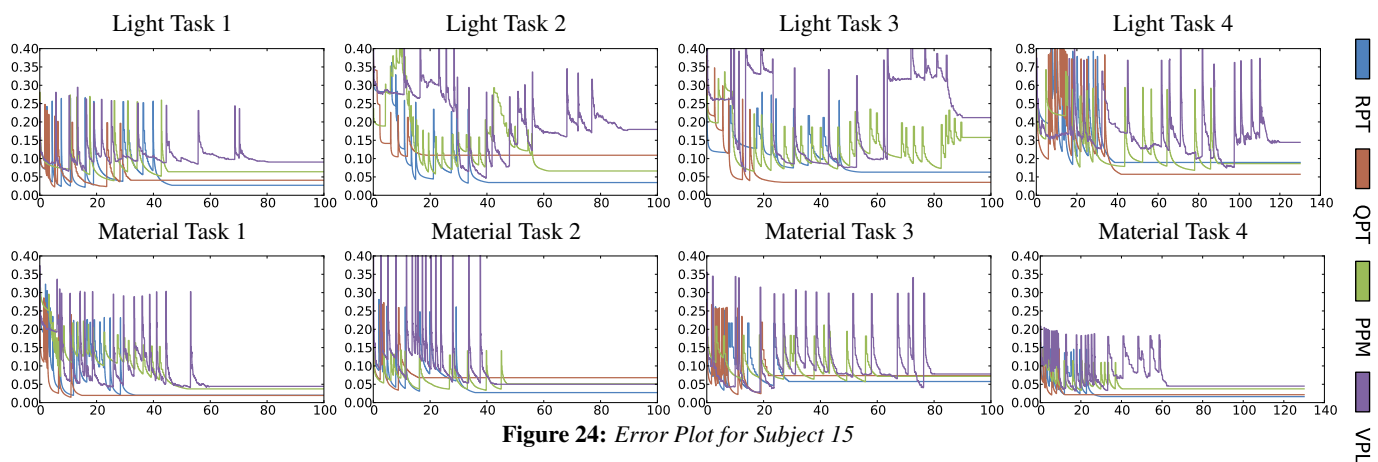


Figure 23: Error Plot for Subject 14



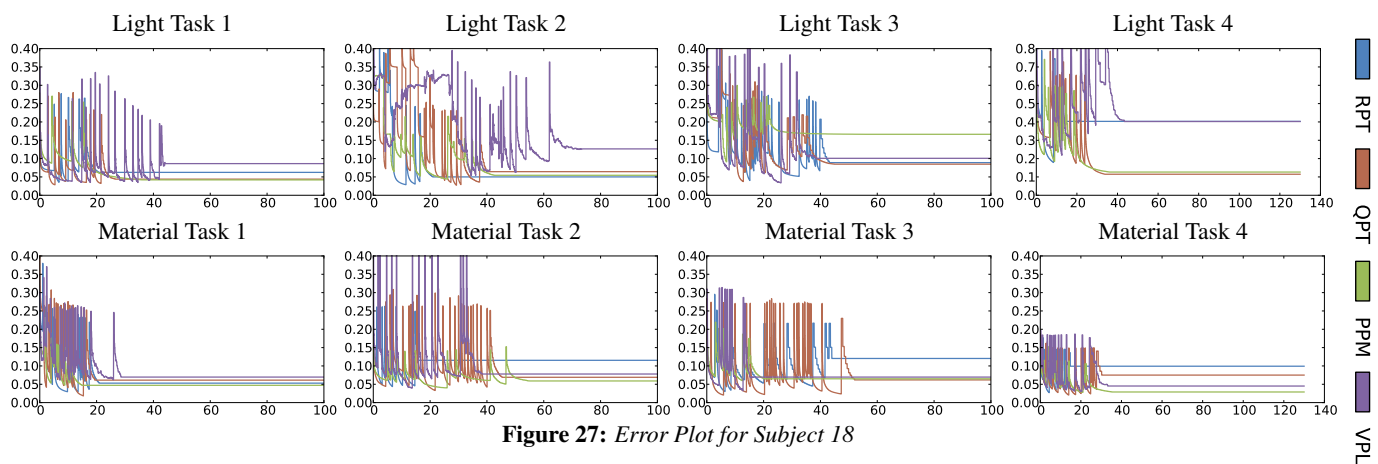


Figure 27: Error Plot for Subject 18

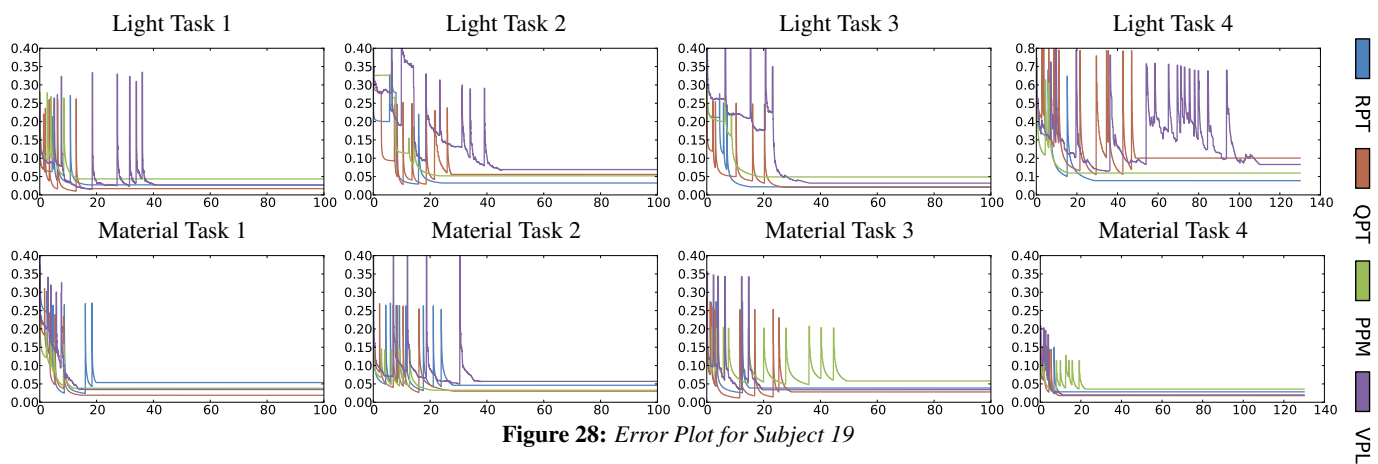


Figure 28: Error Plot for Subject 19

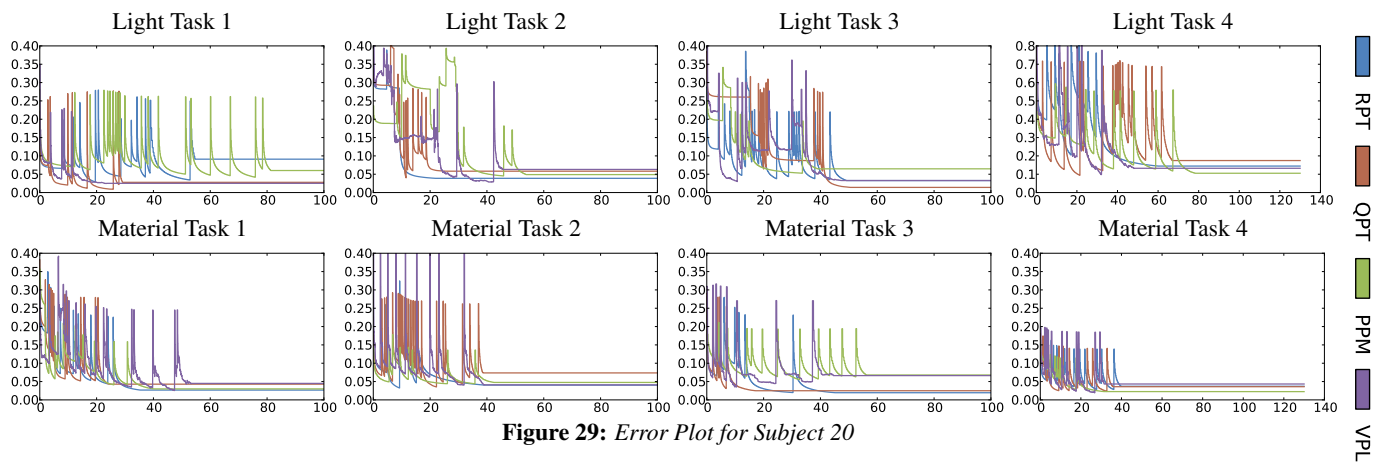
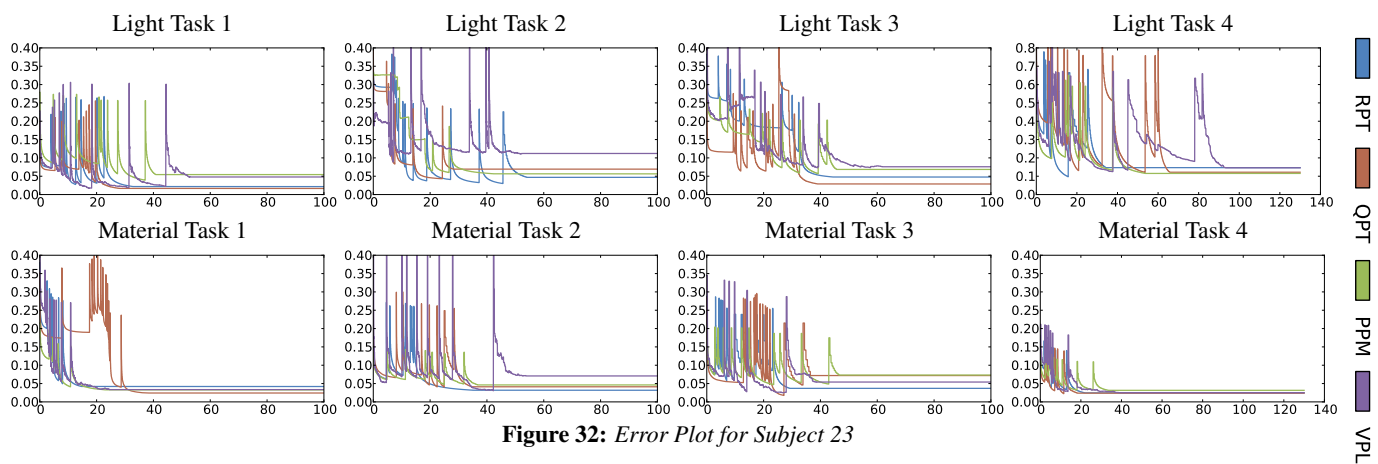
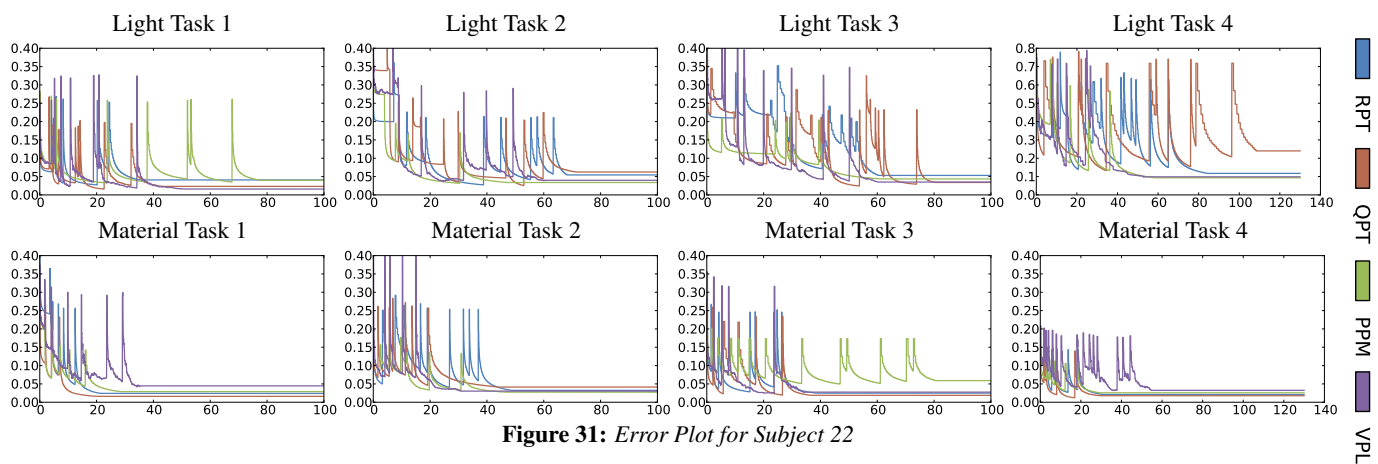
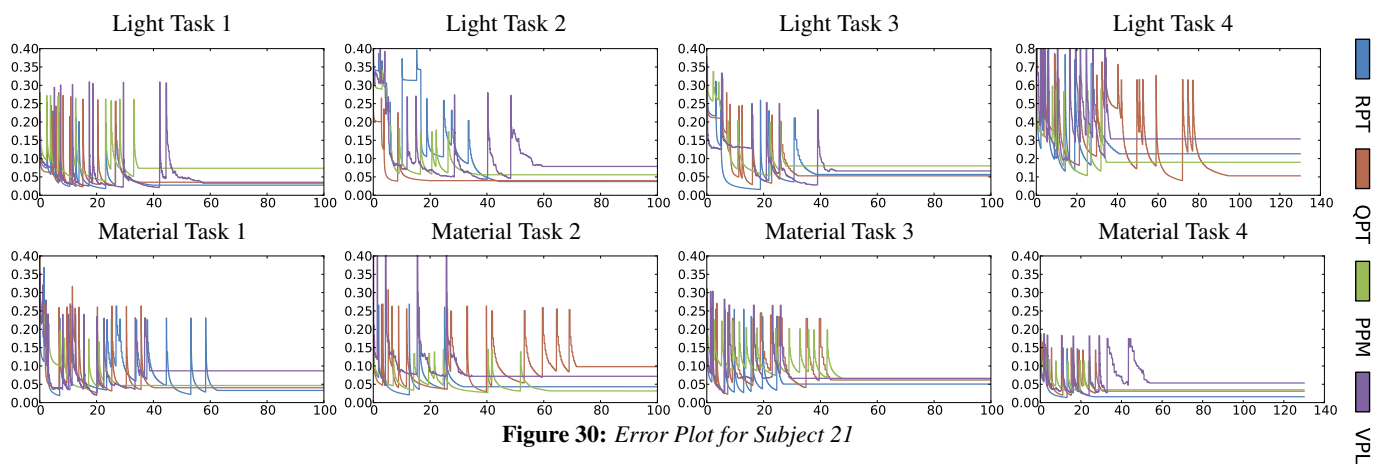


