



The *Personal Development Profile*[®] Phrase Version

Research Report

The *Personal Development Profile*[®] Research Report
Item Number: **O-388**

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The ***Personal Development Profile® Phrase Version***

Research Summary

A *Personal Development Profile® Phrase Version* has been developed based on new research. It offers an option for adults and older teens who would prefer to respond to phrases rather than words, and who prefer a DiSC® instrument with a lower reading level. It provides traditional interpretations of the DiSC Dimensions of Behavior and Classical Profile Patterns.

Development was based on responses from a sample of 928 people who represent ethnic as well as educational and occupational diversity. New scales are highly reliable, and scores approximate a normal distribution. The relation of scores within the *Personal Development Profile Phrase Version* and between it and the *DiSC Classic* indicates this new measure is a valid representation of DiSC theory, as well as an important addition to the family of DiSC instruments which includes *DiSC Classic*.

Theoretical Background

The *Personal Development Profile Phrase Version* is based on the existing *Personal Development Profile* and the *DiSC Classic* published by Inscape Publishing. This family of instruments identifies four ways in which a person interacts with the environment, based on how he or she perceives it.

A person sees the environment as either favorable or unfavorable, and him or herself as either more or less powerful than the environment. Each combination of the four perceptions explains a Dimension of Behavior labeled Dominance (D), influence (i), Steadiness (S), and Conscientiousness (C) or DiSC Dimensions of Behavior. The model is related theoretically and empirically to other models of interpersonal behavior that have been supported by psychological research in recent years.

(See Inscape Publishing's Research Reports:
No. O-255 *DiSC Classic* for an overview of the origin, development, and statistical basis of *DiSC Classic*, and No. O-232 *DiSC Classic as a Measure of Personality* for a review of literature.)

The *Personal Development Profile® Phrase Version* is designed to offer an alternative version of the *DiSC® Classic* and the *Personal Development Profile* to people who may prefer responding to phrases than to words, and who may prefer a lower reading level. Investigation into a DiSC instrument using phrases rather than single words began with research for the profile called *I-Sight®* that was created specifically for young people ages 12-18. However, the *Personal Development Profile Phrase Version* contains more phrases and interpretive information, and it is normed on an adult sample of the U.S. population.

The *Personal Development Profile Phrase Version* contains an entirely new response page, which was developed based on Inscape Publishing's most recent understanding of the constructs measured.

Item Development

Item development proceeded in two phases. During the first phase, new items were prepared using subject-matter experts and the most up-to-date information about DiSC® theory and measurement.

Knowledge of each contributor's own DiSC profile ensured that a personal, as well professional understanding of each scale was represented. Phrases and interpretive material were scored for reading level, with the goal of ensuring the entire instrument would be at or about a sixth grade reading level, and therefore, would be accessible to a wide variety of respondents.

This draft or *alpha*-test version was administered to 333 adults in a national sample, and a detailed item analysis was conducted of their responses. This stage of analysis allowed developers to identify new phrases that effectively measured each scale.

During the second phase of item development, steps were taken to ensure the response form for the *Personal Development Profile Phrase Version* measured the same domain of information as measured in *DiSC Classic*. Items were matched for meaning to identify parallel words and phrases. Since respondents are expected to choose one most descriptive and one least descriptive word from each set of four, the assignment of words to sets or boxes must meet two criteria: each box must contain cues (words or phrases) from each of the four scales D, i, S, and C; and cues must be independent or bear little relation to each other.

The first criterion was achieved by inserting a D, i, S, and C item in each box. The second criterion was achieved by examining item inter-correlations within each box. Correlations among items assigned to the same box fell in the range of $r_{xy} = -.28$ to $.23$, based on responses obtained during the *alpha*-test phase of development.

Results of Analysis

The following sections describe research and findings obtained during the second development phase. They offer statistical information on the internal consistency reliability of measurement scales, and explain how the validity of the instrument in relation to the DiSC® model was confirmed. Details of the research sample population are in Table 1.

