Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.
A CRITERION VALIDATION OF THE NEW ZEALAND ARMY
OFFICER SELECTION BOARD

A thesis presented in partial fulfilment of the requirements for the degree of
Master of Science in Psychology at Massey University,
Palmerston North, New Zealand.

Kathryn Benjamin

2006
Abstract

The purpose of this research was to assess the incremental validity of selection measures employed on the New Zealand Army Officer Selection Board (OSB) over and above measures of cognitive ability. The study assessed whether the use of measures of personality, cognitive ability, peer assessment ratings, and observer competency gradings, could predict future training performance and job performance. Criterion measures of training and job performance included Officer Cadet School (OCS) performance results, supervisor ratings, and annual reporting documents. The sample population consisted of 72 New Zealand Army officers. Of these participants 15 were female and 57 were male. The average age of the participants was 27.5 years. It was hypothesised that individual elements of the assessment centre (observer ratings, psychologist ratings, and peer assessment ratings) would provide incremental validity over cognitive ability testing. It was also hypothesised that elements of the Eysenck Personality Questionnaire (EPQ-R) and the Gordon Personal Profile Inventory (GPP-I) would be positively correlated with measures of training performance and job performance. Lastly, it was hypothesised that increased time since commissioning would be positively correlated with higher job performance. The results demonstrate that no linear combination of predictors was able to predict future training performance or job performance. Only the last hypothesis was supported and the results are discussed in light of methodological shortcomings.
Acknowledgements

I would like to acknowledge the invaluable assistance of the following people in producing this thesis:

My Supervisor, Dr Fiona Alpass for her knowledge, support, and unfaltering calm in the face of research hurdles. I would like to acknowledge the assistance provided in data collection and statistical analysis. Thank you for your time, effort and honest advice.

My Co-Supervisor, Major Helen Horn (Senior Psychologist Army) for her help and support in gaining access to resources, her commitment to completing this research, and her never-ending optimism and patience.

Lieutenant Colonel Paul King (Commandant of the Officer Cadet School) and his staff, for their willingness and assistance in gaining access to records and information.

Nicole Frost, for your patience and honesty whilst proof-reading my work.

My friend Carolyn Freeman, who motivated, empathised and laughed along with me on our journey to thesis completion.

Finally, I would like to thank the employees of the New Zealand Army who participated in this research. Your involvement is greatly appreciated.
## Contents

Abstract.................................................................................................................. i
Acknowledgements.................................................................................................. ii
Contents..................................................................................................................... iii
List of Figures and Tables.......................................................................................... vi
List of Figures and Tables.......................................................................................... vii
Glossary of Abbreviations......................................................................................... viii

### Chapter 1  Introduction .................................................................................. 1
  1.1 Overview of the Issues..................................................................................... 1
  1.2 Literature Review............................................................................................ 2
  1.2.1 Conceptual Analysis of Validity................................................................. 9
  1.2.2 The Assessment Centre............................................................................. 15
    Assessment Centre Validity
    Problems in the Assessment Centre
    Competency Based Frameworks
    Job Relevant Simulations
    The Interview
    Measures of Cognitive Ability
    Personality Questionnaires
  1.2.3 The New Zealand Officer Selection Board................................................. 28
    Past Validation
    Pre-Selection Process
    Current Selection Process
    Key Functional Groups
    Assessment Criteria and Techniques
    Physical Testing
  1.3 The Present Research.................................................................................... 38
  1.4 Hypotheses.................................................................................................... 38

### Chapter 2  Design .................................................................................... 41
  2.1 Sample........................................................................................................... 41
  2.2 Predictor Measures......................................................................................... 42
    2.2.1 Psychometric Tests.................................................................................. 42
      Cognitive Ability Testing
      ACER B90
      Raven’s APM
      Personality Testing
      GPPI
      EPQ-R
Appendices

1. NZ Army OSB Competencies .................................................. 101
2. New Zealand Army Officer Selection Recruitment Process ........ 102
3. Behavioural Specific Exercises .............................................. 103
4. MD68 Assessment Criteria .................................................... 104
5. Supervisor Rating Sheet and Rating Information ...................... 105
6. Approval to conduct research within NZDF ............................. 109
7. Massey University Ethics Approval ......................................... 110
8. Participant Information and Consent Form ............................... 111
9. Letter to participants from Deputy Chief of Army ..................... 117
10. Supervisor Information and Consent Form .............................. 118

Statistical Appendices

1. Bivariate Correlation Table for Individual MTO Ratings and
   Supervisor Composite OAR Elements .................................... 123
2. Bivariate Correlation Table for Time Since Commissioning ....... 125
List of Figures

Figures... ...........................................

