

methodology

CHAPTER 2

“a true craftsman is not bound to a single idea, as the formal idea often gives rise to a family of variations”

-Tapio Wirkkala, Pipe models, ‘meerschaum’ (sea foam) and nylon, 1974-6.

The main focus of the Practice-based Research (PBR) method lies with the making and documentation of the process and final creative product. However, the method of PBR does not specifically emphasize the iterative nature of producing an object. With this in mind, the dissertation employs a hybrid research strategy. This hybrid strategy employs the Practice-based Research method as the main framework and the Action Research (AR) method as a supplementary and supportive strategy.

This chapter is concerned with the description and justification of the research strategies and techniques applied in the dissertation. The chapter starts with a short discussion on PBR and the role of the artefact in the creation of research knowledge. This is followed by situating the AR method within the framework of PBR. The chapter concludes by applying the key processes of PBR and AR to the dissertation in order to formulate an overall action plan for the investigation.

Figure 2.1. Tapio Wirkkala, pipe models (Zifcak, 2015).

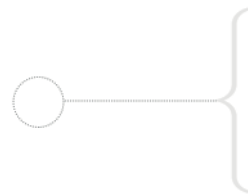
research method

2.1.

PRACTICE-BASED RESEARCH AND THE ROLE OF THE ARTEFACT

Since the 1990's various creative disciplines such as architecture, design, art and performance have gradually occupied themselves more and more with academic research (Nimkulrat, 2009: 3; Nimkulrat, 2012: 2). The creative practices employed by these practitioners during research, act as the basis for theoretical inquiry and scholarly research and is known as Practice-led or Practice-based Research (Nimkulrat, 2012, 2).

Linda Candy (2006: 1) defines Practice-led Research as research that 'leads primarily to new understanding about practice' and



Practice-based Research as research where the 'creative artefact is the basis of the contribution to knowledge'.

These practice related research methodologies have progressed from being merely supplementary '...adopted and adapted social science methods...' to complex intellectual advancement of creative practice as a basis for theoretical questioning (Sullivan, 2009: 62; Nimkulrat, 2012: 2). Even though these methodologies with their practice related frameworks are fairly new in the history of knowledge production they attribute the artefact with an authentic role in research (Candy & Edmond, 2010: 20). The Practice-based Research method therefore encourages creative practice from the researcher. The researcher, as a designer, executes the creative process and the production of artefacts as the main aim of the research (Nimkulrat, 2012: 2).

For creative practitioners the made object is generally the reason for the initial activity. Therefore, it is often the case that practitioners create artefacts which form a central part of the practice, but is supported by little or no formal research process. However, within the realm of research, the process of exploration and making provides the opportunity to generate research and knowledge (Candy & Edmond, 2010: 5). Maarit Makela (2009:1), mentions that artefacts can, and have been, regarded as both the answers to research questions and as part of an argument on a particular topic. Makela (2009:1) also suggests that the artefact can be seen as a method for '...collecting and preserving information and understanding'.

Even though the artefact is the outcome of creative practice, the knowledge of a creative practice lies within the practice itself (Nimkulrat, 2012: 2). Since the knowledge of the process of making is not evident in the object alone, the creative output produced as an integral part of the research process is accompanied by documentation. This includes a description of the process

as well as explanation and textual analysis to support the position. The textual documentation demonstrates critical reflection (Creativity & Cognition studios, 2015). Similar to any other definition of research, the research component of the Practice-based Research method requires that the understanding and knowledge gained as a result of the research process be clearly and easily transferable (Creativity & Cognition studios, 2015).

Therefore the research should:

- Define a series of research questions or problems to be addressed as well as define aims and objectives in terms of contribution.
- Specify a research context.
- Outline the methods applied to answer the proposed research questions.

See section **2.1.1. Practice-based Research**, on poster 3 (page 16) for a listed summary of the Practice-based Research method.

Works by authors such as Nithikul Nimkulrat (*Hands-on intellect: Integrating craft practice into design research*, 2012), Linda Candy (*Practice Based Research: A guide*, 2010), Maarit Makela (*Knowing through making: The role of the Artefact in Practice-based Research*, 2009), may be reviewed under the discourse of Practice-based Research.

2.2.

ACTION RESEARCH

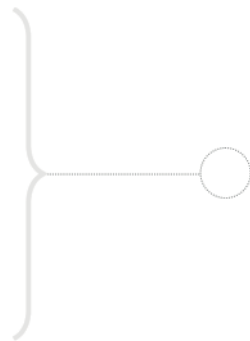
Action Research emerged in the 1920's and has since developed on a constant basis to become a dynamic and evolved research method. Action Research gained distinction during times of change (Zuber-Skerrit, 2001: 1). World War I and 2 and more recently, a response to globalisation as well as rapid socio-economic change and advancements in technology ensured the dynamic development of Action Research (Zuber-Skerrit, 2001: 2). Zuber-Skerrit (2001:1) states that Action Research (and Action Learning) is more stable and sustainable than other 'traditional ways of learning, training and research.'

Simply put, Action Research is the cyclical iterative process of an intention or plan, followed by an action, and completed by reflection on that action (Dick & Swepson, 2013: 2; Zuber-Skerrit, 2001: 2).

