

# 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	-0.1455	-0.1550	0.0843	-0.0980
Level of Motivation	-0.1455	1.0000	0.9395	0.7706	0.6684
Attention	-0.1550	0.9395	1.0000	0.5819	0.5091
Relevance	0.0843	0.7706	0.5819	1.0000	0.6237
Satisfaction	-0.0980	0.6684	0.5091	0.6237	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	0.3641	0.3333	0.6001	0.5421
Level of Motivation	0.3641	0.0000	0.0000	0.0000	0.0000
Attention	0.3333	0.0000	0.0000	0.0001	0.0007
Relevance	0.6001	0.0000	0.0001	0.0000	0.0000
Satisfaction	0.5421	0.0000	0.0007	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	-0.0135	-0.0593	0.2120	0.0735
Level of Motivation	-0.0135	1.0000	0.9370	0.7740	0.6186
Attention	-0.0593	0.9370	1.0000	0.5459	0.3996
Relevance	0.2120	0.7740	0.5459	1.0000	0.6901
Satisfaction	0.0735	0.6186	0.3996	0.6901	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	0.949	0.7782	0.3090	0.7271
Level of Motivation	0.9490	0.000	0.0000	0.0000	0.0010
Attention	0.7782	0.000	0.0000	0.0048	0.0478
Relevance	0.3090	0.000	0.0048	0.0000	0.0001
Satisfaction	0.7271	0.001	0.0478	0.0001	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	-0.2358	-0.2750	-0.0067	-0.3093
Level of Motivation	-0.2358	1.0000	0.9318	0.8156	0.8363
Attention	-0.2750	0.9318	1.0000	0.6252	0.9042
Relevance	-0.0067	0.8156	0.6252	1.0000	0.5620
Satisfaction	-0.3093	0.8363	0.9042	0.5620	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	0.3793	0.3026	0.9805	0.2437
Level of Motivation	0.3793	0.0000	0.0000	0.0001	0.0001
Attention	0.3026	0.0000	0.0000	0.0096	0.0000
Relevance	0.9805	0.0001	0.0096	0.0000	0.0235
Satisfaction	0.2437	0.0001	0.0000	0.0235	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	-0.1651	-0.1811	0.1355	-0.0779
Level of Motivation	-0.1651	1.0000	0.9212	0.7500	0.6285
Attention	-0.1811	0.9212	1.0000	0.5070	0.4434
Relevance	0.1355	0.7500	0.5070	1.0000	0.5905
Satisfaction	-0.0779	0.6285	0.4434	0.5905	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					
Level of Motivation	0.0000				
Attention	0.3919	0.3919			
Relevance	0.3472	0.0000	0.0000		
Satisfaction	0.4833	0.0000	0.0050	0.0000	
	0.6878	0.0003	0.0160	0.0007	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				
Level of Motivation	-0.1007	1.0000			
Attention	-0.1463	0.8725	1.0000		
Relevance	0.1256	0.7995	0.4441	1.0000	
Satisfaction	0.0766	0.5922	0.2689	0.7312	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	0.7006	0.5753	0.6309	0.7702
Level of Motivation	0.7006	0.0000	0.0000	0.0001	0.0123
Attention	0.5753	0.0000	0.0000	0.0741	0.2967
Relevance	0.6309	0.0001	0.0741	0.0000	0.0009
Satisfaction	0.7702	0.0123	0.2967	0.0009	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				
Level of Motivation	-0.3439	1.0000	-0.4114	0.0211	-0.3669
Attention	-0.4114	0.9324	1.0000	0.7778	0.8230
Relevance	0.0211	0.7778	0.5990	1.0000	0.9088
Satisfaction	-0.3669	0.8230	0.9088	0.5301	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	0.2738	0.1840	0.9481	0.2408
Level of Motivation	0.2738	0.0000	0.0000	0.0029	0.0010
Attention	0.1840	0.0000	0.0000	0.0396	0.0000
Relevance	0.9481	0.0029	0.0396	0.0000	0.0762
Satisfaction	0.2408	0.0010	0.0000	0.0762	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