Figure 29: Error Plot for Subject 20



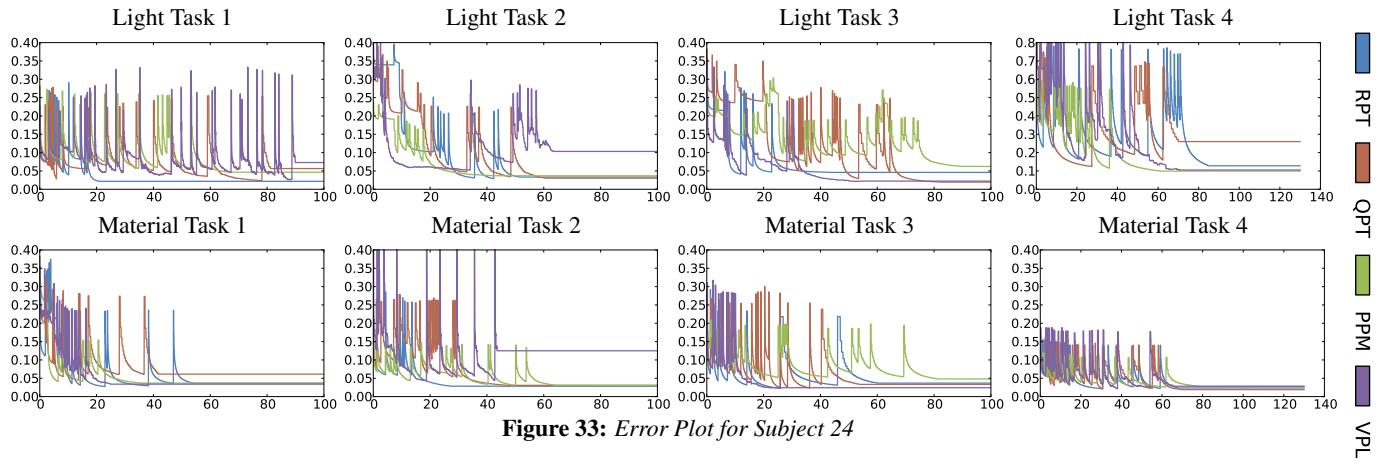


Figure 33: Error Plot for Subject 24

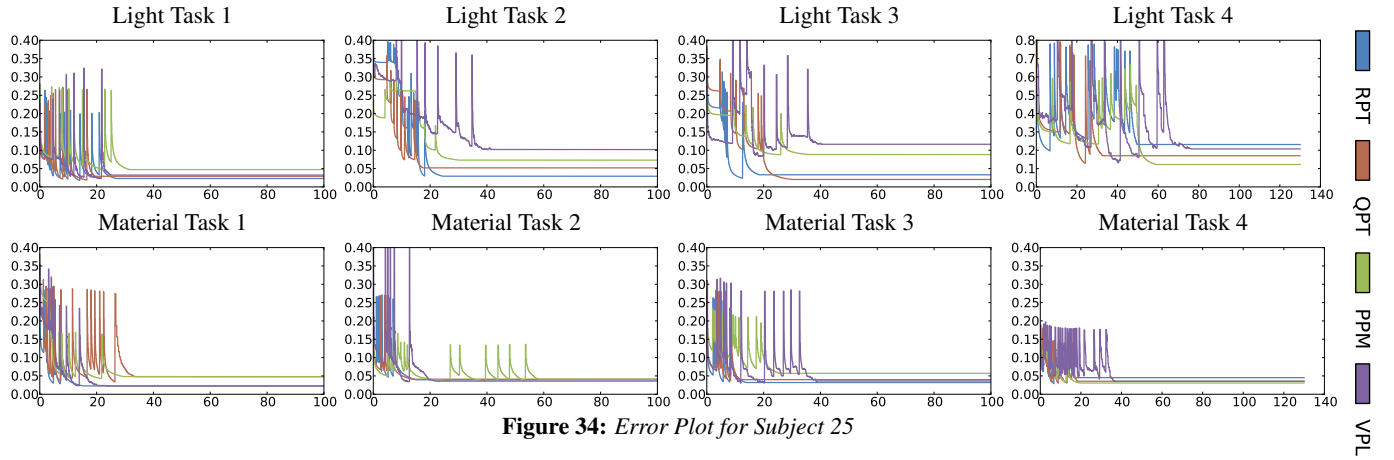


Figure 34: Error Plot for Subject 25

4 Completion Time

Figure 35 is the completion time comparison graph for each type of trials in the paper. Table 1, 2 and 3 are corresponding ANOVA. Star(*) in the data means the means are different with high confidence ($> 80\%$).

