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The impact of an extended stay outdoor education school program upon adolescent participants

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THE IMPACT OF AN EXTENDED STAY OUTDOOR EDUCATION
SCHOOL PROGRAM UPON ADOLESCENT PARTICIPANTS

A thesis submitted in fulfilment of the requirements for the award of the degree of

DOCTOR OF PHILOSOPHY

from

THE UNIVERSITY OF WOLLONGONG

by

TONIA L. GRAY

B Ed (Wollongong)
MA (Northern Colorado)

Faculty of Education
1997
DECLARATION

I certify that the substance of this thesis has not already been submitted for any degree and is not being submitted for any degree.

I certify that any help received in preparing this thesis, and all the sources used, have been acknowledged.

Signed

Date 24.12.97.

TONIA L. GRAY
ACKNOWLEDGMENTS

Behind every PhD candidate, there are many unsung heroes. I am referring to my parents, Jeanette and Brian Gray, and my family and friends whose unflagging efforts have helped keep the thesis 'afloat' in tumultuous times. The many times when you begin to question the value of a higher degree as opposed to sanity! Quite honestly, these people are in a round about way, part-owners of this thesis. Their abilities to inadvertently regain equilibrium and balance back into your life whether it be with childcare assistance, a sounding-board for your frustrations or just simply being a calming influence as you go through the higher degree roller coaster ride - to you all, I am eternally grateful and forever indebted.

This study would not have been possible without the assistance of various people and organisations. Firstly, I wish to thank the staff, students and parents at both Timbertop (Geelong Grammar School) and Glengarry (The Scots College) for participating in different aspects of the thesis, whether that be within the preliminary stages or the actual experimental group. Collectively, their patience, honesty, and tolerance whilst I obtained the data, was nothing short of outstanding.

It would be remiss of me not to thank my supervisors. Firstly, the late Professor Russell Linke, for his input during the initial stages of this thesis deserves special mention. He invested a great deal of expertise and guidance into the genesis of the instruments used during the quantitative component of this study. Secondly, Associate Professor Barry Harper for his invaluable support and guidance during the final stages of this thesis. Finally, a special thanks must be extended to Associate Professor John Patterson, Dr Ken Russell and Ms Anne Porter for their statistical wizardry.

In the latter stages of the thesis, I was extremely fortunate to connect with Mike Gass, Simon Priest, Clifford Knapp, Tom Potter, Scott Wurdinger and Aleta Meyer. In various ways, they
have all offered enriching comments and advice which have undoubtedly strengthened the final product.

On the word processing and graphics front, I quite often underwent my own "wilderness experience". The expertise of Kerry Stokes and Mieke Scheeringa was a godsend. They have all collectively contributed in their own unique way to the final product - and it would be criminal if I did not give you credit for your assistance in this regard.

Funnily enough, this thesis would be in a different area had it not been for two very special males who were instrumental in my career development. To Des Ryan and Chris Topp, my sincere thanks for being such wonderful mentors in the field of Outdoor Education. When I first became interested in teaching outdoor education in the early 1980's, these two people not only trusted that a "female" could lead students in the bush, but they unselfishly shared their expertise, support and encouragement whilst I was a mere novice. Des and Chris - I love you both!

Lastly, and most importantly - my daughter, Mikhaela. At times I have been racked by guilt especially when I have had to say "mum is busy working on the computer...I'll play or draw or colour or read with you later". Well now my PhD journey is over, let's play and enjoy some quality time together!
This study is an outgrowth of my strong belief in outdoor education as an adjunct to contemporary educational methods. I became aware of the inherent power of this pedagogical medium over ten years ago whilst teaching in a secondary school. Quite clearly from this point forward, I was enamoured by this teaching paradigm.

The personal and social development of students in my classes, whether they be in the secondary or tertiary setting, have all provided ongoing testimony as to the pedagogical value of this field. For this reason, I have set about the rather arduous task of attempting to prove the educational efficacy of outdoor education.

At this juncture, one of my fondest wishes would be that this thesis becomes tattered and torn in the field. I am cognizant of the fact that there is a large pool of research which is commonly referred to as too "esoteric and academic". Such pieces of work remain on bookshelves collecting dust and can only be labelled ephemeral and obsolete.

