

round	Diference in Scores	Intrinsic Motivation	Interest/Enjoyment	Perceived Choice	Pressure/Tension	Effort/Importance
Diference in Scores	1.0000	-0.0614	-0.2199	0.0474	-0.2027	0.0802
Intrinsic Motivation	-0.0614	1.0000	0.8232	0.6049	-0.3841	0.2957
Interest/Enjoyment	-0.2199	0.8232	1.0000	0.3809	-0.2937	0.0329
Perceived Choice	0.0474	0.6049	0.3809	1.0000	0.0020	-0.0594
Pressure/Tension	-0.2027	-0.3841	-0.2937	0.0020	1.0000	0.0721
Effort/Importance	0.0802	0.2957	0.0329	-0.0594	0.0721	1.0000
method: spearman						

Table 6: Correlation matrix with p-values of Difference in Scores and Motivation for the group ont-gamified between participants' motivation and learning outcomes in the first empirical study

[illegible]

#### 4 Diference in Scores and Motivation for the group Apprentice

Table 7: Correlation matrix of Difference in Scores and Motivation for the group Apprentice between participants' motivation and learning outcomes in the first empirical study

[illegible]

Table 8: Correlation matrix with p-values of Difference in Scores and Motivation for the group Apprentice between participants' motivation and learning outcomes in the first empirical study

[illegible]

## 5 Difference in Scores and Motivation for the group Master

Table 9: Correlation matrix of Difference in Scores and Motivation for the group Master between participants' motivation and learning outcomes in the first empirical study

[illegible]

Table 10: Correlation matrix with p-values of Difference in Scores and Motivation for the group Master between participants' motivation and learning outcomes in the first empirical study

[illegible]

## 6 Difference in Scores and Motivation for the group non-gamified.Apprentice

Table 11: Correlation matrix of Difference in Scores and Motivation for the group non-gamified.Apprentice between participants' motivation and learning outcomes in the first empirical study

[illegible]

Table 12: Correlation matrix with p-values of Diference in Scores and Motivation for the group non-gamified.Apprentice between participants' motivation and learning outcomes in the first empirical study

round	Diference in Scores	Intrinsic Motivation	Interest/Enjoyment	Perceived Choice	Pressure/Tension	Effort/Importance
Diference in Scores	0.0000	0.3938	0.1473	0.8581	0.2575	0.3214
Intrinsic Motivation	0.3938	0.0000	0.0038	0.0056	0.0448	0.3405
Interest/Enjoyment	0.1473	0.0038	0.0000	0.2844	0.4402	0.5058
Perceived Choice	0.8581	0.0056	0.2844	0.0000	0.0961	0.9319
Pressure/Tension	0.2575	0.0448	0.4402	0.0961	0.0000	0.2498
Effort/Importance	0.3214	0.3405	0.5058	0.9319	0.2498	0.0000

method: spearman

## 7 Diference in Scores and Motivation for the group non-gamified.Master

Table 13: Correlation matrix of Diference in Scores and Motivation for the group non-gamified.Master between participants' motivation and learning outcomes in the first empirical study

round	Diference in Scores	Intrinsic Motivation	Interest/Enjoyment	Perceived Choice	Pressure/Tension	Effort/Importance
Diference in Scores	1.0000	0.3833	0.2762	0.2119	−0.0866	0.5339
Intrinsic Motivation	0.3833	1.0000	0.9043	0.7660	−0.4253	0.4928
Interest/Enjoyment	0.2762	0.9043	1.0000	0.5703	−0.3311	0.3502
Perceived Choice	0.2119	0.7660	0.5703	1.0000	−0.4093	0.1791
Pressure/Tension	−0.0866	−0.4253	−0.3311	−0.4093	1.0000	0.2098
Effort/Importance	0.5339	0.4928	0.3502	0.1791	0.2098	1.0000

method: spearman

Table 14: Correlation matrix with p-values of Diference in Scores and Motivation for the group non-gamified.Master between participants' motivation and learning outcomes in the first empirical study

