

NOMENCLATURE

TAS	Third-year architecture student
FAS	Fifth-year architecture student
PAP	Professional architectural practitioner

TABLE OF CONTENTS

	Page
ABSTRACT	iii
บทคัดย่อ	iv
ACKNOWLEDGEMENTS	v
NOMENCLATURE	vi
TABLE OF CONTENTS	vii
LIST OF FIGURES.....	ix
LIST OF TABLES.....	x
CHAPTER	
I	
INTRODUCTION: SIGNIFICANCE AND PROBLEMS IN ARCHITECTURAL-DESIGN PROCESS AND RESEARCH FOR CREATIVITY	1
1. Design Process and Research in Architectural Creativity	1
2. Terminology and Definitions	2
3. The Problem of Architectural Design and Research	4
4. The Significance of the Research.....	4
5. Objectives of Inquiry	5
6. Limitation of Study	5
7. Notes	5
II	
LITERATURE REVIEW: REFLECTIONS ON STRUCTURE OF DESIGN INQUIRY AND RESEARCH	7
1. Problem-Solving and Architectural Creativity.....	7
2. The Distinction of Design Problem-Solving	8
3. Design Problems	9
4. Creativity as a Process.....	10
5. Architectural-Design Process	12
6. Design Research as Investigative Modes in the Process.....	15
7. Dialectic of Design Rationality	18
8. An Overview of Reviews toward Design Inquiry	20
9. Notes	20

CHAPTER	Page
III	RESEARCH HYPOTHESES AND METHODOLOGY 23
	1. Research Framework and Question..... 23
	2. Research Hypotheses 23
	3. Subjects of Study..... 24
	4. Research Methods 25
	5. Validity 27
	6. Notes 27
IV	RESEARCH RESULTS: COLLABORATION BETWEEN ARCHITECTURAL-DESIGN PROCESS AND RESEARCH 28
	1. Design Inquiry of the Co-Development of Problems-Solutions 29
	2. Research Space within the Design Process..... 38
	3. Design Dialogues: Bridging Design Visions toward Research 45
	4. An Overview of Research Collaboration with Design Inquiry..... 55
	5. Notes 56
V	DISCUSSION AND CONCLUSION..... 57
	1. Discussion: Functionalities of Research as Bridging, Understanding, Framing, and Formulating Design..... 57
	2. Conclusion: Research Realization into the Design Process 59
	3. Implementation: Design as a Critical Learning Process 59
	4. Further Study 60
	5. Notes 61
	REFERENCES..... 62
	APPENDIX A..... 64
	APPENDIX B..... 75
	APPENDIX C 85
	VITA 95

LIST OF FIGURES

FIGURE	Page
4.1 The third-year architecture students' design process collaborating with research in the co-development between problems-solutions model	31
4.2 The fifth-year architecture students' design process collaborating with research in the co-development between problems-solutions model	34
4.3 The professional architects' design process collaborating With research in the co-development between problems-solutions model	37
4.4 The third-year architecture student's whole design process of the Eco-Adaptable Community Project	40
4.5 Research through case studies.....	42
4.6 Sketching as research and communication modes.....	43
4.7 Drawing and model-making as research and communication modes.....	43
4.8 Model-making as physical spatial research.....	44
4.9 Re-grouping hierarchy of activities.....	46
4.10 Re-structuring the building typology's functional process	47
4.11 The defined, water treatment system indicating an association of functionalities	48
4.12 A construct of spatial relationship and volumes	50
4.13 Planning of the <i>Sala Phuket's</i> restaurant	51
4.14 The design process of spatial experimentation	52
4.15 Solid-void exploring sketches with material modules	54
4.16 Exploration of spatial volumes' flexibilities through movable partitions	54

LIST OF TABLES

TABLE	Page
3.1 Analytical processes of data reduction.....	26
4.1 Comparative research space in the design process of the co-development of problems-solutions.....	39