My undying wish is for theory and practice to work synergistically in the outdoor education paradigm. As both a theorist and practitioner in this field, I have endeavoured to steer away from contributing to an ever-increasing pool of research which is viewed as irrelevant or too academic. For this reason, I sincerely hope that this piece of research enriches the field of outdoor education.
ABSTRACT

Although recently outdoor education has become an important component of the school curricula in Australia, extended programs in residential settings are still comparatively rare. Where such programs have been in existence, their raison d'être is underpinned by anecdotal evidence rather than systematic evaluation or empirically established statements of effectiveness (Gray, Patterson and Linke, 1993a).

This research is a longitudinal study examining the impact of an Extended Stay Outdoor Education School Program (ESOESP) upon adolescent participants. Primarily the study analyses program impact, both immediate and residual, upon the perceived changes in identified variables of participants. Data was gathered and analysed using both quantitative and qualitative methodologies. Many researchers are of the belief that the two methodologies compliment one another and thereby strengthen the total evaluation model (for example Hanna, 1992a; Henderson, 1993; Klint and Priest, 1988).

A unique Australian school (Timbertop) was used as the basis of a case study in the research. Timbertop is Geelong Grammar School's outdoor education campus where an ESOESP lasting for a full academic year is conducted. This residential program is co-educational catering for both females and males in Year 9. The subjects (n=409) came from two consecutive school populations, viz the 1993 cohort (n=201) and the 1994 cohort (n=208).

Three quantitative instruments, the Real Me Questionnaire (RMQ), the School Life Questionnaire (SLQ) and the Parent Questionnaire (PQ) were designed specifically for this study to assess program effectiveness. Moreover, the instrumentation evaluated perceived changes in participants' attitudes, values and behaviours during and after exposure to an ESOESP along with differential gender outcomes. Using a quasi-experimental design, students were administered pre-tests and tracked at regular intervals for up to two academic
years using the RMQ and SLQ in order to ascertain self-perceived changes in selected variables.

The instruments contained subscales (also referred to as dependent variables) related to selected variables which were identified on the basis of the literature review, as being relevant outcomes associated with ESOESP's. The RMQ contained six subscales: 1) social responsibility, 2) personal relations, 3) health and physical aptitude, 4) environmental sensitivity, 5) autonomy and 6) academic and cultural achievement. The SLQ contained four subscales: 1) school spirit, 2) quality of teaching, 3) interpersonal relationships and 4) appropriateness of curriculum.

In qualitative terms, a randomly selected cohort from each consecutive school year (1993 and 1994) were tracked using techniques such as personal interview, personal observation, time line charts and log book analysis. Input from teachers and parents was also sought in an attempt to consolidate the self-report data. The teacher interviews provided anecdotal evidence towards program impact for the cohort of students tracked through personal interview.

The research design was further strengthened both quantitatively and qualitatively, using a Parent Questionnaire (PQ). This was mailed to all parents/guardians of the 1993 cohort roughly nine to ten months following their child’s completion of the ESOESP. Inarguably, triangulation of data from a variety of sources provided a more comprehensive overview of the impact of ESOESP's upon adolescent participants.

In order to ascertain the impact of the ESOESP over an academic year, an A X B X (C X S) two-way repeated measures mixed model analysis of variance (MANOVA) was carried out on the self-report data contained in the RMQ and SLQ, where A represented time, B represented gender and C represented the subjects with time. An extra data point (referred to as follow-up) was included for the 1993 cohort 12-months after their ESOESP departure.
When assessing the residual impact of the ESOESP, four subscales viz: Social Responsibility, Appropriateness of Curriculum, Quality of Teaching and School Spirit, all experienced a significant decline in the mean scores over the follow-up period. The most marked and statistically significant reversion was in the subscales Quality of Teaching and School Spirit. The other six subscales remained relatively constant over the follow-up period.

The qualitative data was collected by a number of methodologies viz: 1) personal interviews; 2) log book analysis and time line charts; 3) personal observations; 4) teachers' perceptions; and 5) parents' perceptions. In the main, all sources of qualitative data strongly endorsed the intrinsic and extrinsic benefits of the ESOESP.