Figure 36 is the completion time comparison graph for each trial.

Table 1: ANOVA of Completion Time for Novice Group

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.99267	0.13967	0.08185	RPT	-	0.62038	0.55747	0.05293
QPT	0.99267	-	0.16584	0.09835	QPT	0.62038	-	0.99755	0.16321
PPM	0.13967	0.16584	-	0.56700	PPM	0.55747	0.99755	-	0.11653
VPL	0.08185	0.09835	0.56700	-	VPL	0.05293	0.16321	0.11653	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.80941	0.98517	0.95059	RPT	-	0.68405	0.30858	0.15032
QPT	0.80941	-	0.78975	0.83353	QPT	0.68405	-	0.57785	0.46167
PPM	0.98517	0.78975	-	0.93127	PPM	0.30858	0.57785	-	0.95991
VPL	0.95059	0.83353	0.93127	-	VPL	0.15032	0.46167	0.95991	-

Table 2: ANOVA of Completion Time for Expert Group

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.48153	0.10553	0.00063	RPT	-	0.84416	0.68851	0.01541
QPT	0.48153	-	0.41782	0.01175	QPT	0.84416	-	0.91678	0.05530
PPM	0.10553	0.41782	-	0.06971	PPM	0.68851	0.91678	-	0.02677
VPL	0.00063	0.01175	0.06971	-	VPL	0.01541	0.05530	0.02677	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.90939	0.06616	0.17787	RPT	-	0.82277	0.18155	0.06226
QPT	0.90939	-	0.14079	0.29777	QPT	0.82277	-	0.15900	0.05796
PPM	0.06616	0.14079	-	0.59677	PPM	0.18155	0.15900	-	0.63142
VPL	0.17787	0.29777	0.59677	-	VPL	0.06226	0.05796	0.63142	-

Table 3: ANOVA of Completion Time for All Subjects

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.72814	0.04313	0.00079	RPT	-	0.58868	0.46828	0.00319
QPT	0.72814	-	0.12450	0.00450	QPT	0.58868	-	0.95320	0.02457
PPM	0.04313	0.12450	-	0.10667	PPM	0.46828	0.95320	-	0.01158
VPL	0.00079	0.00450	0.10667	-	VPL	0.00319	0.02457	0.01158	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.79923	0.34417	0.43964	RPT	-	0.80339	0.10610	0.01809
QPT	0.79923	-	0.55283	0.67465	QPT	0.80339	-	0.22029	0.07823
PPM	0.34417	0.55283	-	0.81524	PPM	0.10610	0.22029	-	0.73796
VPL	0.43964	0.67465	0.81524	-	VPL	0.01809	0.07823	0.73796	-

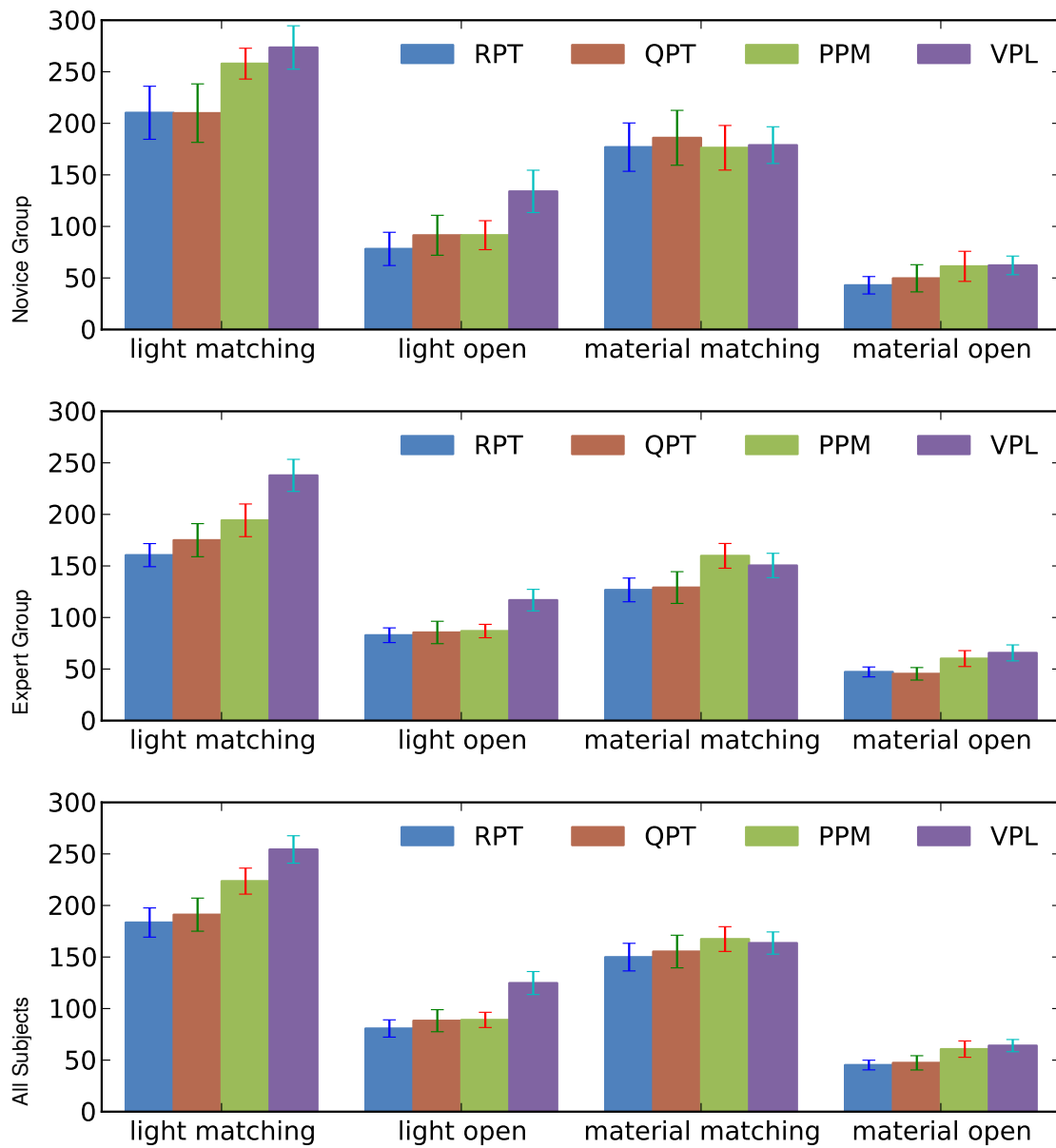


Figure 35: Completion time for each type of trials.