Figure 1. Flowchart of the Officer Training Process... ........................................... 4
Figure 2. Nomological framework proposed by Nunnally (1978)... .................. 9
Figure 3. Conceptual Framework for personnel selection proposed by Binning and Barrett (1989)................................. 10
Figure 4. Conceptualisation of the Performance domain. Adopted from Binning and Barrett (1989)................................. 11
Figure 5. Idiographic Framework for Selection proposed by Binning and Barrett (1989)................................. 14
# List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Responsibilities of Senior Board Members taken from the OSB Folder</td>
<td>33</td>
</tr>
<tr>
<td>2</td>
<td>Responsibilities of Syndicate Board Members taken from the OSB folder</td>
<td>34</td>
</tr>
<tr>
<td>3</td>
<td>Summary of Quantitative Information</td>
<td>53</td>
</tr>
<tr>
<td>4</td>
<td>Demographic Comparison Figures Between New Zealand Army Regular Force Officers and the Sample</td>
<td>61</td>
</tr>
<tr>
<td>5</td>
<td>One-Way Analysis of Variance in ACER B90 Score and Age By Group</td>
<td>63</td>
</tr>
<tr>
<td>6</td>
<td>Ethnic Breakdown of the Sample by Gender</td>
<td>63</td>
</tr>
<tr>
<td>7</td>
<td>McNemar's Formula Corrections for ACER B90 Range Restriction on Main Variables</td>
<td>66</td>
</tr>
<tr>
<td>8</td>
<td>Formula Corrections for Criterion Unreliability on Main Variables</td>
<td>68</td>
</tr>
<tr>
<td>9</td>
<td>Means, Standard Deviations and Case Numbers for Main Variables</td>
<td>69</td>
</tr>
<tr>
<td>10</td>
<td>Intercorrelations Between Main Variables for Sample</td>
<td>70</td>
</tr>
<tr>
<td>11</td>
<td>Intercorrelations Between Subscales of the EPQ-R and GPP-I for Training Performance and Job Performance</td>
<td>72</td>
</tr>
<tr>
<td>12</td>
<td>Intercorrelations Between Individual MTO Ratings and Supervisor Composite OAR Elements</td>
<td>123</td>
</tr>
<tr>
<td>13</td>
<td>Intercorrelations for Time Since Commissioning with MD68 Elements and Supervisor Composite OAR Elements</td>
<td>125</td>
</tr>
</tbody>
</table>
Glossary of Abbreviations

AC  Assessment Centre
ADFA  Australian Defence Force Academy
AIB  Admiralty Interview Board
APS  Army Psychology Service
B90  ACER Advanced Test B90
BARS  Behavioural Anchored Rating Scales
BP  Board President
CSSB  British Civil Service Selection Board
DBP  Deputy Board President
DCA  Deputy Chief of Army
DV  Dependant Variable
EFL  Entry Fitness Level
EPOQ-R  Eysenck Personality Questionnaire Revised
FOR  Frame of Reference
FOSB  Final Officer Selection Board (Navy)
GMA  General Mental Ability
GPP-I  Gordon Personality Profile Inventory
IOT  Initial Officer Training
IV  Independent Variable
KASO’s  Knowledge, Abilities, Skills, Other attributes
LO  Liaison Officer
MS  Military Secretary
MTO  Military Testing Officer
NCO  Non-Commissioned Officer
NZCC  New Zealand Commissioning Course
OAR  Overall Assessment Rating
OCS (NZ)  Officer Cadet School
OIC  Officer In Charge
OSB  Officer Selection Board
RATEL  Radio Telephone Procedure
Raven’s APM  Raven’s Advanced Progressive Matrices
RCB  Regular Commissions Board
RFL  Required Fitness Level
RMAS  Royal Military Academy Sandhurst
RMAS YO  Royal Military Academy Sandhurst Young Officer
RNZAF  Royal New Zealand Air Force
RNZN  Royal New Zealand Navy
TCS  Training Criterion Score
TEWT  Tactical Exercise Without Troops
TFMS  Territorial Force Military Secretary
TTCP  The Technical Cooperation Program
WOSB  War Office Selection Board
YO  Young Officer