It can therefore be seen, that a pluralistic evaluation model was involved in the assessment of process and impact variables. Similarly, the study utilised a prospective methodology for data collection. The case study approach attempted to assess the immediate and long term impact of an ESOESP and discuss the differences between perceived and real outcomes of the experience. A secondary purpose of the study was to establish rigorous and acceptable methodologies and instrumentation which will enable ongoing and systematic research into this field. Clearly there was a paucity of formal evaluation which attempted to clarify the ongoing aims and objectives and program efficacy within this arena.

Assessing the residual and long-term effects of ESOESP's was no easy task. In many respects the longitudinal nature of the research is representative of a landmark study within the outdoor education paradigm. Invariably, outdoor education is perceived as a fringe or peripheral subject within the school curriculum. Increasingly, these so called "esoteric" subjects are coming under scrutiny by policy and curriculum planners as we head towards the 21st century. Attempts have been made during this study, to devise a workable model which assists in the identification of the educational efficacy and viability of ESOESP's.
Physical fitness of students was assessed by measuring their completion time over a set cross country course designated at the ESOESP. The fitness testing data was analysed descriptively and inferentially using a t-test for paired samples. The PQ data was treated descriptively for every item with means and standard deviations being reported.

As far as the quantitative data is concerned, the results were unequivocal and somewhat ambiguous. The fitness data revealed a significant improvement in aerobic capacity ($p<.001$) for both cohorts. The PQ consistently made reference to similar attributes attained as a result of the intervention. For the most part, these included 1) autonomy and self-reliance; 2) environmental sensitivity; 3) health and physical aptitude; 4) interpersonal relationships; and 5) social responsibility. The PQ also conveyed that the parents were strong advocates of the program. Collectively, the large majority of parents (89.4%) were either satisfied (25.2%) or very satisfied (64.2%) with the experiences provided by Timbertop. A minority of parents (10.6%) were slightly dissatisfied with the ESOESP whilst no parent (0%) indicated a total dissatisfaction with the school.

In most instances there was minimal change within the subscales of the RMQ and SLQ over the ESOESP duration. There were only five subscales that revealed a significant main effect viz: Social Responsibility; Personal Relations; Environmental Sensitivity; Quality of Teaching; and School Spirit. Moreover, all five subscales that were statistically significant experienced a decline in scores.

Only one subscale viz; Academic and Cultural Achievement produced a significant gender difference. Mean scores for males and females became more similar (or androgynous) as a result of the intervention. All other subscales retained their parallelism during the period of intervention. The combined mean scores for the 1993 and 1994 females remained consistently higher than their male counterparts in all subscales except Autonomy throughout the duration of the ESOESP.
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CHAPTER 1  AN INTRODUCTION TO THE STUDY

1.1 Background and Rationale

1.2 Brief History of Outdoor Education
   1.2.1 Historical Context
   1.2.2 Defining Outdoor Education
      1.2.2.1 Outdoor Adventure
      1.2.2.2 The Wilderness Experience
      1.2.2.3 Experiential Education
      1.2.2.4 Outdoor Education
      1.2.2.5 Uniting the four terms

1.3 Background to ESOESP's
   1.3.1 The Emergence of ESOESP's in Schools
   1.3.2 Aims of ESOESP's

1.4 Need for the Study

CHAPTER 2  LITERATURE REVIEW

2.1 Education in the 1990's: The current state of play

2.2 Adolescence
   2.2.1 Characteristics of Adolescents
      2.2.1.1 The Stability of Adolescent Self-Concept
      2.2.1.2 Adolescent Identity Formation
      2.2.1.3 Resiliency in Adolescents
      2.2.1.4 Risk Taking Propensity in Adolescence
   2.2.2 Gender Issues
      2.2.2.1 The Development of Gender Identity
      2.2.2.2 Gender and Adolescence
      2.2.2.3 Outdoor Education and Gender Issues

