

Summary of correlation analysis between motivation factors and in the second empirical study

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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 | | | | | |

method: spearman

Table 12: (continued)

| round | Gains in Skill/Knowledge | Level of Motivation | Attention | Relevance | Satisfaction |
|--|--------------------------|---------------------|-----------|-----------|--------------|
| 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 | | | | | |