A Comparison of Task-Specific and Dimension-Specific Assessment Centres

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The real voyage of discovery consists not in seeking new landscapes, but in having new eyes
-Marcel Proust

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ii) The research practice and ethical policies approved by Massey University have been complied with.

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This is also to certify that the thesis material has not been used for any other degree.

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Stephen G. Atkins
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Date: 23 Sept 2003

This work is dedicated to my late grandfather, Mr. Ernest F. M. Wilson, who passed from this world at 6am on Sunday the 9th of February 2003. You were such a great and noble man, and your kindness, knowledge, wisdom, and humour will be so dearly missed. I wish I could have shared the contents of my dissertation with you, as I know you would have been keenly interested. You were one of the few people, in my younger years, who tempted me into the realisation that learning could be enjoyable. You shared your extensive knowledge of astronomy with me, and stirred a fascination, which remains today. Just prior to your passing, you said to me in your profound way; "You're my best friend". You are also my best friend, my dear grandfather. May you rest well, until we meet again.

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Abstract

Three studies were employed to further an understanding of a measurement quandary concerning assessment centres (ACs). A common theme associated with ACs is that they do not appear to measure the trait-based variables that they purport to. To compound this mystery, ACs are found to be predictive of outcome criteria; particularly criteria related to promotion. All three studies took varying perspectives on this measurement dilemma. The first study looked at particular traits that were not formally assessed in ACs, and whether these traits explained variance in overall AC ratings. No definitive evidence was found for this notion; however, tacit knowledge appeared to be associated with a small amount of variance in overall AC ratings in one of the samples under scrutiny. The second study looked at the extent to which assessors and candidates understood the models they were assessing and were being assessed under. Neither party appeared to distinguish trait-based, task-based, or other models as being more or less appropriate. While the first and second studies acknowledged some peripheral issues in the AC literature, the third study addressed the fundamental research question. Specifically, the third study investigated whether an alternative to the prevailing trait paradigm was needed. This study compared two models of assessment in a repeated measures design. One model treated the AC data as though they comprised situationally specific behavioural samples. The second model treated the data as though they were indicative of trait-based responses. Using a generalizablity study, both models demonstrated similar psychometric characteristics, although only data treated under the situationally specific model held a conceptual justification. These findings suggest that the situationally specific task-based model presents a more appropriate means by which to treat AC ratings.

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Principal Notational Conventions for Generalizability Studies

p	The main effect for persons, the object of measurement in G studies.
x	The main effect for assessment centre exercises. This and any other source of variance in a G study, except for the object of measurement, is termed a *facet*.
d	The main effect for dimensions, traits, or competencies. These constructs are assumed to have a quality that is relatively stable and enduring across assessment exercises. This and any other source of variance in a G study, except for the object of measurement, is termed a facet.
px	The interaction term for two (or more) facets in a G study.
pxd,e	The interaction between all the facets in a G study followed by an 'e' indicates the error term for the model. This is the component of variance that is attributable to undifferentiated error.
$i:x$	The presence of a colon (:) indicates that one facet is nested within another. In this case, the facet '*i*' (items) is nested within 'x' (exercises). This occurs in a task-specific assessment centre, because each exercise has its own associated set of items.
σ^2_{Rel}	Relative error term. Used to calculate measurement error associated with all of the components of variance that compare the standing of individuals relative to one another. This term is used in the calculation of the G coefficient.
σ^2_{Abs}	Absolute error term. Used to calculate measurement error associated with all of the components of variance that relate to absolute decisions. That is, decisions that have a cut-off point, or a pass/fail criterion. This term is used in the calculation of the Phi coefficient.
$E\rho^2_{Rel}$	The G coefficient for relative decisions. This is presented on a scale from 0, indicating poor generalizability, to 1, indicating excellent generalizability.
ϕ	The Phi coefficient for absolute decisions. This is presented on a scale from 0, indicating poor generalizability, to 1, indicating excellent generalizability.