2.3 Outdoor and Experiential Education
   2.3.1 Benefits of Outdoor and Experiential Education
5.1.2.5 Autonomy 147
5.1.2.6 Academic and Cultural Achievements 149
5.1.2.7 Environmental Sensitivity 151
5.1.2.8 School Spirit 152
5.1.2.9 Quality of Teaching 155
5.1.2.10 Interpersonal Relationships 157
5.1.2.11 Appropriateness of Curriculum 159
5.1.2.12 Summary of the 1993 Cohort's Personal Interviews 162

5.1.3 Log Book Analysis and Time Line Charts 169
5.1.4 Parent Input 177
5.1.4.1 General Comments 177
5.1.4.2 Health and Physical Aptitude 179
5.1.4.3 Personal Relations 180
5.1.4.4 Social Responsibility 181
5.1.4.5 Autonomy 181
5.1.4.6 Academic and Cultural Achievements 182
5.1.4.7 Environmental Sensitivity 183
5.1.4.8 School Spirit 183
5.1.4.9 Quality of Teaching 184
5.1.4.10 Interpersonal Relationships 184
5.1.4.11 Appropriateness of Curriculum 185
5.1.4.12 Parents' Perceptions of the Problems and Limitations 186
5.1.4.13 Parents' Perceptions of the Residual Effects 188
5.1.4.14 Parents' Perceptions of the Gender Differences 189

5.1.5 Teacher Input 190
5.1.5.1 Master of Timbertop's Comments 190
5.1.5.2 Teacher Perceptions 191

CHAPTER 6 PERCEPTIONS OF THE ESOESP: THE 1994 COHORT'S RESULTS AND DISCUSSION 195

6.1 The 1994 Background Information 195
6.1.1 Personal Observations 196
6.1.2 Personal Interviews 197
6.1.2.1 General Comments 198
6.1.2.2 Health and Physical Aptitude 201
6.1.2.3 Personal Relations 203
6.1.2.4 Social Responsibility 205
6.1.2.5 Autonomy 206
6.1.2.6 Academic and Cultural Achievements
6.1.2.7 Environmental Sensitivity
6.1.2.8 School Spirit
6.1.2.9 Quality of Teaching
6.1.2.10 Interpersonal Relationships
6.1.2.11 Appropriateness of Curriculum
6.1.2.12 Summary of the 1994 Cohort's Personal Interviews
6.1.3 Time Line Chart and Log Book Analysis

CHAPTER 7 RMQ, SLQ, PQ AND FITNESS DATA AND DISCUSSION

7.1 Results Over The 12 Month ESOESP Duration
7.1.1 The RMQ Results Over The ESOESP Duration
    7.1.1.1 Social Responsibility
    7.1.1.2 Personal Relations
    7.1.1.3 Academic and Cultural Achievements
    7.1.1.4 Health and Physical Aptitude
    7.1.1.5 Autonomy
    7.1.1.6 Environmental Sensitivity
7.1.2 The SLQ Results Over The ESOESP Duration
    7.1.2.1 Appropriateness of Curriculum
    7.1.2.2 Quality of Teaching
    7.1.2.3 School Spirit
    7.1.2.4 Interpersonal Relationships
7.1.3 Fitness Data
7.1.4 Summary Of ESOESP Impact In Quantitative Terms Over The 12 Month Duration.

7.2 RMQ and SLQ Results Over The 12 Month Follow-Up
7.2.1 Social Responsibility Follow-Up Results
7.2.2 Personal Relations Follow-Up Results
7.2.3 Academic and Cultural Achievements Follow-Up Results
7.2.4 Health and Physical Aptitude Follow-Up Results
7.2.5 Autonomy Follow-Up Results
7.2.6 Environmental Sensitivity Follow-Up Results
7.2.7 Appropriateness of Curriculum Follow-Up Results
7.2.8 Quality of Teaching Follow-Up Results
7.2.9 School Spirit Follow-Up Results
7.2.10 Interpersonal Relationships Follow-Up Results
7.2.11 Summary Of The RMQ and SLQ Results Over The 12 Month Follow-Up