Table 1. Demographic Characteristics of Beta Test Respondents (N=928)

Characteristic	Number	Percent	Characteristic	Number	Percent
<u>Gender:</u>					
Male	282	31%	under 18	11	1%
Female	632	69	18-25	292	32
<u>Age:</u>					
			26-35	257	28
			36-45	226	25
			46-55	100	11
			56 or older	36	4
<u>Education:</u>					
Up to high school grad	152	17%	African-American	98	11%
High school graduate	102	11	Asian-American	13	1
Some college	238	26	Caucasian	596	65
Technical/trade school	58	6	Hispanic	101	11
College graduate	231	26	Native American	19	2
Graduate/professional degree	122	14	Other	91	10
<u>Employment:</u>					
Secretarial/clerical	56	6%	Manufacturing	64	7%
Executive	20	2	Finance/ins./real estate	81	9
Mid-level management	77	8	Public administration	32	4
Supervisory	27	3	Wholesale/retail trade	77	9
Professional	128	14	Business services	157	18
Mechanical/technical	31	3	Educational services	87	10
Skilled trades	13	1	Health services	87	10
Warehouse/gen'l labor	13	1	Transportation/utilities	30	3
Assembly worker	4	<1	Other	260	30
Customer service	95	10			
Sales	52	6			
Health care worker	40	4			
Teacher/educator	101	11			
Custodial/housekeeping	11	1			
Work at home	33	4			
Other	210	23			
<u>Industrial classification:</u>					

Note: Any variation of column totals from N=928 is the direct result of missing data.

Scale Reliability

The following internal-consistency reliabilities (Cronbach's *alpha* coefficient) represent the average correlation between all pairs of items on each scale. As such, they indicate the extent to which items on a scale measure the same thing. A coefficient of .70 is considered acceptable for a self-report measure.

Scale D (Dominance): $r_{yy} = .85$

Scale i (influence): $r_{yy} = .88$

Scale S (Steadiness): $r_{yy} = .80$

Scale C (Conscientiousness): $r_{yy} = .86$

Note: No adjustments for scale length have been made to these coefficients.

It is important to note that in the *Personal Development Profile® Phrase Version* all phrases are scored. There are no “Ns” for partially scored items in this instrument. One of the reasons the reliabilities are as high as they are is that all 28 items on each scale contribute to its score.

Validity of the Instrument

One way to examine the validity of an instrument is to observe whether the pattern of inter-correlations between scales is what the underlying theory would predict. Scale inter-correlations for the *Personal Development Profile Phrase Version* are shown in Table 2 along with the scale reliabilities for comparison.

Table 2. Reliabilities and Inter-Correlations of DiSC® Scales in the Personal Development Profile® Phrase Version

	D	I	S	C
D	.85			
I	-.05	.88		
S	-.75	-.16	.80	
C	-.18	-.78	.15	.86

Note: Scale reliabilities are shown in bold along the diagonal.

Based on DiSC® theory, one expects to see negative relationships between scales that are opposite on the dimensions measured. The D (Dominant) scale reflects an individual's perception that an environment is unfavorable and he or she is more powerful than that environment. The S (Steadiness) scale reflects a perception that an environment is favorable and the respondent is less powerful than that environment. They are opposite on both axes of the DiSC model—environmental favorableness and personal power in relation to it (i.e., Locus of Control).

Likewise the i (Influence) and C (Conscientiousness) measures are opposite in theory. The i scale reflects an individual's perception that an environment is favorable and he or she is more powerful than that environment. And, the C scale reflects a perception that an environment is unfavorable and she or he is less powerful than that environment.

Negative inter-scale correlations of $r_{xy} = -.75$ for D and S and $r_{xy} = -.78$ for i and C reflect theoretical assumptions of the model along with the forced-choice response format. It is important that they are smaller in absolute value than scale reliabilities (i.e., the correlation of items within a scale), in order to justify the use of four separate scales. A comparison of inter-scale correlations with the internal reliabilities shown in Table 2 verifies that they are.

