

FACTOR

```
/VARIABLES q7c_new q7d_new q7e_new q7f_new q9b_new q9d_new q9e_new q11a_new  
q11b_new q11c_new  
          q11e_new q11f_new  
/MISSING MEANSUB  
/ANALYSIS q7c_new q7d_new q7e_new q7f_new q9b_new q9d_new q9e_new q11a_new  
q11b_new q11c_new  
          q11e_new q11f_new  
/PRINT INITIAL DET KMO EXTRACTION ROTATION FSCORE  
/FORMAT SORT BLANK(.4)  
/PLOT EIGEN  
/CRITERIA MINEIGEN(1) ITERATE(25)  
/EXTRACTION ML  
/CRITERIA ITERATE(25) DELTA(0)  
/ROTATION OBLIMIN.
```

**Factor Analysis**

**Notes**

Output Created	25-JAN-2017 14:40:13	
Comments		
Input	Active Dataset	DataSet2
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	2342

Missing Value Handling	Definition of Missing	MISSING=EXCLUDE: User-defined missing values are treated as missing.
	Cases Used	MEAN SUBSTITUTION: For each variable used, missing values are replaced with the variable mean.
Syntax		<pre> FACTOR /VARIABLES q7c_new q7d_new q7e_new q7f_new q9b_new q9d_new q9e_new q11a_new q11b_new q11c_new           q11e_new q11f_new /MISSING MEANSUB /ANALYSIS q7c_new q7d_new q7e_new q7f_new q9b_new q9d_new q9e_new q11a_new q11b_new q11c_new           q11e_new q11f_new /PRINT INITIAL DET KMO EXTRACTION ROTATION FSCORE /FORMAT SORT BLANK(.4) /PLOT EIGEN /CRITERIA MINEIGEN(1) ITERATE(25) /EXTRACTION ML /CRITERIA ITERATE(25) DELTA(0) /ROTATION OBLIMIN. </pre>
Resources	Processor Time	00:00:04.27
	Elapsed Time	00:00:01.29
	Maximum Memory Required	18976 (18.531K) bytes

**Correlation Matrix<sup>a</sup>**

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a. Determinant = .003

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.861
Bartlett's Test of Sphericity	Approx. Chi-Square	11380.247
	df	66
	Sig.	.000

### Communalities

	Initial	Extraction
Confident: solve computer software problems	.376	.333
Confident: program computers	.406	.376
Confident: think of new tech inventions	.443	.548
Confident: create new technology inventions	.511	.686
Agree: People like me can do well learning tech	.405	.479
Agree: People like me can do well in tech jobs	.569	.763
Agree: People like me can create new tech inventions	.540	.621

Interest: take future classes in computer game design	.469	.385
Interest: take future classes in computer programming	.587	.526
Interest: take future classes learning how to create	.543	.510
Interest: get a computing or tech related college degree	.653	.764
Interest: get a tech related job when get older	.628	.711

Extraction Method: Maximum Likelihood.

### Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.235	43.629	43.629	4.763	39.691	39.691
2	1.452	12.102	55.731	1.009	8.406	48.097
3	1.283	10.693	66.424	.929	7.741	55.838
4	.816	6.802	73.226			
5	.729	6.072	79.298			
6	.470	3.914	83.213			
7	.457	3.811	87.023			
8	.398	3.316	90.339			
9	.352	2.933	93.272			

10	.322	2.685	95.957			
11	.267	2.223	98.181			
12	.218	1.819	100.000			

**Total Variance Explained**

Rotation Sums of Squared Loadings<sup>a</sup>

Factor	Total
1	3.916
2	3.353
3	3.350
4	
5	
6	
7	
8	
9	
10	
11	
12	

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

### Factor Matrix<sup>a</sup>

	Factor		
	1	2	3
Interest: get a computing or tech related college degree	.756	-.438	
Interest: get a tech related job when get older	.728	-.425	
Interest: take future classes learning how to create	.705		
Interest: take future classes in computer programming	.695		
Agree: People like me can do well in tech jobs	.692		-.432
Agree: People like me can create new tech inventions	.652		
Interest: take future classes in computer game design	.599		
Confident: create new technology inventions	.574		.495
Agree: People like me can do well learning tech	.556		
Confident: program computers	.520		
Confident: think of new tech inventions	.517		.429
Confident: solve computer software problems	.491		

Extraction Method: Maximum Likelihood.<sup>a</sup>

a. 3 factors extracted. 6 iterations required.

### Goodness-of-fit Test

Chi-Square	df	Sig.
1061.313	33	.000

### Pattern Matrix<sup>a</sup>

	Factor		
	1	2	3
Interest: get a computing or tech related college degree	.920		
Interest: get a tech related job when get older	.890		
Interest: take future classes in computer programming	.626		
Interest: take future classes in computer game design	.519		
Interest: take future classes learning how to create	.481		
Agree: People like me can do well in tech jobs		.891	
Agree: People like me can create new tech inventions		.727	

Agree: People like me can do well learning tech		.696	
Confident: create new technology inventions			.860
Confident: think of new tech inventions			.762
Confident: program computers			.523
Confident: solve computer software problems			.491

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 8 iterations.

### Structure Matrix

	Factor		
	1	2	3
Interest: get a computing or tech related college degree	.871	.430	
Interest: get a tech related job when get older	.840	.415	
Interest: take future classes in computer programming	.715	.469	.444
Interest: take future classes learning how to create	.667	.502	.541
Interest: take future classes in computer game design	.609	.406	



Agree: People like me can do well in tech jobs	.484	.869	
Agree: People like me can create new tech inventions	.416	.777	.499
Agree: People like me can do well learning tech		.691	
Confident: create new technology inventions			.827
Confident: think of new tech inventions			.738
Confident: program computers	.414		.600
Confident: solve computer software problems			.565

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

### Factor Correlation Matrix

Factor	1	2	3
1	1.000	.540	.509
2	.540	1.000	.503
3	.509	.503	1.000

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

### Factor Score Coefficient Matrix

	Factor		
	1	2	3
Confident: solve computer software problems	.028	.012	.122
Confident: program computers	.033	.012	.139
Confident: think of new tech inventions	.003	.023	.273
Confident: create new technology inventions	.008	.027	.443
Agree: People like me can do well learning tech	.012	.184	.006
Agree: People like me can do well in tech jobs	.046	.515	-.028
Agree: People like me can create new tech inventions	.001	.268	.089
Interest: take future classes in computer game design	.090	.025	.035
Interest: take future classes in computer programming	.140	.037	.043
Interest: take future classes learning how to create	.108	.047	.090
Interest: get a computing or tech related college degree	.400	.001	.002
Interest: get a tech related job when get older	.316	.002	-.003

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.

### Factor Score Covariance Matrix

Factor	1	2	3
1	2.905	2.810	3.631
2	2.810	2.771	3.346
3	3.631	3.346	4.143

Extraction Method: Maximum Likelihood.

Rotation Method: Oblimin with Kaiser Normalization.