

KINDERGARTENS' LANDSCAPE:
THE EFFECT OF OUTDOOR PLAY SPACE ON
CHILDREN'S PLAY AND PERFORMANCES

WAN AZLINA WAN ISMAIL

FACULTY OF BUILT ENVIRONMENT
UNIVERSITY OF MALAYA
KUALA LUMPUR

2011

KINDERGARTENS' LANDSCAPE:
THE EFFECT OF OUTDOOR PLAY SPACE ON
CHILDREN'S PLAY AND PERFORMANCES

WAN AZLINA WAN ISMAIL

DISSERTATION SUBMITTED IN FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF
SCIENCE (ARCHITECTURE)

FACULTY OF BUILT ENVIRONMENT
UNIVERSITY OF MALAYA
KUALA LUMPUR

2011

UNIVERSITI MALAYA

PERAKUAN KEASLIAN PENULISAN

Nama: WAN AZLINA BINTI WAN ISMAIL (No. K.P/Pasport: 810310-10-6084)

No. Pendaftaran/Matrik: BGB080009

Nama Ijazah: IJAZAH SARJANA SAINS (SENIBINA)

Tajuk Kertas Projek/Laporan Penyelidikan/Disertasi/Tesis ("Hasil Kerja ini"):

KINDERGARTENS' LANDSCAPE: THE EFFECT OF OUTDOOR PLAY SPACE ON CHILDREN'S PLAY AND PERFORMANCES

Bidang Penyelidikan: REKABENTUK PERBANDARAN

Saya dengan sesungguhnya dan sebenarnya mengaku bahawa:

- (1) Saya adalah satu-satunya pengarang/penulis Hasil Kerja ini;
- (2) Hasil Kerja ini adalah asli;
- (3) Apa-apa penggunaan mana-mana hasil kerja yang mengandungi hakcipta telah dilakukan secara urusan yang wajar dan bagi maksud yang dibenarkan dan apa-apa petikan, ekstrak, rujukan atau pengeluaran semula daripada atau kepada mana-mana hasil kerja yang mengandungi hakcipta telah dinyatakan dengan sejelasnya dan secukupnya dan satu pengiktirafan tajuk hasil kerja tersebut dan pengarang/penulisnya telah dilakukan di dalam Hasil Kerja ini;
- (4) Saya tidak mempunyai apa-apa pengetahuan sebenar atau patut semunasabahnya tahu bahawa penghasilan Hasil Kerja ini melanggar suatu hakcipta hasil kerja yang lain;
- (5) Saya dengan ini menyerahkan kesemua dan tiap-tiap hak yang terkandung di dalam hakcipta Hasil Kerja ini kepada Universiti Malaya ("UM") yang seterusnya mula dari sekarang adalah tuan punya kepada hakcipta di dalam Hasil Kerja ini dan apa-apa pengeluaran semula atau penggunaan dalam apa jua bentuk atau dengan apa juga cara sekalipun adalah dilarang tanpa terlebih dahulu mendapat kebenaran bertulis dari UM;
- (6) Saya sedar sepenuhnya sekiranya dalam masa penghasilan Hasil Kerja ini saya telah melanggar suatu hakcipta hasil kerja yang lain sama ada dengan niat atau sebaliknya, saya boleh dikenakan tindakan undang-undang atau apa-apa tindakan lain sebagaimana yang diputuskan oleh UM.

Tandatangan Calon

Tarikh

MAC 2012

Diperbuat dan sesungguhnya diakui di hadapan,

Tandatangan Saksi

Tarikh

Nama:

Jawatan:

UNIVERSITI MALAYA

ORIGINAL LITERARY WORK DECLARATION

Name of Candidate: WAN AZLINA BINTI WAN ISMAIL(I.C/Passport No: 810310-10-6084)

Registration/Matric No: BGB080009

Name of Degree: MASTER OF SCIENCE (ARCHITECTURE)

Title of Project Paper/Research Report/Dissertation/Thesis ("this Work"):

KINDERGARTENS' LANDSCAPE: THE EFFECT OF OUTDOOR PLAY SPACE
ON CHILDREN'S PLAY AND PERFORMANCES

Field of Study: URBAN DESIGN

I do solemnly and sincerely declare that:

- (1) I am the sole author/writer of this Work;
- (2) This Work is original;
- (3) Any use of any work in which copyright exists was done by way of fair dealing and for permitted purposes and any excerpt or extract from, or reference to or reproduction of any copyright work has been disclosed expressly and sufficiently and the title of the Work and its authorship have been acknowledged in this Work;
- (4) I do not have any actual knowledge nor do I ought reasonably to know that the making of this work constitutes an infringement of any copyright work;
- (5) I hereby assign all and every rights in the copyright to this Work to the University of Malaya ("UM"), who henceforth shall be owner of the copyright in this Work and that any reproduction or use in any form or by any means whatsoever is prohibited without the written consent of UM having been first had and obtained;
- (6) I am fully aware that if in the course of making this Work I have infringed any copyright whether intentionally or otherwise, I may be subject to legal action or any other action as may be determined by UM.

Candidate's Signature

Date MARCH 2012

Subscribed and solemnly declared before,

Witness's Signature

Date

Name:

Designation:

ACKNOWLEDGEMENT

All praise is due to Allah, the Lord of the Worlds. Ultimately, only Allah has given us the strength and courage to proceed with our entire life. His works are truly splendid and wholesome and His knowledge is truly complete with due perfection.

My deepest gratitude goes to my supervisor Sr Dr. Zulkiflee Abdul Samad and Encik Kamarudzaman Mat Rejab for their valuable and close supervision, guidance, comments, encouragement, motivation, inspirations and friendship rendered throughout this study. These special thanks also for Dr. Hazreena Hussein who helps me a lot in conducting the data collections. Not forgetting my former lecturer, Associate Professor Dr. Ismail Said from University Technology of Malaysia for his continuous support and encouragement that direct me to the end of the study. I am also thankful to my dear parents, as well as my family for their continuous moral support. The most special dedication goes to my compassionate husband Nik Fazli bin Sopian and my dearest son Nik Danial Rayyan who really deserves special recognition for the encouragement and support that I truly need.

ABSTRACT

Playing and moving are central in young children's lives. Allowing the children to experience the natural and man-made elements in their school environment would develop their cognitive, physical, and social abilities. This study investigates the impact of playing in outdoor play space on physical skills or motor development of kindergarten children. The outdoor play spaces of four kindergartens' playground were selected to be evaluated in the case study afterwards. The research aim is to identify the landscape features (natural and man-made) in the playground areas that offer challenge in children play. Data of the children performances were elicited using a phenomenological approaches by employed three major strategies include interviews, observation and behaviour mapping as well as children participatory drawing project. The data gathered from two sources: teachers and staffs as well as the kindergarten's children. The data were analysed using descriptive statistics and content analysis. The data advocated that the children performed dynamically during play activities in outdoor play area particularly when they attached to the natural environment. Based on Theory of Affordances applied in this study, the results showed that the effect of outdoor play space on children's play and performances were higher when they experienced the natural and man-made elements directly. The study concluded that the landscape features (natural and man-made) in outdoor environments fostered the physical skill of kindergarten's children and it should be incorporated in the design of a kindergarten.

ABSTRAK

Aplikasi kemahiran motor dalam aktiviti bermain kanak-kanak merupakan unsur yang sangat penting bagi perkembangan hidup mereka. Dengan mengeksplorasi unsur-unsur landskap semula jadi dan buatan dalam persekitaran sekolah mereka akan mengembangkan kemahiran kognitif, fizikal, dan sosial. Oleh itu, kajian ini adalah bertujuan mengkaji kesan daripada aktiviti bermain di ruang permainan luar kawasan sekolah terhadap perkembangan fizikal atau motor kanak-kanak khususnya diperingkat umur 4 hingga 6 tahun. Empat buah sekolah telah dipilih untuk dinilai dalam kajian kes. Tujuan penyelidikan ini adalah untuk mengenalpasti ciri-ciri landskap (semula jadi dan buatan) yang dapat memberi rangsangan terhadap kemahiran motor kanak-kanak sepanjang bermain di persekitaran luar sekolah. Data tentang kemahiran fizikal kanak-kanak telah dinilai berdasarkan pendekatan fenomenologi yang menerapkan tiga strategi utama termasuk temu bual, pemerhatian dan pemetaan tingkah laku serta projek lukisan kanak-kanak. Kaedah ini melibatkan penyertaan kanak-kanak daripada sekolah tersebut sebagai responden. Melalui kaedah ini, data diperoleh daripada dua sumber iaitu hasil daripada hasil temubual bersama guru-guru serta kanak-kanak. Data kemudiannya dianalisa menggunakan statistik deskriptif berasaskan Teori Affordances. Hasil analisa tersebut menunjukkan bahawa kanak-kanak menjadi lebih aktif bermain di persekitaran luar sekolah khususnya apabila terdedah kepada persekitaran semulajadi.