round	Diference in Scores	Intrinsic Motivation	Interest/Enjoyment	Perceived Choice	Pressure/Tension	Effort/Importance
Diference in Scores	0.0000	0.1762	0.3392	0.4670	0.7684	0.0493
Intrinsic Motivation	0.1762	0.0000	0.0000	0.0014	0.1295	0.0734
Interest/Enjoyment	0.3392	0.0000	0.0000	0.0332	0.2476	0.2197
Perceived Choice	0.4670	0.0014	0.0332	0.0000	0.1461	0.5401
Pressure/Tension	0.7684	0.1295	0.2476	0.1461	0.0000	0.4717
Effort/Importance	0.0493	0.0734	0.2197	0.5401	0.4717	0.0000

method: spearman

## 8 Diference in Scores and Motivation for the group ont-gamified.Apprentice

Table 15: Correlation matrix of Diference in Scores and Motivation for the group ont-gamified.Apprentice between participants' motivation and learning outcomes in the first empirical study

round	Diference in Scores	Intrinsic Motivation	Interest/Enjoyment	Perceived Choice	Pressure/Tension	Effort/Importance
Diference in Scores	1.0000	−0.2786	−0.2435	−0.0036	0.2283	0.1953
Intrinsic Motivation	−0.2786	1.0000	0.9024	0.7063	−0.4157	0.3418
Interest/Enjoyment	−0.2435	0.9024	1.0000	0.6838	−0.2257	0.1686
Perceived Choice	−0.0036	0.7063	0.6838	1.0000	0.1282	0.1150
Pressure/Tension	0.2283	−0.4157	−0.2257	0.1282	1.0000	−0.2203
Effort/Importance	0.1953	0.3418	0.1686	0.1150	−0.2203	1.0000

method: spearman

Table 16: Correlation matrix with p-values of Diference in Scores and Motivation for the group ont-gamified.Apprentice between participants' motivation and learning outcomes in the first empirical study

round	Diference in Scores	Intrinsic Motivation	Interest/Enjoyment	Perceived Choice	Pressure/Tension	Effort/Importance
Diference in Scores	0.0000	0.3138	0.3818	0.9898	0.4132	0.4854
Intrinsic Motivation	0.3138	0.0000	0.0000	0.0032	0.1233	0.2124
Interest/Enjoyment	0.3818	0.0000	0.0000	0.0049	0.4187	0.5480
Perceived Choice	0.9898	0.0032	0.0049	0.0000	0.6488	0.6833
Pressure/Tension	0.4132	0.1233	0.4187	0.6488	0.0000	0.4302
Effort/Importance	0.4854	0.2124	0.5480	0.6833	0.4302	0.0000

method: spearman

## 9 Diference in Scores and Motivation for the group ont-gamified.Master

Table 17: Correlation matrix of Diference in Scores and Motivation for the group ont-gamified.Master between participants' motivation and learning outcomes in the first empirical study

round	Diference in Scores	Intrinsic Motivation	Interest/Enjoyment	Perceived Choice	Pressure/Tension	Effort/Importance
Diference in Scores	1.0000	0.0000	−0.0449	0.2633	−0.1712	−0.1501
Intrinsic Motivation	0.0000	1.0000	0.7558	0.4183	−0.3971	0.2602
Interest/Enjoyment	−0.0449	0.7558	1.0000	0.0903	−0.4813	−0.0808
Perceived Choice	0.2633	0.4183	0.0903	1.0000	−0.1028	−0.1580
Pressure/Tension	−0.1712	−0.3971	−0.4813	−0.1028	1.0000	0.4237
Effort/Importance	−0.1501	0.2602	−0.0808	−0.1580	0.4237	1.0000

method: spearman

Table 18: Correlation matrix with p-values of Difference in Scores and Motivation for the group ont-gamified.Master between participants' motivation and learning outcomes in the first empirical study

[illegible]