An investigation of the English language proficiency and academic and clinical performance of University of Adelaide Medical School undergraduates.

Anna Chur-Hansen

Department of Psychiatry
Faculty of Medicine
Division of Health Sciences
University of Adelaide
South Australia

Thesis submitted in fulfilment of the requirements for the Degree of Doctor of Philosophy.

Date submitted: July, 1998.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Appendices</td>
<td>ix</td>
</tr>
<tr>
<td>Abstract</td>
<td>xii</td>
</tr>
<tr>
<td>Author's Statement</td>
<td>xiii</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>xiv</td>
</tr>
</tbody>
</table>

**Chapter I. The University of Adelaide School of Medicine.**

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Outline of Chapter I.</td>
<td>1</td>
</tr>
<tr>
<td>II. The University of Adelaide Medical School Student Population.</td>
<td>1</td>
</tr>
<tr>
<td>III. The University of Adelaide Medicine Curriculum</td>
<td>4</td>
</tr>
<tr>
<td>IV. The Malaysian Australian Tertiary Education Scheme (MATES).</td>
<td>7</td>
</tr>
<tr>
<td>V. The Language Development Programme.</td>
<td>10</td>
</tr>
<tr>
<td>VI. The Supplementary Programme.</td>
<td>19</td>
</tr>
</tbody>
</table>

**Chapter II. Review of the literature.**

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outline of Chapter II.</td>
<td>25</td>
</tr>
<tr>
<td>II. Language proficiency, medical training and the doctor-patient</td>
<td>26</td>
</tr>
<tr>
<td>relationship.</td>
<td></td>
</tr>
<tr>
<td>(i) Register</td>
<td>45</td>
</tr>
<tr>
<td>(ii) Colloquial language</td>
<td>49</td>
</tr>
<tr>
<td>(iii) Reading and Written language.</td>
<td>54</td>
</tr>
<tr>
<td>(iv) Listening</td>
<td>59</td>
</tr>
<tr>
<td>(v) Speech acts.</td>
<td>60</td>
</tr>
<tr>
<td>(vi) Non-verbal behaviours</td>
<td>61</td>
</tr>
<tr>
<td>(i) Touch</td>
<td>63</td>
</tr>
<tr>
<td>(ii) Eye Contact</td>
<td>64</td>
</tr>
<tr>
<td>(iii) Tone of voice.</td>
<td>65</td>
</tr>
<tr>
<td>(iv) Accent</td>
<td>66</td>
</tr>
</tbody>
</table>
(v) Rate of speech.  
(vi) Physical distance norms.  
(vii) Cue discrepancy.  
(viii) Facial expression.  
(ix) Non-verbal behaviours and patient satisfaction.  

II.III. Language skills distinct from Medical Communication Skills.  

II.IV. Australian research on medical students’ English language proficiency  

II.V. English language proficiency and academic and clinical performance.  
(i) Studies that have originated from Australian medical schools.  
(ii) Studies that have considered English language proficiency and performance in specific subjects.  

II.VI. ‘Standardized Patient’ research.  
(i) Definition of the term “standardized patient”.  
(ii) A history of the use of standardized patients in the United States.  
(iii) The use of standardized patients in Australia.  
(iv) Selection and training of standardized patients.  
(v) Reliability and validity of standardized patient ratings.  
(vi) The use of standardized patients to assess English language proficiency.
Summary. 124
Aims and objectives of this thesis. 125
Subjects. 128

Chapter III: Study I. 140
Testing the 1994 first year student cohort for English language proficiency employing the Screening Test of Adolescent Language (STAL).

Method 140
Procedure 147
Results 148
Discussion 161

Chapter IV: Study II. 168
Testing the 1994 third year student cohort for English language proficiency employing the Screening Test of Adolescent Language (STAL) and the Word Knowledge Test (WKT).

Method 168
Results 171
Discussion 176

Chapter V: Study III. 178
The relationship between language background, English language proficiency and medical communication skills.

Introduction 178
Method 179
Procedure 179
Results 181
Discussion 183
Chapter VI: Study IV.
Clinicians' perceptions of students' language difficulties at the University of Adelaide Medical School.

Introduction 187
Method 190
Results 191
Discussion 194

Chapter VII: Study V.
Language Rating Scale (LRS) Pilot Study.

Introduction 199
Method 206
Subjects and Procedure 208
Results 210
Discussion 234

Chapter VIII: Study VI.
Language Rating Scale (LRS) Study and Written Language Rating Scale (WLRS) Pilot Study.

Introduction 247
Method and Procedure 258
Results 263
Discussion 298
Chapter IX: Study VII.

The predictive validity of language background, English language proficiency and participation in language and subject based interventions with respect to performance in a first year behavioural science course.

Introduction ........................................... 315
Method .................................................... 316
Procedure ................................................. 317
Results ..................................................... 319
Discussion ................................................. 325

Chapter X: Discussion and Conclusions. ....... 336

Appendices. .............................................. 361

References. .............................................. 472
Abstract.

This thesis has two major aims. The first is to investigate the English language proficiency of several cohorts of undergraduate medical students enrolled at the University of Adelaide, South Australia, employing both quantitative data and qualitative measures. The second is to consider the influence of students' English language proficiency upon their academic and clinical performance. For the purpose of this thesis, "English language proficiency" is defined according to the quantitative and qualitative measures with which it has been assessed. "Academic performance", as conceptualised in this thesis, refers to the summative outcome measures of an examination in medical communication skills and performance in a one-year behavioural science course. "Clinical performance" has been taken in this thesis to refer to interactions between students and patients, both "real" and standardized.

The thesis begins with a description of the students who enrol in Medicine at the University of Adelaide Medical School, and two of the teaching interventions that have been implemented by the School in order to assist students experiencing difficulties with the course due to limitations in English language ability.

For the sake of cohesion and clarity a select literature review follows, based primarily upon writings from the field of medical education as opposed to the body of work in language teaching and learning. The latter has been largely omitted because the discipline employs its own terminology and philosophy, which is outside the author's area of knowledge and expertise.

The literature review commences with a consideration of the importance of language proficiency in medical training and practice, with a distinction made between the terms "language" and "communication". A discussion of the limited research that has been conducted regarding the English language proficiency of Australian medical students follows, including the predictive validity of language in the areas of academic and clinical performance.

A comprehensive review of the use of standardized patients to assess clinical skills is presented, with particular focus upon their employment in an Australian context and issues of reliability and validity. The literature review concludes with a discussion of United States research which has explored the use of standardized patients to evaluate the spoken English language proficiency of Foreign Medical Graduates in that country.

Following the literature review seven studies are presented which deal with one or both of the major aims of the thesis. Each study comprises one chapter, and takes the format of a scientific journal article, with its own introduction, method, results, discussion and conclusion sections.

The thesis ends with a general conclusion concerning the main findings gleaned from the seven studies conducted and puts forward recommendations for future teaching and learning strategies and research opportunities in the medical education arena.