CONTENTS

CHAPTER	TITLE	PAGE
	PREFACE	i
	DECLARATION	ii
	FORM OF SUBMISSION OF THESIS	iii
	ACKNOWLEDGEMENT	v
	ABSTRACT	vi
	CONTENTS	viii
	LIST OF TABLES	xii
	LIST OF FIGURES	xiii
	LIST OF APPENDICES	xvi
CHAPTER 1	INTRODUCTION	
	1.1 Children and Play Space	1
	1.2 Problem Statement	5
	1.3 Research Gap	6
	1.4 Aim and Objectives	8
	1.5 Research questions	9
	1.6 Scope of study	10
	1.7 The organization of thesis	15
CHAPTER 2	LITERATURE REVIEW	
	2.1. Children Performances in Outdoor Environment	18
	2.2. Preschool Children in Early Childhood Stage	19
	2.3. Children and Play	22
	2.3.1. Types of Play	24
	2.3.2. The Impact of Children Physical Performances During Play.	26

2.3.3.	Kindergarten’s Outdoor Play Space.	27
2.3.4.	Children Bonding with Outdoor Play Space.	28
2.4.	Affordances of Phenomenal Landscape for Kindergarten Children.	33
2.4.1.	Theory of Affordances	34
2.4.2.	Types of Affordances	35
2.4.3.	Level of Affordances	35
2.4.4.	Taxonomy of Affordances	36
2.5.	Standard Requirement from Local Authority	40
2.6.	Summary	41
CHAPTER 3 THE RESEARCH METHODOLOGY		
3.1	The Methodology and It Implementations	44
3.1.1	Case Study	44
3.1.2	Observation and Mapping Technique	46
3.1.3	Participant Observation	47
3.1.4	Interviews	48
3.2	Piloting the Method: Tadika Islam Taman Tun Dr. Ismail	49
3.2.1	Tadika Islam TTDI and The Outdoor Play Space	50
3.2.2	The Initial Approach	51
3.2.3	The Difficulties Identified in Conducting The Method	51
3.2.4	The Modification Made to The Methodology and Approach	53
3.3	The Case Study Selection	54

	3.4	Summary	55
CHAPTER 4		CASE STUDIES	
	4.1	Descriptive Summaries Of The Case Studies	58
	4.1.1	Tadika Islam Taman Tun Dr Ismail	58
	4.1.2	Tadika Diyana	59
	4.1.3	Tadika University of Malaya	60
	4.1.4	Tadika Kemas Kenari	61
	4.2	Data Collection	64
		i. Multi source and multi method approach	64
		ii. Variables of children to measure	65
		iii. Measurement Approaches	65
	4.3	Data Analysis	73
	4.3.1	Descriptive Statistics	75
	4.3.2	Content Analysis	75
	4.4	Summary	77
CHAPTER 5		ANALYSIS AND FINDINGS	
	5.1	Overt responses in kindergarten's outdoor play spaces.	79
	5.1.1	Play pattern in the play area	79
		i. Case study 01: Tadika Islam Taman Tun Dr. Ismail, Kuala Lumpur	80
		ii. Case study 02: Tadika Diyana, Kuala Lumpur	87
		iii. Case study 03: Tadika University of Malaya (TadikUM)	93
		iv. Case study 04: Tadika Kemas Kenari, Petaling Jaya.	99

