

# Summary of Correlation Analysis

July 18, 2018

## **1 Gains in Skill/Knowledge and Motivation**

Table 1: Correlation matrix of Gains in Skill/Knowledge and Motivation between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	1.0000	-0.0118	-0.0393	0.1605	0.0506
Level of Motivation	-0.0118	1.0000	0.9376	0.7853	0.7255
Attention	-0.0393	0.9376	1.0000	0.6059	0.5581
Relevance	0.1605	0.7853	0.6059	1.0000	0.6486
Satisfaction	0.0506	0.7255	0.5581	0.6486	1.0000

method: spearman

Table 2: Correlation matrix with p-values of Gains in Skill/Knowledge and Motivation between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	0.0000	0.9379	0.7955	0.2867	0.7383
Level of Motivation	0.9379	0.0000	0.0000	0.0000	0.0000
Attention	0.7955	0.0000	0.0000	0.0000	0.0001
Relevance	0.2867	0.0000	0.0000	0.0000	0.0000
Satisfaction	0.7383	0.0000	0.0001	0.0000	0.0000
method: spearman					

## **2 Gains in Skill/Knowledge and Motivation for the group non-gamified**

Table 3: Correlation matrix of Gains in Skill/Knowledge and Motivation for the group non-gamified between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	1.0000	0.1815	0.0986	0.3144	0.2382
Level of Motivation	0.1815	1.0000	0.9276	0.8109	0.6991
Attention	0.0986	0.9276	1.0000	0.5940	0.4703
Relevance	0.3144	0.8109	0.5940	1.0000	0.7335
Satisfaction	0.2382	0.6991	0.4703	0.7335	1.0000
method: spearman					

Table 4: Correlation matrix with p-values of Gains in Skill/Knowledge and Motivation for the group non-gamified between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	0.0000	0.3552	0.6175	0.1032	0.2222
Level of Motivation	0.3552	0.0000	0.0000	0.0000	0.0000
Attention	0.6175	0.0000	0.0000	0.0009	0.0115
Relevance	0.1032	0.0000	0.0009	0.0000	0.0000
Satisfaction	0.2222	0.0000	0.0115	0.0000	0.0000
method: spearman					

### **3 Gains in Skill/Knowledge and Motivation for the group ont-gamified**

Table 5: Correlation matrix of Gains in Skill/Knowledge and Motivation for the group ont-gamified between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	1.0000	-0.2173	-0.2560	-0.0348	-0.2404
Level of Motivation	-0.2173	1.0000	0.9293	0.7842	0.8416
Attention	-0.2560	0.9293	1.0000	0.5903	0.8928
Relevance	-0.0348	0.7842	0.5903	1.0000	0.5099
Satisfaction	-0.2404	0.8416	0.8928	0.5099	1.0000
method: spearman					



Table 6: Correlation matrix with p-values of Gains in Skill/Knowledge and Motivation for the group ont-gamified between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	0.0000	0.3865	0.3052	0.8910	0.3366
Level of Motivation	0.3865	0.0000	0.0000	0.0001	0.0000
Attention	0.3052	0.0000	0.0000	0.0099	0.0000
Relevance	0.8910	0.0001	0.0099	0.0000	0.0306
Satisfaction	0.3366	0.0000	0.0000	0.0306	0.0000
method: spearman					

#### **4 Gains in Skill/Knowledge and Motivation for the group Apprentice**

Table 7: Correlation matrix of Gains in Skill/Knowledge and Motivation for the group Apprentice between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	1.0000	0.0049	-0.0359	0.2041	0.1042
Level of Motivation	0.0049	1.0000	0.9159	0.7651	0.7117
Attention	-0.0359	0.9159	1.0000	0.5443	0.5080
Relevance	0.2041	0.7651	0.5443	1.0000	0.6075
Satisfaction	0.1042	0.7117	0.5080	0.6075	1.0000
method: spearman					

Table 8: Correlation matrix with p-values of Gains in Skill/Knowledge and Motivation for the group Apprentice between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	0.0000	0.9781	0.8401	0.2468	0.5576
Level of Motivation	0.9781	0.0000	0.0000	0.0000	0.0000
Attention	0.8401	0.0000	0.0000	0.0009	0.0022
Relevance	0.2468	0.0000	0.0009	0.0000	0.0001
Satisfaction	0.5576	0.0000	0.0022	0.0001	0.0000
method: spearman					

## **5 Gains in Skill/Knowledge and Motivation for the group Master**

Table 9: Correlation matrix of Gains in Skill/Knowledge and Motivation for the group Master between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	1.0000	0.2592	0.2724	0.1681	0.2120
Level of Motivation	0.2592	1.0000	0.9614	0.8481	0.8219
Attention	0.2724	0.9614	1.0000	0.8600	0.7505
Relevance	0.1681	0.8481	0.8600	1.0000	0.7611
Satisfaction	0.2120	0.8219	0.7505	0.7611	1.0000
method: spearman					