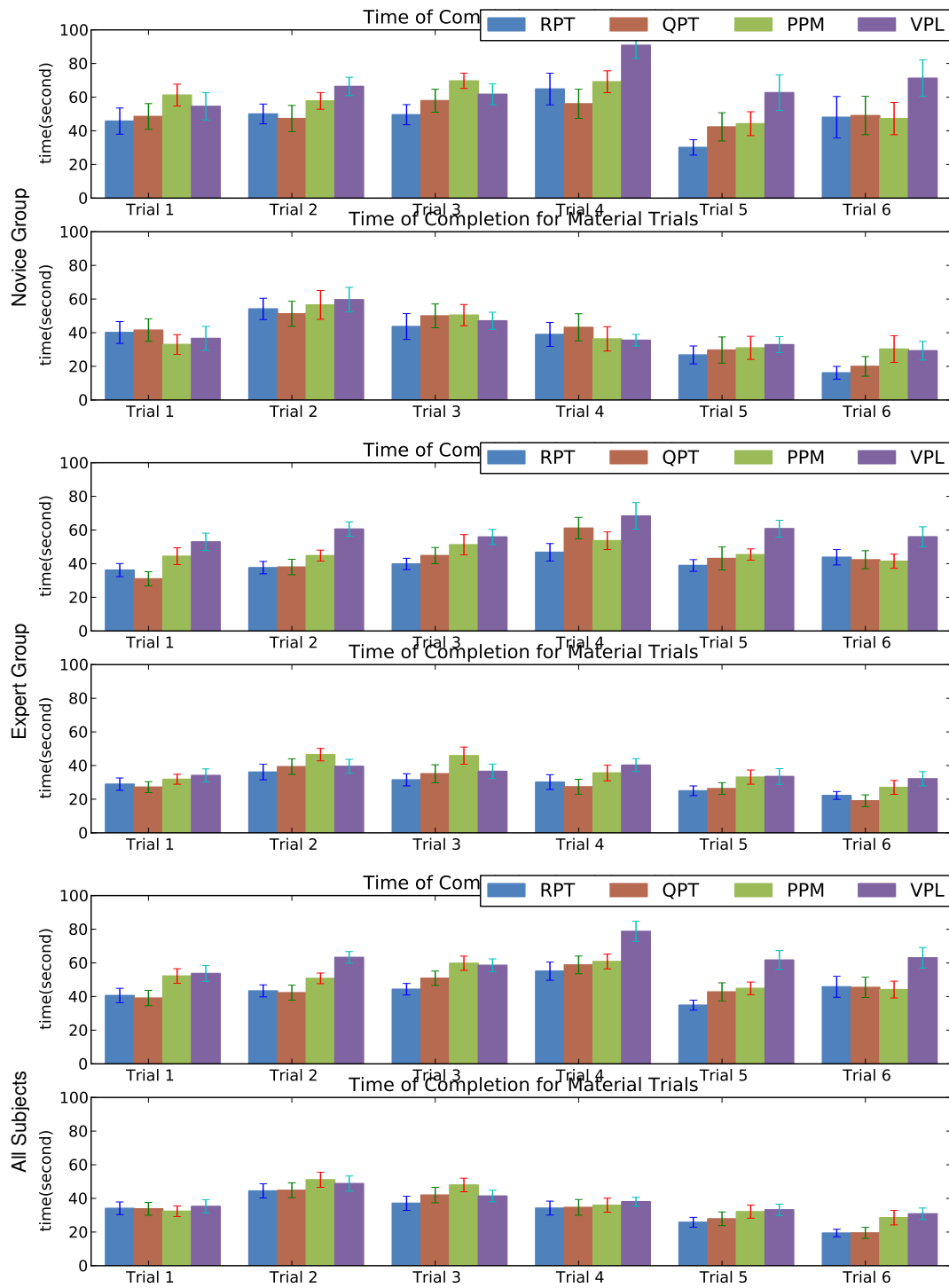


Figure 36: Completion time for individual trials.

5 Subjective Task Image Rating

Figure 37 is the average subjective task rating comparison graph for each type of trials. Table 4, 5 and 6 are the corresponding ANOVA. Star(*) in the data means the means are different with high confidence (> 80%).

Figure 38 is the average subjective task rating comparison graph for light editing trials and material editing trials.

Figure 39 is the average subjective task rating comparison graph for matching trials and open trials.

Figure 40 is the average subjective task rating comparison graph for each light editing trial.

Figure 41 is the average subjective task rating comparison graph for each material editing trial.

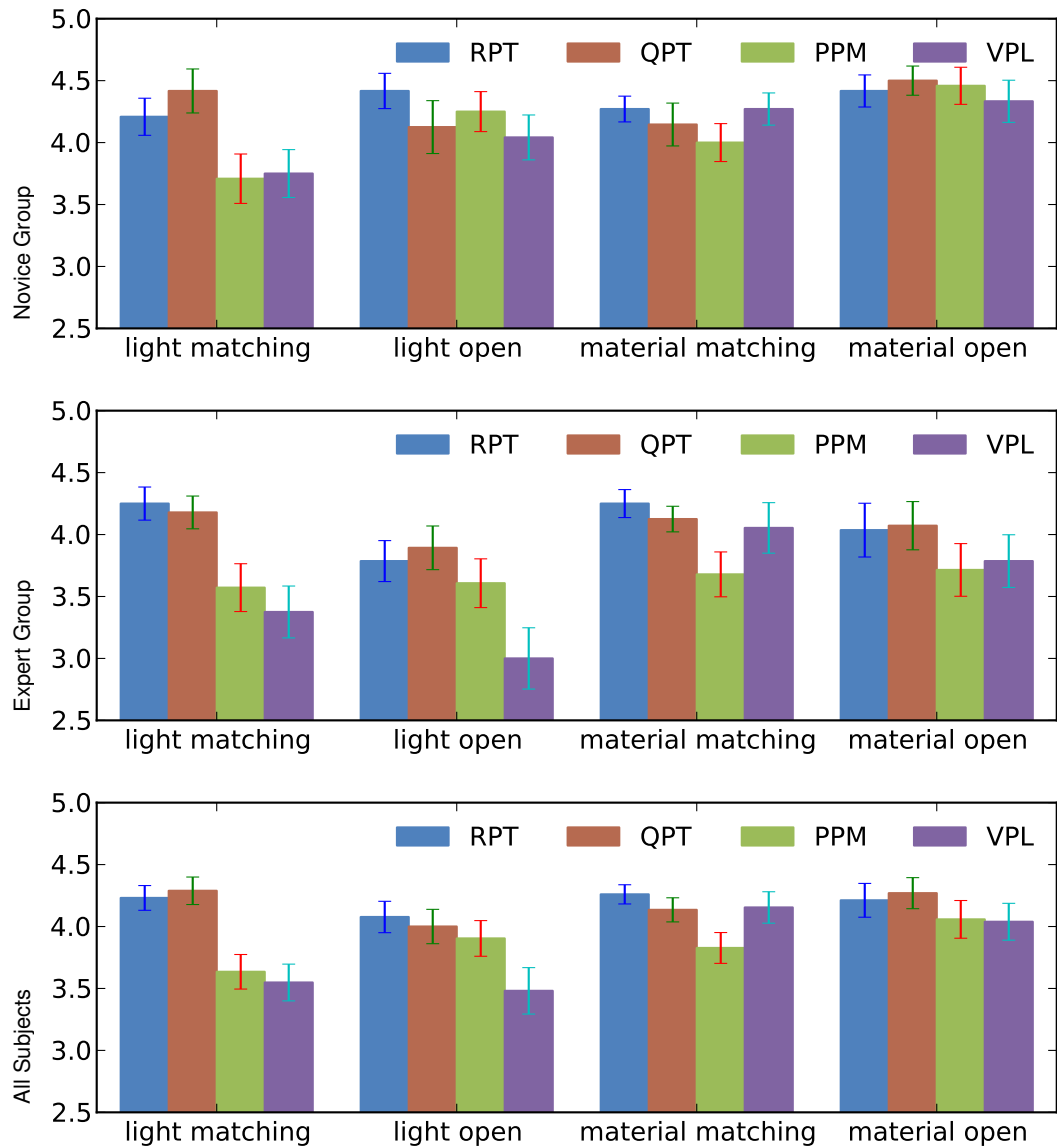


Figure 37: Task rating comparison for individual trial.

Table 4: Task Rating ANOVA for Novice Group

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.39980	0.06801	0.08637	RPT	-	0.28820	0.46616	0.13347
QPT	0.39980	-	0.01869	0.02360	QPT	0.28820	-	0.65909	0.77837
PPM	0.06801	0.01869	-	0.88708	PPM	0.46616	0.65909	-	0.41990
VPL	0.08637	0.02360	0.88708	-	VPL	0.13347	0.77837	0.41990	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.55921	0.17514	1.00000	RPT	-	0.65316	0.84218	0.71261
QPT	0.55921	-	0.55169	0.58571	QPT	0.65316	-	0.83611	0.44885
PPM	0.17514	0.55169	-	0.21003	PPM	0.84218	0.83611	-	0.60273
VPL	1.00000	0.58571	0.21003	-	VPL	0.71261	0.44885	0.60273	-

Table 5: Task Rating ANOVA for Expert Group

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.71726	0.00985	0.00222	RPT	-	0.67273	0.50906	0.01723
QPT	0.71726	-	0.01905	0.00432	QPT	0.67273	-	0.30692	0.00881
PPM	0.00985	0.01905	-	0.51214	PPM	0.50906	0.30692	-	0.07562
VPL	0.00222	0.00432	0.51214	-	VPL	0.01723	0.00881	0.07562	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.43851	0.01589	0.42410	RPT	-	0.90694	0.31733	0.43496
QPT	0.43851	-	0.04923	0.76572	QPT	0.90694	-	0.24329	0.34831
PPM	0.01589	0.04923	-	0.19667	PPM	0.31733	0.24329	-	0.82070
VPL	0.42410	0.76572	0.19667	-	VPL	0.43496	0.34831	0.82070	-

Table 6: Task Rating Graph ANOVA for All Subjects

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.70643	0.00130	0.00047	RPT	-	0.68968	0.38035	0.01272
QPT	0.70643	-	0.00074	0.00027	QPT	0.68968	-	0.63919	0.03368
PPM	0.00130	0.00074	-	0.67867	PPM	0.38035	0.63919	-	0.08529
VPL	0.00047	0.00027	0.67867	-	VPL	0.01272	0.03368	0.08529	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.32928	0.00562	0.48869	RPT	-	0.76136	0.46399	0.40451
QPT	0.32928	-	0.06193	0.90661	QPT	0.76136	-	0.29783	0.25021
PPM	0.00562	0.06193	-	0.07732	PPM	0.46399	0.29783	-	0.92976
VPL	0.48869	0.90661	0.07732	-	VPL	0.40451	0.25021	0.92976	-

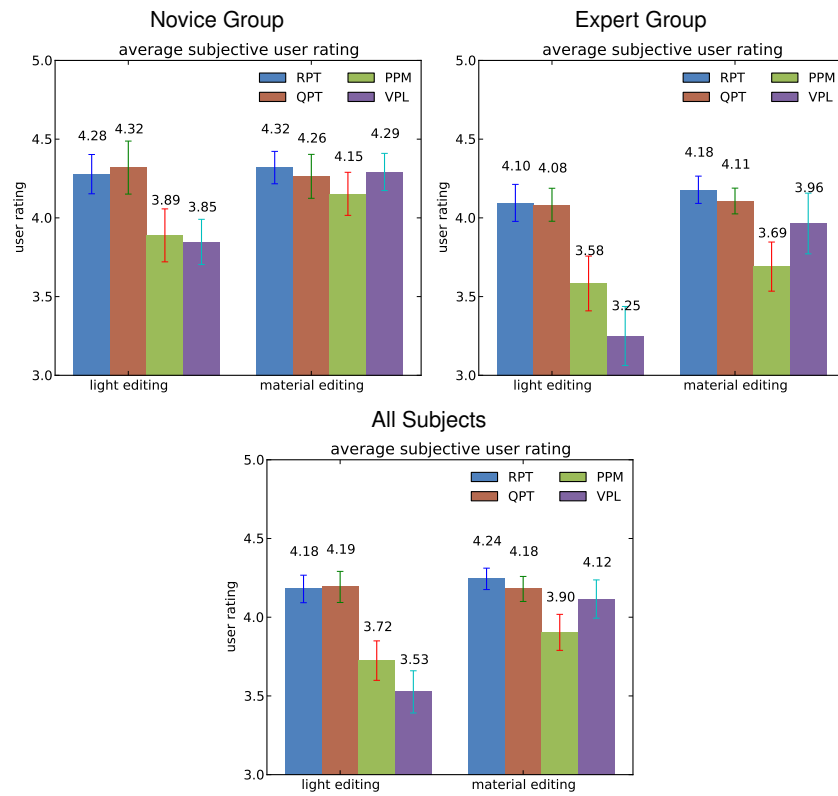


Figure 38: Task rating comparison for light and material editing.