5.1.2	Play activities	106
5.1.3	Dexterity of Children	117
5.2	Affordances of Kindergarten’s Outdoor Play Space	122
5.2.1	Level of Affordances	122
i.	Potential Affordances	123
ii.	Actualized Affordances	124
5.2.2	Taxonomy of Affordances	124
5.2.3	Summary of Children Performances in Outdoor Play Area	127
CHAPTER 6	CONCLUSION	
6.1	The Research Questions, Aim and Objectives	128
6.2	Significant of Research Findings	131
6.3	Prospect Parameters of Design and Planning for Kindergarten’s Outdoor Play Space	133
6.4	Recommendations for Future Research on Outdoor Play Area in Kindergarten Settings	134
	REFERENCES	138
	APPENDIX A	149
	APPENDIX B	168
	APPENDIX C	174
	APPENDIX D	176
	APPENDIX E	179
	APPENDIX F	180
	APPENDIX G	181
	APPENDIX H	198
	APPENDIX I	203
	APPENDIX J	204

LIST OF TABLES

Table 1.1	Appraisal of four studies investigating the impact of outdoor environment on children.
Table 2.1	Functional taxonomy of children's outdoor environment Source: Kytta (2002, 2003) and Heft (1999).
Table 4.1	Summary of case studies.
Table 4.2	Data collection approaches of four study cases.
Table 4.3	Landscape characters appear in drawing.
Table 5.1	Affordances of zones offered in Tadika TTDI.
Table 5.2	Affordances of zones offered in Tadika Diyana.
Table 5.3	Environmental Qualities that support Children's Affordances of Tadika Islam TTDI.
Table 5.4	Environmental Qualities that support Children's Affordances of Tadika Kemas Kenari.
Table 5.5	Children performances in play activities according to approach B.
Table 5.6	The classifications of active activities in kindergartens' children.
Table 5.7	The classifications of passive activities in kindergartens' children.
Table 5.8	Affordances outdoor play space.
Table 6.1	The planning and design prospect parameters.

LIST OF FIGURES

- Figure 1.1 The flow of stage in the research process.
- Figure 3.1 Tadika Islam TTDI and the outdoor play space.
- Figure 4.1 Tadika Islam TTDI's outdoor play area.
- Figure 4.2 Tadika Diyana's outdoor play area.
- Figure 4.3 TadikUM's outdoor play area.
- Figure 4.4 Tadika Kemas Kenari's outdoor play area.
- Figure 4.5 Example of children drawing in participatory drawing project.
- Figure 5.1 This image was taken from in front of the school building shows the original building and the patio was extended to be an open hall with stage on purpose for any school event.
- Figure 5.2 A view of outdoor playground with some plays equipment on turf area.
- Figure 5.3 The right side of the building always shaded by the rain trees.
- Figure 5.4 The layout plan of Tadika Islam TTDI.
- Figure 5.5 The line chart shows the play habitat of children during observation period.
- Figure 5.6 The play space that represents specific play activities and become their favourite place to explore affordances.
- Figure 5.7 This image was taken from facing the school building shows the main building of the school.
- Figure 5.8 The school field and playground area those are located in the middle of the site and bordered by school building.
- Figure 5.9 The layout plan of Tadika Diyana.

- Figure 5.10 The line chart shows the play habitat of children during observation period.
- Figure 5.11 Lawn in front of the second house is one of the children preferred places to play.
- Figure 5.12 The uneven landscape patterns show diversity in landscape design.
- Figure 5.13 An assortment of playground equipment offered diversity in play behaviour.
- Figure 5.14 The layout plan of Tadika University of Malaya (TadikUM).
- Figure 5.15 The line chart shows the play habitat of children during observation period.
- Figure 5.16 The children enjoy taking turn to climb up the railing.
- Figure 5.17 Front side of Tadika Kemas Kenari shows the water fountain and vegetation prototype in the school area.
- Figure 5.18 The landscape pattern that comprises of asphalt, and *sepak takraw* court in the middle of school area.
- Figure 5.19 The typical playground equipment and garden bench next to it were place on the outdoor playground.
- Figure 5.20 Some deficiency and lack of maintenance to landscape features in school area which leads to inert place for children to play.
- Figure 5.21 The layout plan of Tadika Kemas Kenari.
- Figure 5.22 The line chart shows the play behaviour of children during observation period.
- Figure 5.23 Percentage of active and passive activities performed during observation period.
- Figure 5.24 Example of active (left) and passive (right) activities in TTDI.
- Figure 5.25 Active (left) activities that were based on instruction and passive (right) activities like drawing in Tadika Diyana.
- Figure 5.26 Usual activities of children at TadikUM.