Remaining scale inter-correlations are low (i.e., close to zero), indicating that except for the theoretically opposite scales, there is little relationship between them. This finding is particularly important when two scales that measure the same environmental perception are compared—D and C on the one hand and i and S on the other—and when two scales that measure the same Locus of Control are compared—D and i on the one hand and S and C on the other. It is evident that each scale contributes something unique to understanding how one interacts with the world.

Comparison with the *DiSC®* Classic

When two or more instruments are based on the same theory, one expects they will yield similar results. No correlation between them would demonstrate that one or the other is not valid. However it is also important to recognize why two sets of responses are unlikely to agree exactly:

- When the same respondents complete two instruments, some differences between scores are to be expected. Most respondents are unlikely to choose exactly the same responses from one instrument to the next, particularly when there are 112 words or phrases from which to choose.
- Even when an effort is made to create parallel meaning between word and phrase versions of an instrument, subtle differences will exist. If anything, a phrase is more exact than a word and permits fewer variations in interpretation.
- For any respondent who does not know the meaning of a word, the phrase version will probably be more accurate. And differences in accuracy will be reflected in the correlation between instruments.

Table 3. Correspondence of Classical Profile Patterns obtained on the *Personal Development Profile® Phrase Version* and the *DiSC® Classic* (N=311)

	Number	Percent
Exactly matched profiles:	180	60%
Related profiles (one or more high scales the same)	104	35%
Not matched (no high scales the same)	16	5%

The absence of a match in five percent of the comparisons is to be expected. Considering there are several factors that can produce dissimilarities, as described previously, these results are positive.

Distribution of Scores

Because the response page of the *Personal Development Profile® Phrase Version* has been completely redeveloped for this version, it is important to examine the distribution of scores produced by the research sample and determine whether new norms or plotting graphs are in order.

A sufficient amount of difference is noted between existing graphs in the *DiSC® Classic* and the distribution of scores on the new *Personal Development Profile Phrase Version* to justify the use of new graphs. Results for the sample of 928 indicate that scores on the *Personal Development Profile Phrase Version* are fairly “normally” distributed—that is, they tend to fall under a bell-shaped curve. All median scores for scales D, i, S, and C fall within segments 3, 4, or 5.

The most significant change in score distribution occurs on Scale C (Conscientiousness). The phrases developed for the *Personal Development Profile Phrase Version* clearly separate this scale from Scale S (Steadiness); and the distribution approximates a normal curve.

The comparison between patterns obtained on the *Personal Development Profile Phrase Version* and those obtained on the *DiSC Classic* indicates that despite a change in score distribution, results obtained from each version are generally similar.

Reading Level

Overall reading level of the *Personal Development Profile Phrase Version* is grade 6.2 as measured by the Flesch-Kincaid Grade Level Scale. The instrument therefore approximates the reading level of popular newspapers and magazines.

Summary

A new member of the family of DiSC® instruments has been introduced called the *Personal Development Profile® Phrase Version*. It offers an option for adults and older teens who would prefer to respond to phrases rather than words, and who prefer a lower reading level instrument. It provides interpretations of Classical Profile Patterns.

Development was based on responses from a sample of 928 persons who represent ethnic as well as educational and occupational diversity. Scales are highly reliable, and scores tend to be normally distributed. The pattern of scale inter-correlations mirrors the polarity of the DiSC model while demonstrating that sufficient unique variance can be attributed to each of the four scales to justify the use of all of them.

The degree of similarity between profiles obtained from the *Personal Development Profile Phrase Version* and *DiSC Classic* indicates that the *Personal Development Profile Phrase Version* represents the DiSC model as well as other DiSC instruments. While some differences may be observed, they are generally what would be expected for an instrument administered twice.

Improvements in this instrument include a clearer separation between Scales C (Conscientiousness) and S (Steadiness) and the removal of “Ns” from the response scoring protocol.