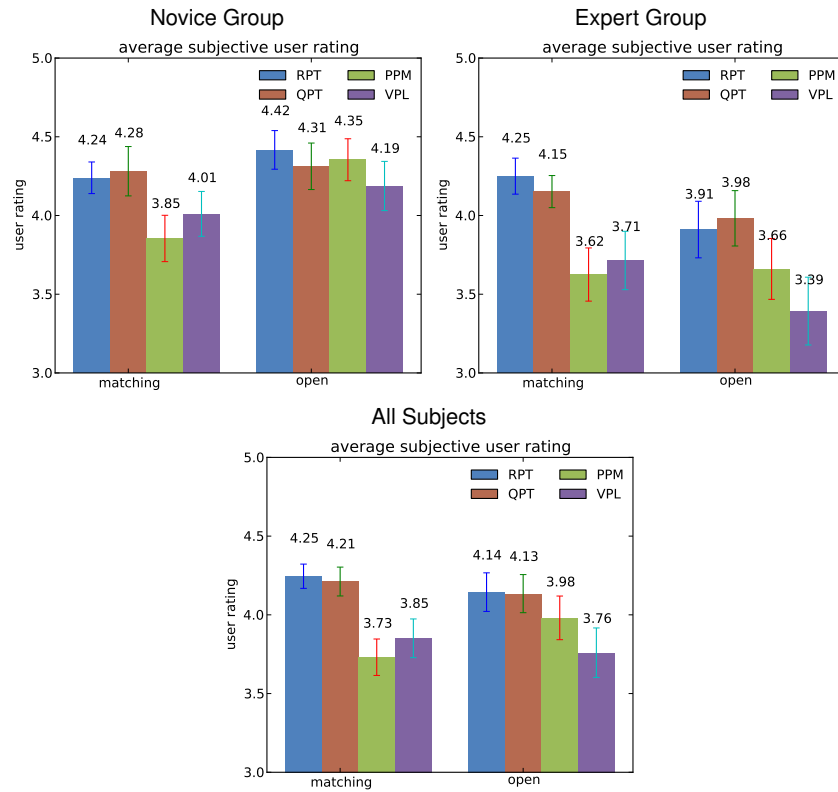


Figure 39: Task rating comparison for matching and open trials.

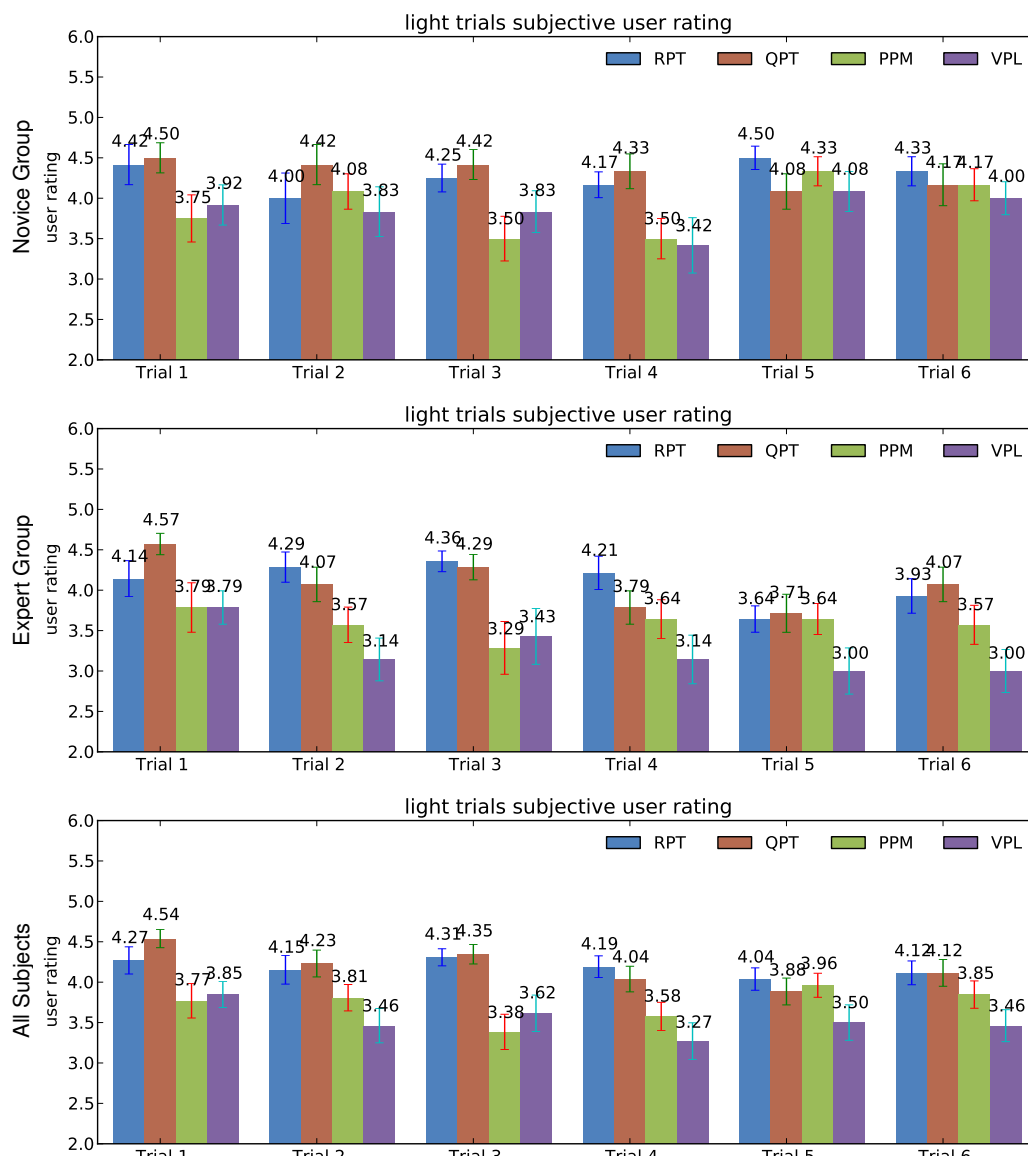


Figure 40: Task rating comparison for lighting trials.

