

RESTRICTED SAMPLE VARIANCE REDUCES GENERALIZABILITY

Online Supplement: Table 5

*Component Definitions for Two-Facet Generalizability Analysis (PRI)*

Persons ( $P$ )	Person $p$ effect (deviation from grand mean, averaged over raters and items)
Raters ( $R$ )	Rater effect for rater $r$ (rater leniency, averaged over persons and items)
Items ( $I$ )	Item effect for item $i$ (deviation from grand mean, averaged over persons and raters)
$PR$	Idiosyncratic perception of person $p$ by rater $r$ (averaged over items)
$PI$	Idiosyncratic perception of person $p$ on item $i$ (averaged over raters)
$RI$	Idiosyncratic leniency of rater $r$ on item $i$ (averaged over persons)
$PRI,e$	Idiosyncratic perception of person $p$ by rater $r$ on item $i$ , confounded with random error

*Note.* Table adapted from Lakes and Hoyt (2009). Components contributing to each score  $X_{pri}$ , representing the rating for person  $p$  by rater  $r$  on item  $i$  of the RCS. In this table, components are defined as *effects*—deviations from the grand mean for all persons, raters, and items. In GT, we will be interested in the *variance* of each component, which provides information about the importance of the corresponding effect in determining observed variance in ratings. For the RCS, when all items and raters are crossed with participants (i.e., all participants are rated using the same items, and all raters rate all participants), these components do not contribute to variance. For a thorough explanation of these variance components and the computation of  $g$  coefficients, we refer readers to Lakes and Hoyt (2009).

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Online Supplement: Table 6

*Expected Variance Components for Different D Study Designs: Cognitive Subscale With Six Items in a K-1 Sample*

	$n'_r = 1$		$n'_r = 3$		$n'_r = 5$		$n'_r = 8$		$n'_r = 10$	
Var	Var	%	Var	%	Var	%	Var	%	Var	%
Src	Est	Var	Est	Var	Est	Var	Est	Var	Est	Var
<i>P</i>	0.29	41	0.29	67	0.29	76	0.29	83	0.29	85
<i>R</i>	0.10	14	0.03	8	0.02	5	0.01	4	0.01	3
<i>I</i>	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
<i>PR</i>	0.22	30	0.07	16	0.04	11	0.03	8	0.02	6
<i>PI</i>	0.01	1	0.01	2	0.01	2	0.01	3	0.01	3
<i>RI</i>	0.01	1	0.00	0	0.00	0	0.00	0	0.00	0
<i>PRI, e</i>	0.09	12	0.03	7	0.02	4	0.01	3	0.01	2

*Note.*  $n'_r$  = number of raters. Var Src = Source of variance. Var est = Variance estimate. % Var = Percentage of total variance. *P* = Person. *R* = Rater. *I* = Item. Expected g coefficient estimates for these designs are shown in Table 4.