7.3 The Parents' Perceptions
CHAPTER 8 DISCUSSION AND ANALYSIS OF GENERAL ISSUES

8.1 Qualitative Data
   8.1.1 Personal Interviews
   8.1.2 Time Line Charts and Log Book Analysis
   8.1.3 Parent Input
   8.1.4 Teacher Input
   8.1.5 Personal Observation
   8.1.6 Qualitative Gender Differences Over the ESOESP Duration

8.2 Quantitative Data
   8.2.1 Student Data
      8.2.1.1 RMQ and SLQ Results over the ESOESP Duration
      8.2.1.2 Quantitative Gender Differences over the ESOESP Duration
      8.2.1.3 Fitness Data
      8.2.1.4 Residual Impact
      8.2.1.5 Parent Input

8.3 Discussion of Main Points
   8.3.1 Personal and Social Growth
   8.3.2 Shared Experiences and Self-Disclosure
   8.3.3 Appropriateness of Curriculum
   8.3.4 Autonomy
   8.3.5 Nature as a Cathartic Agent
   8.3.6 The Instrumentation

8.4 Towards a Model for Future Research In ESOESP's
   8.4.1 Facilitator or Teacher Influence
   8.4.2 Timing of the intervention
   8.4.3 Physical Elements
   8.4.4 The Setting

CHAPTER 9 RECOMMENDATIONS AND CONCLUSIONS

9.1 Recommendations for Future Research
   9.1.1 Recommendations for Future Research in School Based Outdoor Education Programs
   9.1.2 Recommendations for Timbertop

9.2 Implications For Future Development Of ESOESP'S

9.3 Concluding Comments

REFERENCES
## APPENDICES

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix 1</td>
<td>What I Really Want to Be</td>
<td>336</td>
</tr>
<tr>
<td>Appendix 2</td>
<td>What I Really Am</td>
<td>338</td>
</tr>
<tr>
<td>Appendix 3</td>
<td>Real Me Questionnaire (RMQ)</td>
<td>340</td>
</tr>
<tr>
<td>Appendix 4</td>
<td>School Life Questionnaire (SLQ)</td>
<td>344</td>
</tr>
<tr>
<td>Appendix 5</td>
<td>Parent Questionnaire (PQ) and cover letter</td>
<td>346</td>
</tr>
<tr>
<td>Appendix 6</td>
<td>Interview Questions</td>
<td>349</td>
</tr>
<tr>
<td>Appendix 7</td>
<td>Charting your year at Timbertop</td>
<td>351</td>
</tr>
<tr>
<td>Appendix 8</td>
<td>Timbertop's program</td>
<td>352</td>
</tr>
<tr>
<td>Appendix 9</td>
<td>Interview Questions - One Year Later</td>
<td>358</td>
</tr>
<tr>
<td>Appendix 10</td>
<td>Background Information</td>
<td>359</td>
</tr>
</tbody>
</table>

## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1</td>
<td>Definitions for Adventure Activities</td>
<td>7</td>
</tr>
<tr>
<td>Figure 1.2</td>
<td>The Outdoor Education Tree</td>
<td>14</td>
</tr>
<tr>
<td>Figure 1.3</td>
<td>Outdoor Education: A Conceptual Framework</td>
<td>16</td>
</tr>
<tr>
<td>Figure 1.4</td>
<td>Key Elements of Adventure/Outdoor Education</td>
<td>17</td>
</tr>
<tr>
<td>Figure 1.5</td>
<td>Aims and Objectives of ESOESP's</td>
<td>25</td>
</tr>
<tr>
<td>Figure 2.1</td>
<td>The Multi-Dimensional Nature of Self-Concept</td>
<td>41</td>
</tr>
<tr>
<td>Figure 2.2</td>
<td>Erickson's Eight Stages Across the Lifespan</td>
<td>42</td>
</tr>
<tr>
<td>Figure 2.3</td>
<td>The Personality of a Resilient Child</td>
<td>55</td>
</tr>
<tr>
<td>Figure 2.4</td>
<td>The Adventure Experience Paradigm</td>
<td>57</td>
</tr>
<tr>
<td>Figure 2.5</td>
<td>Allen's Model for Risk-Taking in Outdoor Adventure</td>
<td>58</td>
</tr>
<tr>
<td>Figure 2.6</td>
<td>Thought Frequency as Pie Charts</td>
<td>61</td>
</tr>
<tr>
<td>Figure 2.7</td>
<td>Outdoor Education Research Reporting Outcomes For Males and Females</td>
<td>67</td>
</tr>
<tr>
<td>Figure 2.8</td>
<td>Potential Benefits of Outdoor Adventure Pursuits</td>
<td>72</td>
</tr>
<tr>
<td>Figure 2.9</td>
<td>Research Methods Employed in Experiential Education</td>
<td>79</td>
</tr>
<tr>
<td>Figure 2.10</td>
<td>The Adventure Therapy Process</td>
<td>82</td>
</tr>
<tr>
<td>Figure 2.11</td>
<td>Appropriate Therapeutic Change</td>
<td>84</td>
</tr>
<tr>
<td>Figure 3.1</td>
<td>Model to be followed for the Quantitative and Qualitative Evaluation of ESOESP's</td>
<td>95</td>
</tr>
<tr>
<td>Figure 3.2</td>
<td>Program Impact</td>
<td>96</td>
</tr>
<tr>
<td>Figure 3.3</td>
<td>Outline of the Glengarry Trial Testing Program</td>
<td>102</td>
</tr>
<tr>
<td>Figure 3.4</td>
<td>The Evolution of the Quantitative Instruments</td>
<td>105</td>
</tr>
<tr>
<td>Figure 3.5</td>
<td>Subscales contained in the Real Me Questionnaire (RMQ)</td>
<td>106</td>
</tr>
<tr>
<td>Figure 3.6</td>
<td>Subscales contained in the School Life Questionnaire (SLQ)</td>
<td>107</td>
</tr>
<tr>
<td>Figure 3.7</td>
<td>The Category of Variables</td>
<td>114</td>
</tr>
</tbody>
</table>
**Figure 3.8** Definition of Subscales  
**Figure 4.1** Outline of the 1993 Timbertop Cohort Testing Program  
**Figure 4.2** Outline of the 1994 Timbertop Cohort Testing Program  
**Figure 4.3** 1993 & 1994 Timbertop Testing Schedule  
**Figure 7.1** Summary of the RMQ and SLQ Results Over the ESOESP Duration  
**Figure 8.1** The ESOESP Tree