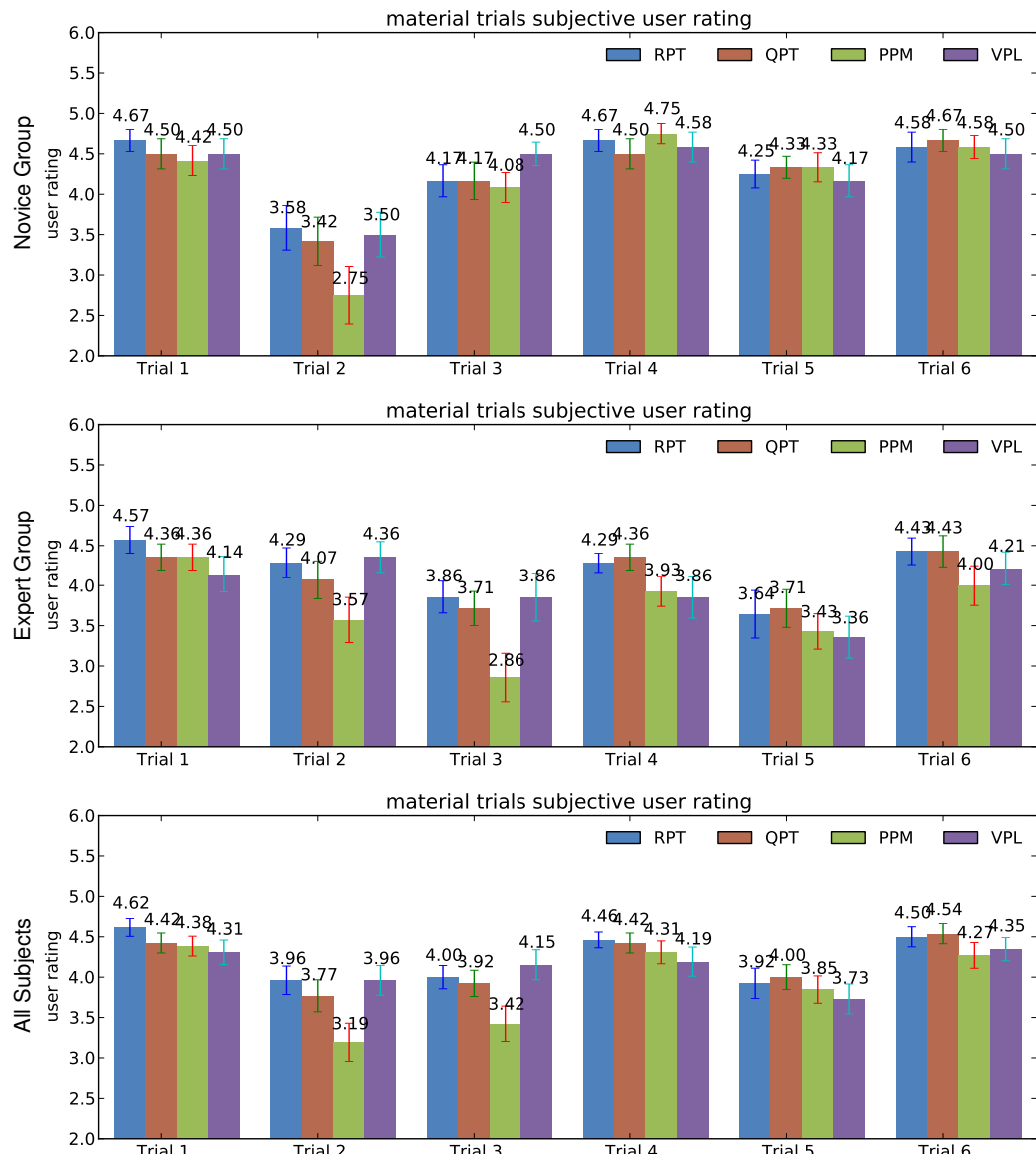


Figure 41: Task rating comparison for material trials.

6 Time between user interactions

Figure 42 is the comparison of time between user interactions in seconds in the paper. Table 7, 8 and 9 are corresponding ANOVA of time between user interactions. Star(*) in the data indicates two means are different with high confidence (> 80%).

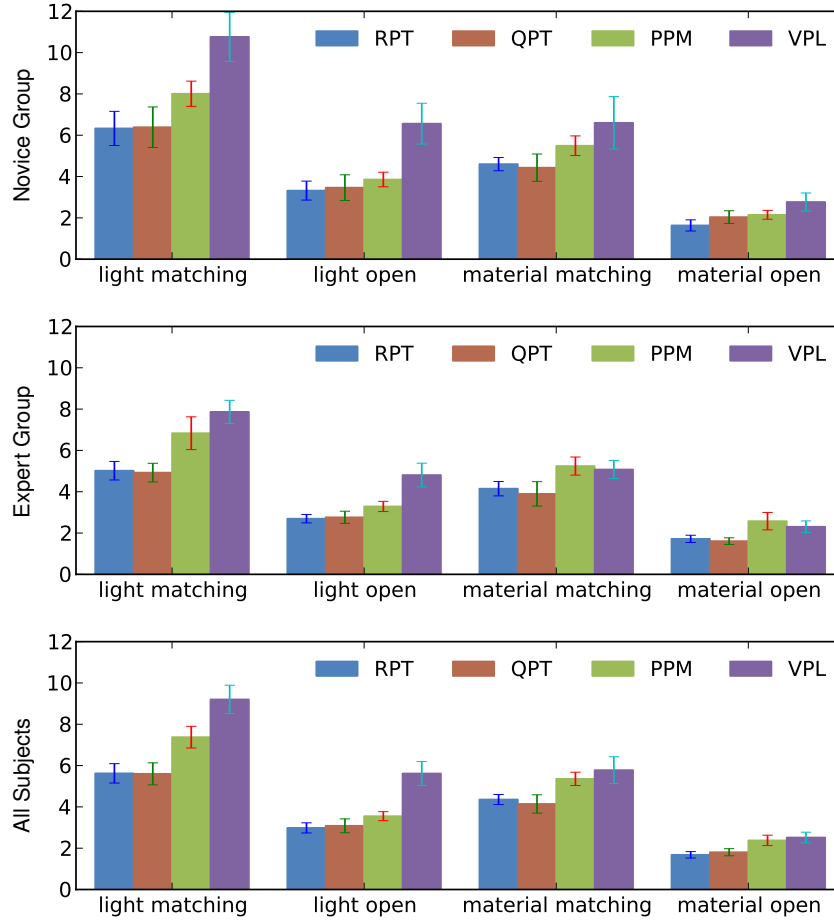


Figure 42: Time between user interactions in seconds.

Table 7: ANOVA of Average Time Between User Interactions for Novice Group

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.96602	0.13193	0.00773	RPT	-	0.86083	0.38455	0.00932
QPT	0.96602	-	0.19327	0.01262	QPT	0.86083	-	0.60319	0.01860
PPM	0.13193	0.19327	-	0.06107	PPM	0.38455	0.60319	-	0.02188
VPL	0.00773	0.01262	0.06107	-	VPL	0.00932	0.01860	0.02188	-
(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.82501	0.15118	0.15795	RPT	-	0.35748	0.16770	0.04628
QPT	0.82501	-	0.22481	0.16062	QPT	0.35748	-	0.77810	0.20409
PPM	0.15118	0.22481	-	0.44210	PPM	0.16770	0.77810	-	0.23656
VPL	0.15795	0.16062	0.44210	-	VPL	0.04628	0.20409	0.23656	-

Table 8: ANOVA of Average Time Between User Interactions for Expert Group

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.88899	0.06599	0.00073	RPT	-	0.85846	0.08590	0.00254
QPT	0.88899	-	0.05432	0.00054	QPT	0.85846	-	0.19861	0.00516
PPM	0.06599	0.05432	-	0.31464	PPM	0.08590	0.19861	-	0.02709
VPL	0.00073	0.00054	0.31464	-	VPL	0.00254	0.00516	0.02709	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.72576	0.07091	0.12402	RPT	-	0.65803	0.08179	0.10218
QPT	0.72576	-	0.08945	0.13515	QPT	0.65803	-	0.04884	0.04981
PPM	0.07091	0.08945	-	0.79827	PPM	0.08179	0.04884	-	0.61050
VPL	0.12402	0.13515	0.79827	-	VPL	0.10218	0.04981	0.61050	-

Table 9: ANOVA of Average Time Between User Interactions for All Subjects

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.97431	0.01821	0.00010	RPT	-	0.81068	0.09714	0.00014
QPT	0.97431	-	0.02406	0.00017	QPT	0.81068	-	0.25937	0.00050
PPM	0.01821	0.02406	-	0.04329	PPM	0.09714	0.25937	-	0.00187
VPL	0.00010	0.00017	0.04329	-	VPL	0.00014	0.00050	0.00187	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.67855	0.01893	0.04978	RPT	-	0.59613	0.02467	0.00867
QPT	0.67855	-	0.03473	0.04659	QPT	0.59613	-	0.07095	0.02831
PPM	0.01893	0.03473	-	0.57121	PPM	0.02467	0.07095	-	0.70458
VPL	0.04978	0.04659	0.57121	-	VPL	0.00867	0.02831	0.70458	-

7 Resolution

Figure 43 is the comparison of average time users spent at each resolution for all trials. Figure 44 is the comparison of average time users spent at each resolution for light matching trials. Figure 45 is the comparison of average time users spent at each resolution for light open trials. Figure 46 is the comparison of average time users spent at each resolution for material matching trials. Figure 47 is the comparison of average time users spent at each resolution for material open trials.

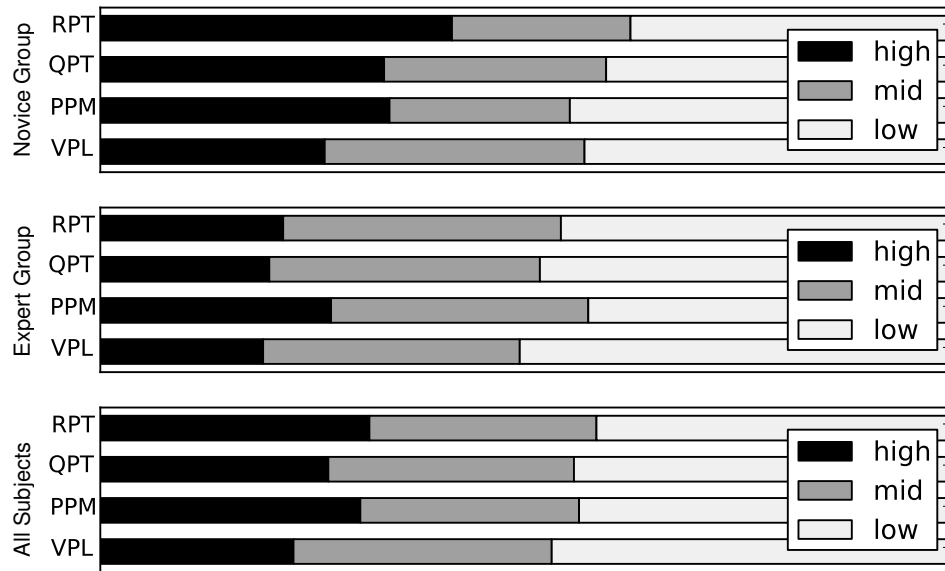


Figure 43: Average time users spent at each resolution.