- Figure 5.27 The children utilized the play equipment.
- Figure 5.28 Almost half of the open space in the school area was covered by asphalt that restricted the play activities.
- Figure 5.29 The outdoor play area participated (ODP) against Length of participation (LOP) of Tadika TTDI.
- Figure 5.30 The outdoor play area participated (ODP) against length of participation (LOP) of Tadika Diyana (TD).
- Figure 5.31 The outdoor play area participated (ODP) against Length of participation (LOP) of TadikUM.
- Figure 5.32 The outdoor play area participated (ODP) against Length of participation (LOP) of Tadika Kemas Kenari.

LIST OF APPENDICES

Appendix A	Kindergarten's guidelines of Petaling Jaya City Council.
Appendix B	Example of interview questions.
Appendix C	Procedures of conducting data collection (Interview).
Appendix D	List of case study selected and criteria.
Appendix E	Example of layout plan for data collection (behaviour mapping).
Appendix F	Table of environmental qualities that support children's affordances (behaviour mapping).
Appendix G	Behaviour Mapping Symbols
Appendix H	Daily notes for data collection.
Appendix I	Example of children certificate of consent.
Appendix J	Informed consent (children participatory).



UNIVERSITY OF MALAYA
FINAL SUBMISSION FOR THESIS/DISSERTATION/RESEARCH REPORT

SECTION A – CANDIDATE’S DETAILS (TO BE COMPLETED BY THE CANDIDATE)

Name of Candidate : Wan Azlina binti Wan Ismail

Programme : MSc. (Architecture) Matric No. : BGB080009

Mailing Address : Lot 644, Belakang LPP, Jalan Sultan Yahya Petra
15200, Kota Bharu, Kelantan.

Mobile/Office Phone No. : 012-2150414 E-mail : azlina@umk.edu.my

Title of
 Thesis/Dissertation/Research Report (Block letters) : KINDERGARTENS’ LANDSCAPE: THE EFFECT OF
OUTDOOR PLAY SPACE ON CHILDREN’S PLAY AND
PERFORMANCES

SECTION B – SUPERVISOR’S DECLARATION (TO BE COMPLETED BY THE SUPERVISOR(S))

I have checked the candidate’s Thesis/Dissertation/Research Report and hereby certify that the candidate has done all corrections suggested by the Examiner’s Committee.

1. **Name of Supervisor :** Sr Dr. Zulkiflee A. Samad

Date: _____

Official Stamp and Signature

2. **Name of Supervisor :** En. Kamarudzaman Mat Rejab

Date: _____

Official Stamp and Signature

3. **Name of Supervisor :** _____

Date: _____

Official Stamp and Signature

SECTION C – *HEAD OF DEPARTMENT’S APPROVAL (TO BE COMPLETED BY THE HEAD OF DEPARTMENT)

***If the candidate’s Faculty is without a department, thesis can be approved by the Deputy Dean / Deputy Director.**

I have checked the candidate’s Thesis/Dissertation/Research Report and hereby certified that the candidate has done and corrections suggested by the Examiner’s Committee.

Date:

Head of Department / Deputy Dean / Deputy Director Official Stamp and Signature

SECTION D – FINAL SUBMISSION OF THESIS/DISSERTATION/RESEARCH REPORT TO BE COMPLETED BY THE CANDIDATE)

Please ensure that Section A, B and Section C has been filled and signed before submitting the Thesis/Dissertation/Research Report to the Assistant Registrar.

Dear Sir/Madam,

Final Submission of Thesis

I hereby submit my Thesis/Dissertation/Research Report as follows:

1. Three (3) printed copies bound in hard cover (Red rexine for thesis and dissertation, and navy blue for research report); and
2. One (1) softcopy in PDF format.

which have been checked and declared by my supervisor(s), and approved by the *Head of Department / Deputy Dean / Deputy Director.

(*Delete whichever is not applicable)

I have also followed the format of writing Thesis/Dissertation/Research Report and have completed the checklist and verified by my supervisor below before submit for examination.

I hereby agree if this form and the checklist are incomplete, and information given is not accurate, the Faculty have the right not to accept my thesis.

Thank you.

Date :

Signature of Candidate

FINAL SUBMISSION

FORMAT OF WRITING THESIS/DISSERTATION/RESEARCH REPORT

1. **Title**

- (a) The title must be the title of research which has been approved by the Senate and the Faculty.
- (b) The name of the candidate must be the name registered with the University.

