Insights Discovery: Validating the system

Insights Discovery: what is it based on?

The Insights Discovery system is based on the psychological types theory of Dr Carl G Jung and one of his leading students, Dr Jolande Jacobi. Jung proposed that our personalities are created from the interaction of two attitudes; Extraversion and Introversion, and four functions, further split into two rational (Thinking and Feeling) and two irrational functions (Sensation and Intuition). When combined, these elements generate common personality types. Jung felt that what makes an individual unique are the different balances of these functions and attitudes interacting within them. It is these balances that make up the Insights four colour energies; representative of observable behavioural patterns (see figure one).

These colours are measured by the Insights Discovery evaluator; a 25-frame questionnaire of 100 word pairs, which produces the Insights Discovery Personal Profile. Designed by Andi Lothian in the early 1990s, Andi, and son Andy, founded Insights Learning & Development Ltd in 1993.

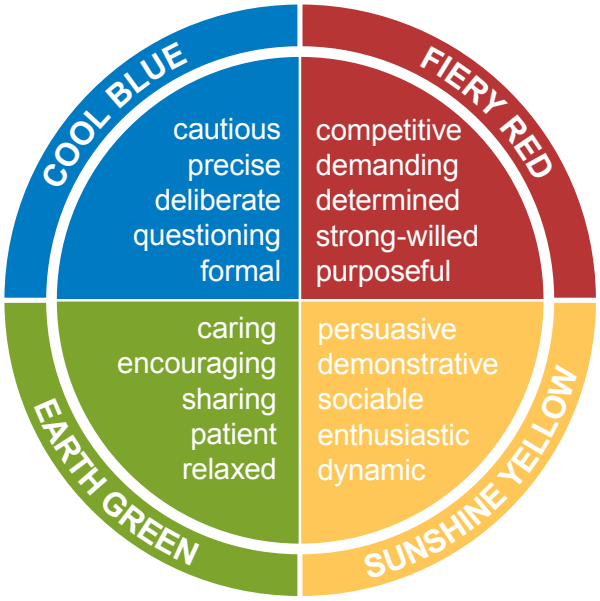

Figure one: The Insights Discovery four colour energy wheel and associated behavioural characteristics

Validity: How do we know the evaluator is measuring what we're saying it's measuring, and how well does it actually measure that?

We measure this through Confirmatory Factor Analysis (CFA) – a test which determines which factors are actually present within a questionnaire. Here we used CFA to test the hypothesised factor structure of the Insights Discovery model. We hypothesised that the four sets of 25 colour based items should load onto the factors such that the polar opposite nature of the 'Fiery Red' vs. 'Earth Green'

items is apparent and the polar opposite nature of the 'Sunshine Yellow' vs. 'Cool Blue' items is apparent. The four colours should load onto their appropriate factor only.

As a general rule of thumb, factor loadings greater than 0.3 or less than -0.3 are considered acceptable. In table one below the results of those statistically significant factor loadings are highlighted in a larger bold font. This table shows our hypotheses are supported in that the polar opposite of 'Cool Blue' is 'Sunshine Yellow', this is further supported by factor analysis, i.e. it can be seen that the 'Cool Blue' items load negatively onto factor two and the 'Sunshine Yellow' items load positively onto factor two. This may lead to the conclusion that the fundamental explanation of the four Insights colour preferences is contained in the first two factors that account for the bulk of the variance.

Sample Size: 33,345	Item average factor loadings			
	Cool Blue	Earth Green	Sunshine Yellow	Fiery Red
Factor one	0.082	**0.521**	-0.031	**-0.566**
Factor two	**0.536**	0.039	**-0.526**	-0.044

Table one: Summary of Item Factor analysis for the Insights Discovery Preference Evaluator

Reliability: here we're interested in two main questions:

i) Does each item in the evaluator perform consistently?

ii) Do we have consistent results over a period of time?

i) Does each item in the evaluator perform consistently?

We determine this statistically through the Cronbach Alpha coefficient. This measures the error variance, i.e. the unknown or unwanted factors in the average inter-item correlation across the four colour energies. When the error variance is low (as we would want), the Alpha coefficient approaches 1.0 – A value of 0.70 is the commonly accepted lower limit.

Here our results show the four colours have very high Cronbach Alpha coefficients.

Sample Size: 33,435	Colour preferences			
	Cool Blue	Earth Green	Sunshine Yellow	Fiery Red
Cronbach Alpha Coefficients	0.924	0.917	0.915	0.930
95% Confidence interval	[0.923, 0.925]	[0.915, 0.918]	[0.914, 0.917]	[0.929, 0.931]

Table two: Summary of Cronbach Alpha coefficients in IDPE

ii) Do we have consistent results over a period of time?

This is determined by giving the same individuals the same test over a certain time period and measuring the Spearman correlation coefficients. The accepted range for this should be between 0.7 and 0.9. We have completed this on various different samples, the most recent including a sample of 6,250 individuals dated from 2011 to 2016 who completed the Insights Discovery Evaluator (IDPE) twice.

We divided the overall sample into three sub-samples based on the length of the retest durations, 0-6 months, 7-18 months, 18 months and beyond. We can see that, for the three time segments, the test-retest correlation coefficients range from 0.81 to 0.87 for all four colour scores.

	Colour energies			
	Cool Blue	Earth Green	Sunshine Yellow	Fiery Red
Correlation (N=6250)	0.86	0.87	0.83	0.84
0-6 months (N= 1869)	0.86	0.83	0.88	0.83
7-18 months (N=1893)	0.86	0.83	0.88	0.85
18 months and beyond (N=2488)	0.87	0.81	0.87	0.83

Table three: Test-retest Spearmen correlation for the IDPE

Conclusion

In conclusion, this brief summary offers good evidence of the construct validity (via CFA), internal reliability (Cronbach Alpha Coefficients) and temporal consistency (Spearman Correlation Coefficients) of the Insights Discovery Preference Evaluator.