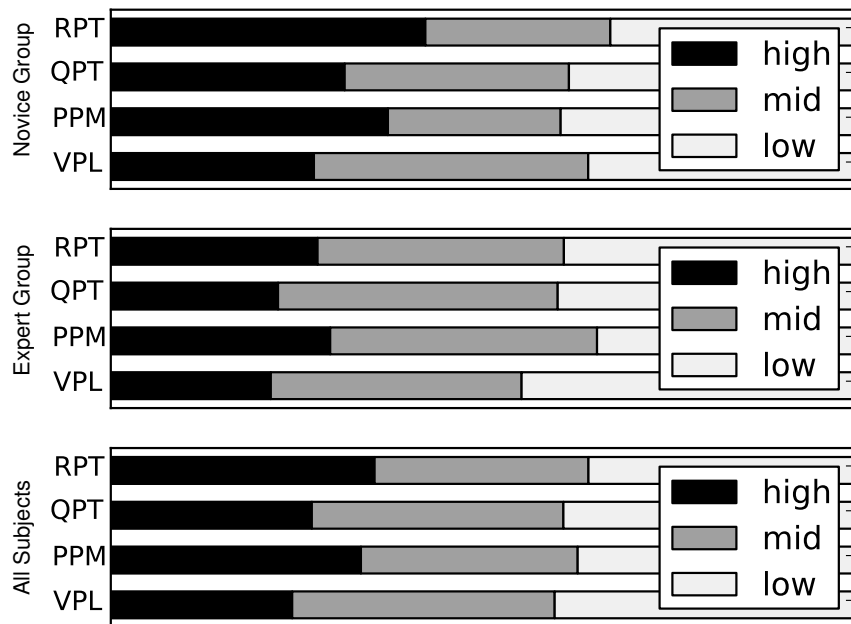


Figure 44: Average time users spent at each resolution in light matching trials.

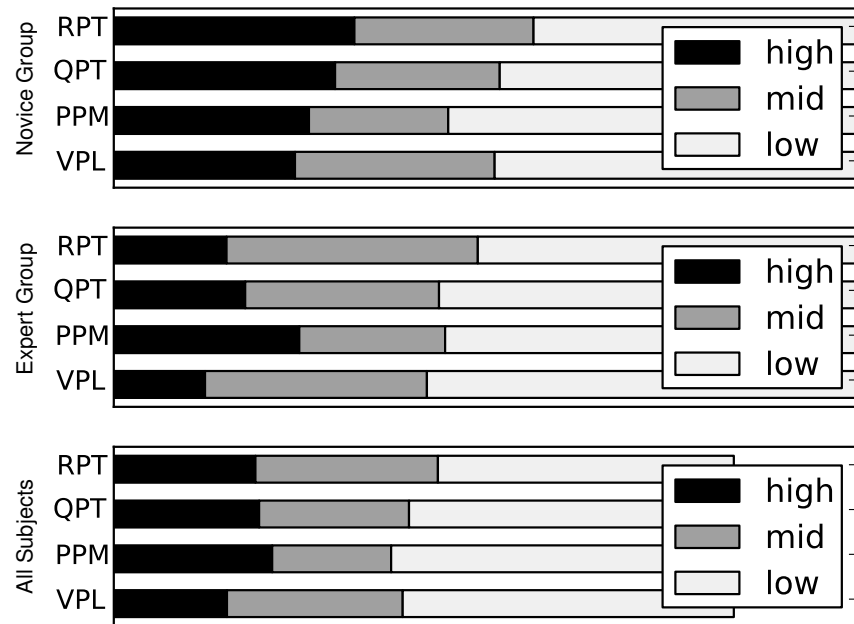


Figure 45: Average time users spent at each resolution in light open trials.

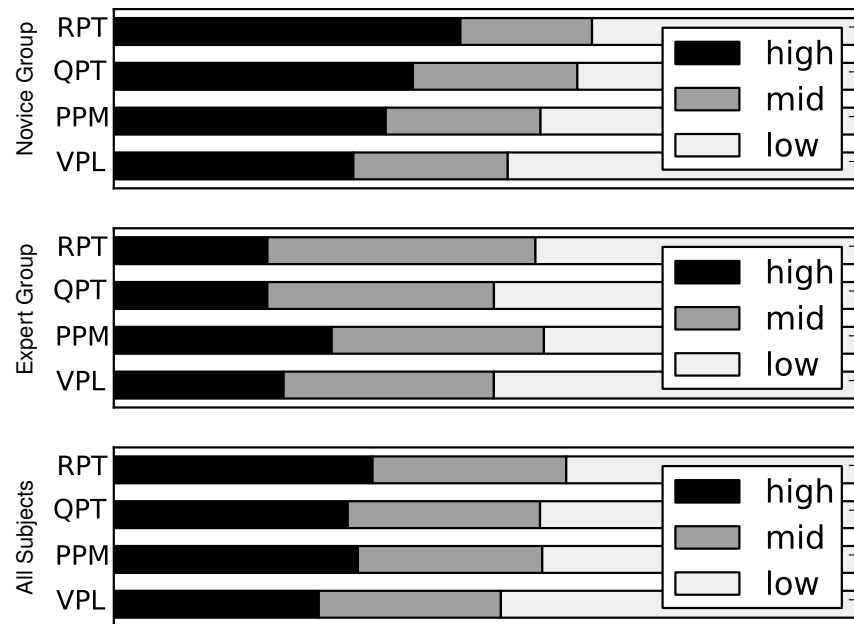


Figure 46: Average time users spent at each resolution in material matching trials.

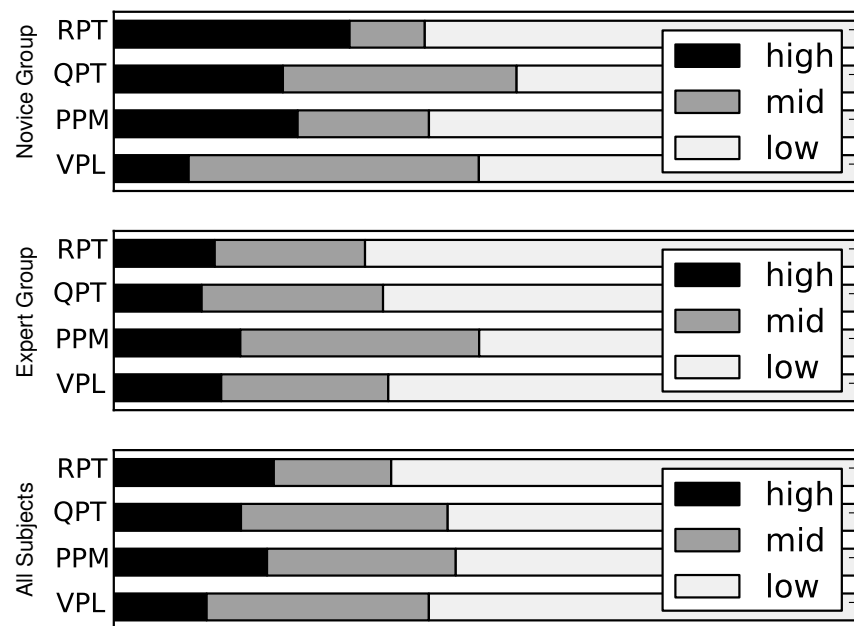


Figure 47: Average time users spent at each resolution in material open trials.

8 Algorithm Rating

Figure 48 is the algorithm rating graph in the paper for novice group, expert group and all subjects. Table 10, 11 and 12 are corresponding ANOVA of algorithm rating data. Star(*) in the data indicates two means are different with high confidence (> 80%).

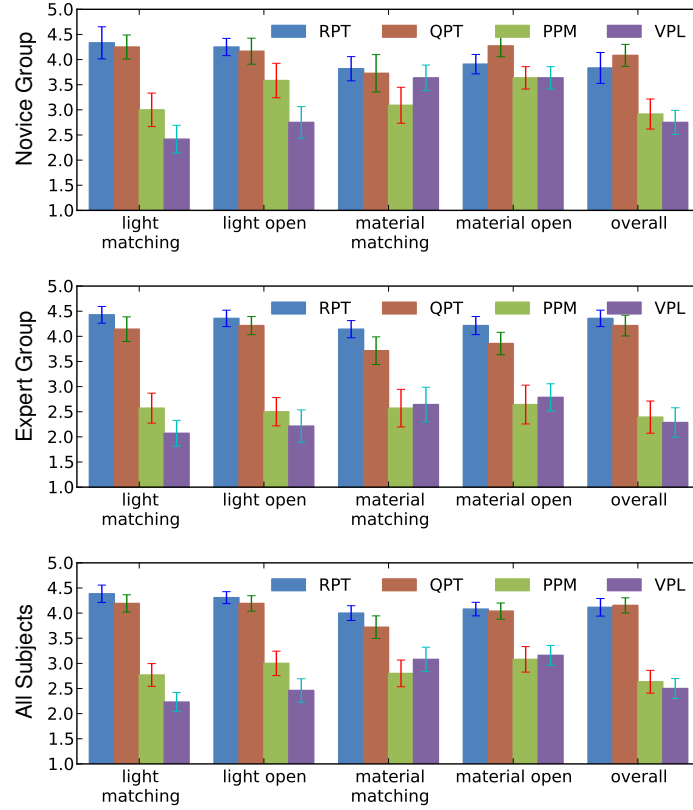


Figure 48: Algorithm rating comparison.