2. **Abstract**

- (a) Not more than 500 words
- (b) Written in both Bahasa Malaysia and English

3. **Binding**

Copy for examination:

- (a) Four (4) printed copies bound in soft cover (Red rexine for thesis and dissertation, and navy blue for research report); and
- (b) One (1) softcopy

Copy for final submission:

- (a) Three (3) printed copies bound in hard cover (Red rexine for thesis and dissertation, and navy blue for research report); and
- (b) One (1) softcopy.

4. **Maximum length**

- (a) PhD Thesis - 100,000 words;
- (b) Master's Dissertation - 60,000 words;
- (c) Master's Dissertation (mixed mode) - 40,000 words;
- (d) Research Report - 20,000 words

(Excluding footnote, appendices, tables, diagrams, references and bibliography)

5. **Printing Quality**

- (a) Double-spacing for all sections. Single-spacing can be used for footnote, appendices, tables and diagrams
- (b) Font type: **Times New Roman** and **Latex** or **Equation Editor** for mathematical text.
- (c) Font size 12 for all text and font size 8 for footnotes.

6. **Indent**

The indents of pages are as follows:

Top : 2.0 cm
Right : 2.0 cm
Left : 4.0 cm
Bottom: 2.0 cm

7. Page numbering

- (a) Font size 8 is recommended for page numbering.
- (b) All page numbers should be printed 1.0 cm from the bottom margin and placed on the right-hand side;
- (c) Roman numerals (i, ii, iii etc) should be used in the Preface section;
- (d) The Title Page and the first page of the Preface should not be numbered. Numbering begins on the second page with 'ii'.

8. Original Literary Work Declaration

Original Literary Work Declaration form can be downloaded from the website at <http://ips.um.edu.my> and must be signed by the candidate and verified by a witness. The form should be placed in the thesis/dissertation/research report immediately BEFORE the abstract.

FORMAT OF WRITING THESIS/DISSERTATION/RESEARCH REPORT CHECKLIST

Please refer to [Guide to the Preparation of Research Reports, Dissertations and Theses](#) for details.

This checklist has to be completed by the candidate and submit to the Dean’s Office before submission for examination of the thesis/dissertation.

	Validation by candidate	Verified by Supervisor
1. The title must be the title of research which has been approved by the Faculty/Senate and the name of the candidate must be the name registered with the University.	<input type="checkbox"/>	<input type="checkbox"/>
2. Binding	<input type="checkbox"/>	<input type="checkbox"/>
Copy for examination:		
(a) Four (4) printed copies bound in soft cover (Red rexine for thesis and dissertation, and navy blue for research report); and (b) One (1) softcopy		
Copy for final submission:		
(a) Three (3) printed copies bound in hard cover (Red rexine for thesis and dissertation, and navy blue for research report); and (b) One (1) softcopy		
3. Cover page and spine according to format	<input type="checkbox"/>	<input type="checkbox"/>
4. Title page according to format	<input type="checkbox"/>	<input type="checkbox"/>
5. Maximum length Excluding footnote, appendices, tables, diagrams, references and bibliography)	<input type="checkbox"/>	<input type="checkbox"/>
(a) Thesis - 100,000 words; (b) Dissertation - 60,000 words (c) Dissertation (Mixed-mode) - 40,000 words (d) Research Report - 20,000 words		
6. Page numbering according to format	<input type="checkbox"/>	<input type="checkbox"/>
7. Abstract not more than 500 words, in both Versions; Bahasa Malaysia and English.	<input type="checkbox"/>	<input type="checkbox"/>

FINAL SUBMISSION

- | | | |
|---|--------------------------|--------------------------|
| 8. Original Literary Work Declaration form which has been signed and placed in the thesis / dissertation / research report | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Softcopy in PDF format | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Use of 'Turnitin' software to check the percentage of similarity. | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Use of 'EndNote' programme for referencing. | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Use of spelling-check feature in MSWord or spell-check software to check for spelling errors. | <input type="checkbox"/> | <input type="checkbox"/> |

I have completed the checklist as above.

Signature of candidate

Date

Name:

Matrics No.:

I have verified that the candidate under supervision has completed the checklist as above.

Official stamp and signature of
Supervisor

Date