Table 10: Correlation matrix with p-values of Gains in Skill/Knowledge and Motivation for the group Master between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	0.0000	0.4159	0.3917	0.6014	0.5083
Level of Motivation	0.4159	0.0000	0.0000	0.0005	0.0010
Attention	0.3917	0.0000	0.0000	0.0003	0.0049
Relevance	0.6014	0.0005	0.0003	0.0000	0.0040
Satisfaction	0.5083	0.0010	0.0049	0.0040	0.0000
method: spearman					

## **6 Gains in Skill/Knowledge and Motivation for the group non-gamified.Apprentice**



Table 11: Correlation matrix of Gains in Skill/Knowledge and Motivation for the group non-gamified.Apprentice between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	1.0000	0.1483	0.0482	0.2433	0.2741
Level of Motivation	0.1483	1.0000	0.8597	0.8226	0.7118
Attention	0.0482	0.8597	1.0000	0.5114	0.3771
Relevance	0.2433	0.8226	0.5114	1.0000	0.7607
Satisfaction	0.2741	0.7118	0.3771	0.7607	1.0000
method: spearman					

Table 12: Correlation matrix with p-values of Gains in Skill/Knowledge and Motivation for the group non-gamified.Apprentice between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	0.0000	0.5325	0.8400	0.3013	0.2421
Level of Motivation	0.5325	0.0000	0.0000	0.0000	0.0004
Attention	0.8400	0.0000	0.0000	0.0212	0.1012
Relevance	0.3013	0.0000	0.0212	0.0000	0.0001
Satisfaction	0.2421	0.0004	0.1012	0.0001	0.0000
method: spearman					

## **7 Gains in Skill/Knowledge and Motivation for the group non-gamified.Master**

Table 13: Correlation matrix of Gains in Skill/Knowledge and Motivation for the group non-gamified.Master between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	1.0000	0.5000	0.5000	0.7365	0.2892
Level of Motivation	0.5000	1.0000	1.0000	0.9207	0.7229
Attention	0.5000	1.0000	1.0000	0.9207	0.7229
Relevance	0.7365	0.9207	0.9207	1.0000	0.6150
Satisfaction	0.2892	0.7229	0.7229	0.6150	1.0000
method: spearman					

Table 14: Correlation matrix with p-values of Gains in Skill/Knowledge and Motivation for the group non-gamified.Master between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	0.0000	0.2162	0.2162	0.0372	0.4873
Level of Motivation	0.2162	0.0000	0.0000	0.0012	0.0427
Attention	0.2162	0.0000	0.0000	0.0012	0.0427
Relevance	0.0372	0.0012	0.0012	0.0000	0.1046
Satisfaction	0.4873	0.0427	0.0427	0.1046	0.0000
method: spearman					

## 8 Gains in Skill/Knowledge and Motivation for the group ont-gamified.Apprentice

Table 15: Correlation matrix of Gains in Skill/Knowledge and Motivation for the group ont-gamified.Apprentice between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	1.0000	-0.2340	-0.3108	0.0221	-0.2235
Level of Motivation	-0.2340	1.0000	0.9320	0.7561	0.8267
Attention	-0.3108	0.9320	1.0000	0.5697	0.8994
Relevance	0.0221	0.7561	0.5697	1.0000	0.4533
Satisfaction	-0.2235	0.8267	0.8994	0.4533	1.0000
method: spearman					

Table 16: Correlation matrix with p-values of Gains in Skill/Knowledge and Motivation for the group ont-gamified.Apprentice between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	0.0000	0.4207	0.2795	0.9403	0.4425
Level of Motivation	0.4207	0.0000	0.0000	0.0018	0.0003
Attention	0.2795	0.0000	0.0000	0.0334	0.0000
Relevance	0.9403	0.0018	0.0334	0.0000	0.1035
Satisfaction	0.4425	0.0003	0.0000	0.1035	0.0000
method: spearman					



## **9 Gains in Skill/Knowledge and Motivation for the group ont-gamified.Master**

Table 17: Correlation matrix of Gains in Skill/Knowledge and Motivation for the group ont-gamified.Master between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	1.0000	-0.7379	-0.5000	-0.7379	-0.7379
Level of Motivation	-0.7379	1.0000	0.9487	1.0000	1.0000
Attention	-0.5000	0.9487	1.0000	0.9487	0.9487
Relevance	-0.7379	1.0000	0.9487	1.0000	1.0000
Satisfaction	-0.7379	1.0000	0.9487	1.0000	1.0000
method: spearman					

Table 18: Correlation matrix with p-values of Gains in Skill/Knowledge and Motivation for the group ont-gamified.Master between motivation factors and in the second empirical study

round	Gains in Skill/Knowledge	Level of Motivation	Attention	Relevance	Satisfaction
Gains in Skill/Knowledge	0.0000	0.2621	0.5000	0.2621	0.2621
Level of Motivation	0.2621	0.0000	0.0513	0.0833	0.0833
Attention	0.5000	0.0513	0.0000	0.0513	0.0513
Relevance	0.2621	0.0833	0.0513	0.0000	0.0833
Satisfaction	0.2621	0.0833	0.0513	0.0833	0.0000
method: spearman					