Table 10: ANOVA of Algorithm Rating for Novice Group

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.84332	0.01126	0.00025	RPT	-	0.79984	0.11013	0.00059
QPT	0.84332	-	0.00800	0.00008	QPT	0.79984	-	0.20710	0.00305
PPM	0.01126	0.00800	-	0.20984	PPM	0.11013	0.20710	-	0.10040
VPL	0.00025	0.00008	0.20984	-	VPL	0.00059	0.00305	0.10040	-
(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.85304	0.13933	0.64060	RPT	-	0.26565	0.40802	0.40802
QPT	0.85304	-	0.27321	0.85554	QPT	0.26565	-	0.07607	0.07607
PPM	0.13933	0.27321	-	0.27025	PPM	0.40802	0.07607	-	1.00000
VPL	0.64060	0.85554	0.27025	-	VPL	0.40802	0.07607	1.00000	-
(e) OVERALL									
	RPT	QPT	PPM	VPL					
RPT	-	0.53320	0.05325	0.01435					
QPT	0.53320	-	0.00645	0.00071					
PPM	0.05325	0.00645	-	0.68129					
VPL	0.01435	0.00071	0.68129	-					

Table 11: ANOVA of Algorithm Rating for Expert Group

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.36044	0.00002	0.00000	RPT	-	0.57587	0.00001	0.00001
QPT	0.36044	-	0.00057	0.00001	QPT	0.57587	-	0.00004	0.00002
PPM	0.00002	0.00057	-	0.23183	PPM	0.00001	0.00004	-	0.52541
VPL	0.00000	0.00001	0.23183	-	VPL	0.00001	0.00002	0.52541	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.21367	0.00106	0.00087	RPT	-	0.24025	0.00148	0.00025
QPT	0.21367	-	0.02543	0.02708	QPT	0.24025	-	0.01430	0.00671
PPM	0.00106	0.02543	-	0.89333	PPM	0.00148	0.01430	-	0.77263
VPL	0.00087	0.02708	0.89333	-	VPL	0.00025	0.00671	0.77263	-

(e) OVERALL				
	RPT	QPT	PPM	VPL
RPT	-	0.60530	0.00002	0.00000
QPT	0.60530	-	0.00009	0.00002
PPM	0.00002	0.00009	-	0.81390
VPL	0.00000	0.00002	0.81390	-

Table 12: ANOVA of Algorithm Rating for All Subjects

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.44295	0.00000	0.00000	RPT	-	0.56340	0.00002	0.00000
QPT	0.44295	-	0.00001	0.00000	QPT	0.56340	-	0.00017	0.00000
PPM	0.00000	0.00001	-	0.08053	PPM	0.00002	0.00017	-	0.12273
VPL	0.00000	0.00000	0.08053	-	VPL	0.00000	0.00000	0.12273	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.32233	0.00041	0.00297	RPT	-	0.85590	0.00161	0.00056
QPT	0.32233	-	0.01457	0.06872	QPT	0.85590	-	0.00355	0.00176
PPM	0.00041	0.01457	-	0.45749	PPM	0.00161	0.00355	-	0.81209
VPL	0.00297	0.06872	0.45749	-	VPL	0.00056	0.00176	0.81209	-

(e) OVERALL				
	RPT	QPT	PPM	VPL
RPT	-	0.87091	0.00001	0.00000
QPT	0.87091	-	0.00000	0.00000
PPM	0.00001	0.00000	-	0.66297
VPL	0.00000	0.00000	0.66297	-

9 Algorithm Ranking

Figure 49 is the algorithm ranking graph in the paper for novice group, expert group and all subjects.

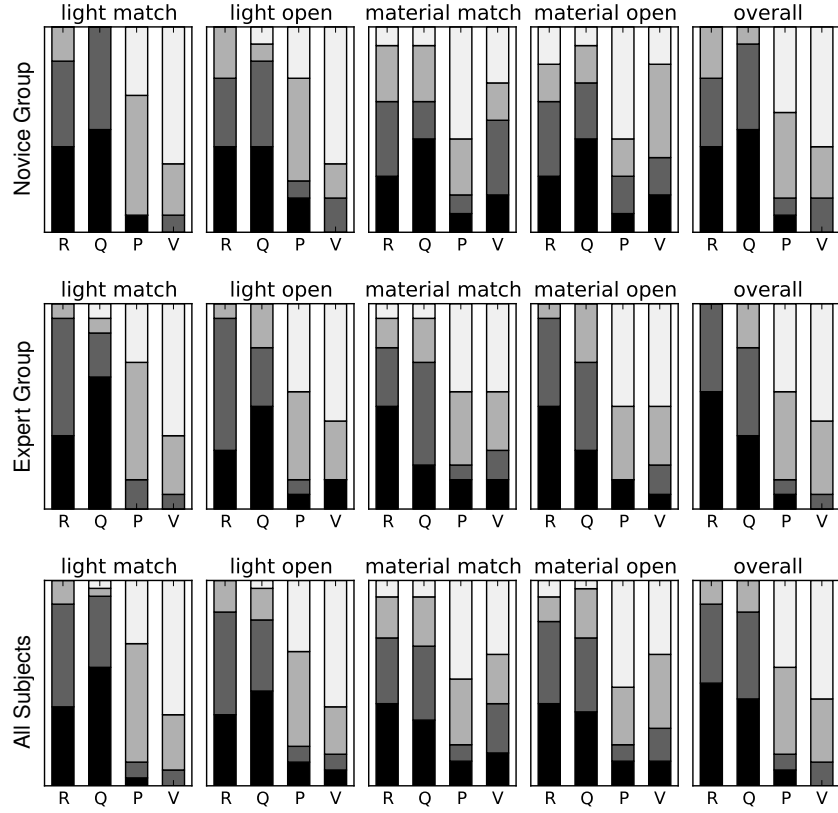


Figure 49: Algorithm ranking comparison.

Table 13: ANOVA of Algorithm Ranking for Novice Group

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.44093	0.00083	0.00011	RPT	-	0.90157	0.01845	0.00041
QPT	0.44093	-	0.00016	0.00003	QPT	0.90157	-	0.02303	0.00072
PPM	0.00083	0.00016	-	0.14739	PPM	0.01845	0.02303	-	0.07193
VPL	0.00011	0.00003	0.14739	-	VPL	0.00041	0.00072	0.07193	-
(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.63038	0.01892	0.45247	RPT	-	0.40957	0.06476	0.39512
QPT	0.63038	-	0.01278	0.24747	QPT	0.40957	-	0.01432	0.10827
PPM	0.01892	0.01278	-	0.12090	PPM	0.06476	0.01432	-	0.18023
VPL	0.45247	0.24747	0.12090	-	VPL	0.39512	0.10827	0.18023	-
(e) OVERALL									
	RPT	QPT	PPM	VPL					
RPT	-	0.47086	0.00277	0.00060					
QPT	0.47086	-	0.00067	0.00015					
PPM	0.00277	0.00067	-	0.48767					
VPL	0.00060	0.00015	0.48767	-					

Table 14: ANOVA of Algorithm Ranking for Expert Group

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.28515	0.00005	0.00001	RPT	-	0.63337	0.00021	0.00060
QPT	0.28515	-	0.00023	0.00005	QPT	0.63337	-	0.00046	0.00070
PPM	0.00005	0.00023	-	0.07593	PPM	0.00021	0.00046	-	0.57887
VPL	0.00001	0.00005	0.07593	-	VPL	0.00060	0.00070	0.57887	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.22308	0.00496	0.00771	RPT	-	0.13627	0.00039	0.00023
QPT	0.22308	-	0.01740	0.03212	QPT	0.13627	-	0.00233	0.00233
PPM	0.00496	0.01740	-	0.88351	PPM	0.00039	0.00233	-	0.94010
VPL	0.00771	0.03212	0.88351	-	VPL	0.00023	0.00233	0.94010	-

(e) OVERALL				
	RPT	QPT	PPM	VPL
RPT	-	0.12819	0.00005	0.00001
QPT	0.12819	-	0.00067	0.00006
PPM	0.00005	0.00067	-	0.40103
VPL	0.00001	0.00006	0.40103	-

Table 15: ANOVA of Algorithm Ranking for All Subjects

(a) LIGHT MATCHING					(b) LIGHT OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.19393	0.00000	0.00000	RPT	-	0.65610	0.00001	0.00000
QPT	0.19393	-	0.00000	0.00000	QPT	0.65610	-	0.00003	0.00000
PPM	0.00000	0.00000	-	0.02124	PPM	0.00001	0.00003	-	0.09871
VPL	0.00000	0.00000	0.02124	-	VPL	0.00000	0.00000	0.09871	-

(c) MATERIAL MATCHING					(d) MATERIAL OPEN				
	RPT	QPT	PPM	VPL		RPT	QPT	PPM	VPL
RPT	-	0.61695	0.00025	0.00884	RPT	-	0.67236	0.00009	0.00056
QPT	0.61695	-	0.00054	0.02159	QPT	0.67236	-	0.00010	0.00096
PPM	0.00025	0.00054	-	0.23893	PPM	0.00009	0.00010	-	0.31053
VPL	0.00884	0.02159	0.23893	-	VPL	0.00056	0.00096	0.31053	-

(e) OVERALL				
	RPT	QPT	PPM	VPL
RPT	-	0.55433	0.00000	0.00000
QPT	0.55433	-	0.00000	0.00000
PPM	0.00000	0.00000	-	0.27232
VPL	0.00000	0.00000	0.27232	-