**LIST OF TABLES**

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 7.1</td>
<td>Summarized Results for the RMQ and SLQ Over the ESOESP Duration</td>
<td>227</td>
</tr>
<tr>
<td>Table 7.2</td>
<td>Time By Gender By Cohort Results</td>
<td>228</td>
</tr>
<tr>
<td>Table 7.3</td>
<td>RMQ Results - Cohort By Time</td>
<td>229</td>
</tr>
<tr>
<td>Table 7.4</td>
<td>RMQ Results - Gender By Time</td>
<td>230</td>
</tr>
<tr>
<td>Table 7.5</td>
<td>Mean Social Responsibility Scores - Cohort By Time</td>
<td>230</td>
</tr>
<tr>
<td>Table 7.6</td>
<td>Mean Social Responsibility Scores - Gender By Time</td>
<td>231</td>
</tr>
<tr>
<td>Table 7.7</td>
<td>Mean Personal Relations Scores - Cohort By Time</td>
<td>232</td>
</tr>
<tr>
<td>Table 7.8</td>
<td>Mean Personal Relations Scores - Gender By Time</td>
<td>232</td>
</tr>
<tr>
<td>Table 7.9</td>
<td>Mean Academic &amp; Cultural Achievement Scores - Cohort By Time</td>
<td>233</td>
</tr>
<tr>
<td>Table 7.10</td>
<td>Mean Academic &amp; Cultural Achievement - Gender By Time</td>
<td>233</td>
</tr>
<tr>
<td>Table 7.11</td>
<td>Mean Health &amp; Physical Aptitude Scores - Cohort By Time</td>
<td>234</td>
</tr>
<tr>
<td>Table 7.12</td>
<td>Mean Health &amp; Physical Aptitude Scores - Gender By Time</td>
<td>235</td>
</tr>
<tr>
<td>Table 7.13</td>
<td>Mean Autonomy Scores - Cohort By Time</td>
<td>235</td>
</tr>
<tr>
<td>Table 7.14</td>
<td>Mean Autonomy Scores - Gender By Time</td>
<td>236</td>
</tr>
<tr>
<td>Table 7.15</td>
<td>Mean Environmental Sensitivity Scores - Cohort By Time</td>
<td>236</td>
</tr>
<tr>
<td>Table 7.16</td>
<td>Mean Environmental Sensitivity Scores - Gender By Time</td>
<td>237</td>
</tr>
<tr>
<td>Table 7.17</td>
<td>SLQ Results - Cohort By Time</td>
<td>238</td>
</tr>
<tr>
<td>Table 7.18</td>
<td>SLQ Results - Gender By Time</td>
<td>239</td>
</tr>
<tr>
<td>Table 7.19</td>
<td>Mean Appropriateness of Curriculum Scores - Cohort By Time</td>
<td>239</td>
</tr>
<tr>
<td>Table 7.20</td>
<td>Mean Appropriateness of Curriculum Scores - Gender By Time</td>
<td>240</td>
</tr>
<tr>
<td>Table 7.21</td>
<td>Mean Quality of Teaching Scores - Cohort By Time</td>
<td>241</td>
</tr>
<tr>
<td>Table 7.22</td>
<td>Mean Quality of Teaching Scores - Gender By Time</td>
<td>241</td>
</tr>
<tr>
<td>Table 7.23</td>
<td>Mean School Spirit Scores - Cohort By Time</td>
<td>242</td>
</tr>
<tr>
<td>Table 7.24</td>
<td>Mean School Spirit Scores - Gender By Time</td>
<td>242</td>
</tr>
<tr>
<td>Table 7.25</td>
<td>Mean Interpersonal Relationships Scores - Cohort By Time</td>
<td>243</td>
</tr>
<tr>
<td>Table 7.26</td>
<td>Mean Interpersonal Relationships Scores - Gender By Time</td>
<td>244</td>
</tr>
<tr>
<td>Table 7.27</td>
<td>1993 Cohort's Run Times</td>
<td>244</td>
</tr>
<tr>
<td>Table 7.28</td>
<td>1994 Cohort's Run Times</td>
<td>244</td>
</tr>
<tr>
<td>Table 7.29</td>
<td>1993 Cohort's RMQ and SLQ Results - Pre, Mid, Post and Follow-up</td>
<td>249</td>
</tr>
<tr>
<td>Table 7.30</td>
<td>Mean Social Responsibility Scores After Follow-up</td>
<td>250</td>
</tr>
<tr>
<td>Table 7.31</td>
<td>Mean Personal Relations Scores After Follow-up</td>
<td>250</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>Table 7.32</td>
<td>Mean Academic &amp; Cultural Scores After Follow-up</td>
<td>251</td>
</tr>
<tr>
<td>Table 7.33</td>
<td>Mean Health &amp; Physical Aptitude After Follow-up</td>
<td>251</td>
</tr>
<tr>
<td>Table 7.34</td>
<td>Mean Autonomy Scores After Follow-up</td>
<td>252</td>
</tr>
<tr>
<td>Table 7.35</td>
<td>Mean Environmental Sensitivity Scores After Follow-up</td>
<td>252</td>
</tr>
<tr>
<td>Table 7.36</td>
<td>Mean Appropriateness of Curriculum Scores After Follow-up</td>
<td>253</td>
</tr>
<tr>
<td>Table 7.37</td>
<td>Mean Quality of Teaching Scores After Follow-up</td>
<td>253</td>
</tr>
<tr>
<td>Table 7.38</td>
<td>Mean School Spirit Scores After Follow-up</td>
<td>254</td>
</tr>
<tr>
<td>Table 7.39</td>
<td>Mean Interpersonal Relationship Scores After Follow-up</td>
<td>254</td>
</tr>
<tr>
<td>Table 7.40</td>
<td>Changes In Students As Perceived By Parents</td>
<td>257</td>
</tr>
<tr>
<td>Table 7.41</td>
<td>Parents' Satisfaction Rating of Timbertop</td>
<td>259</td>
</tr>
</tbody>
</table>