Once a cycle is completed, a second cycle starts with a revised plan or intention. See Figure 2.2. Action Research process (following page). Action Research is systematic and rigorous (Zuber-Skerrit, 2001: 2). Zuber-Skerrit (2001:3) also mentions that '*Through reflection we conceptualise and generalise what happened (action). We can then investigate in new situations whether our conceptions were right; that is, we try to find confirming or disconfirming evidence.*'

The incorporation of the Action research method within the framework of Practice-based Research, assists with the act of making. Here, the iterative and cyclical nature of the Action research method contributes to the development of a well resolved artefact as well as assists in the documentation process.

See section 2.2.1. **Action Research**, on poster 3 (following page) for a concise list of the steps that make up the process of Action Research.

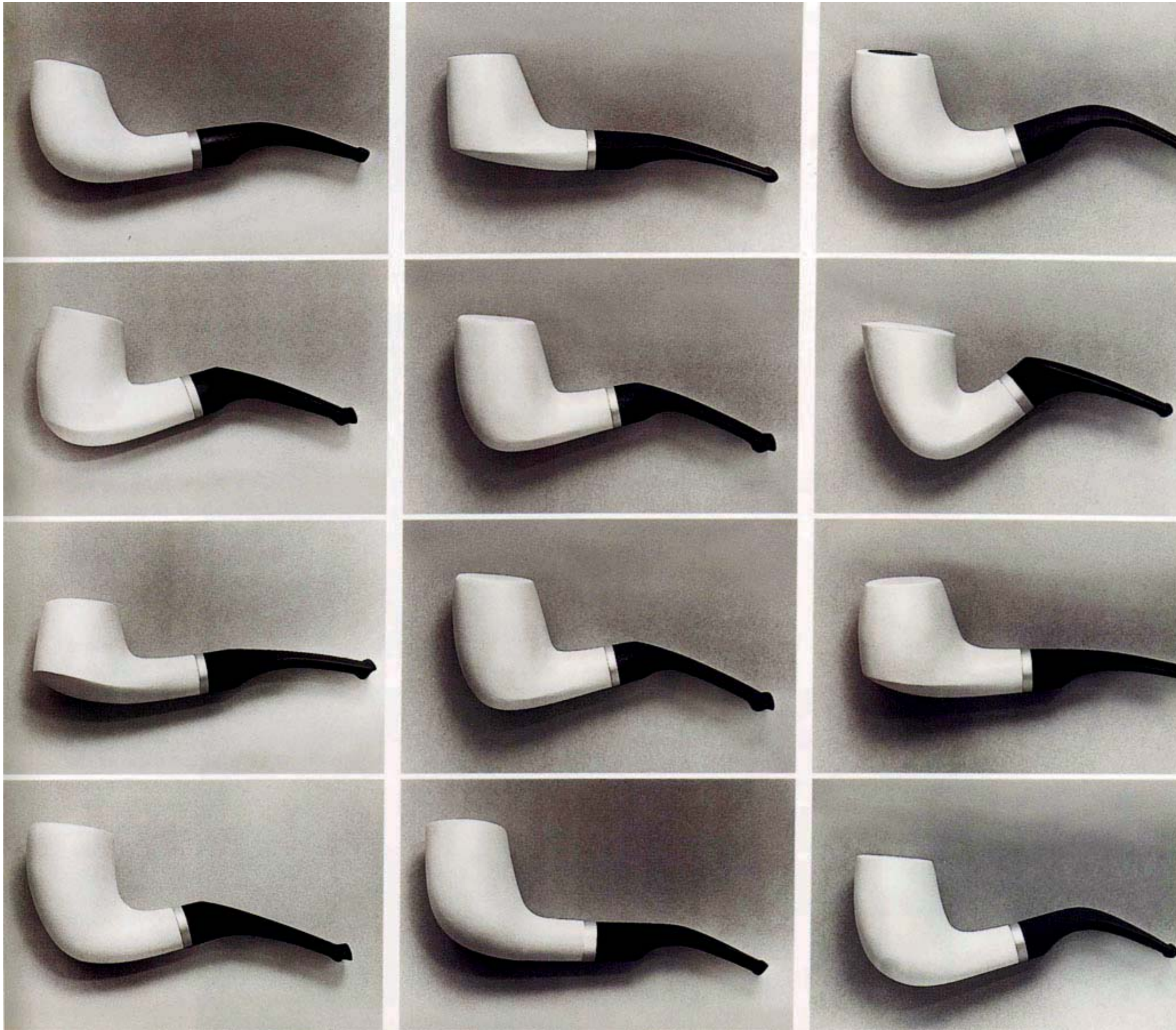


methodology

PRACTICE-BASED RESEARCH & ACTION RESEARCH

“ a true craftsman is not bound to a single idea, as the formal idea often gives rise to a family of variations”

Tapio Wirkkala, pipe models, 'meerscham' (sea foam) and nylon, 1974-6 (Zifcak, 2015)



(above) Figure 2.1. Tapio Wirkkala, pipe models (Zifcak, 2015).
(right) Figure 2.2. Action Research diagram

1.5.1. METHODS OVERVIEW

The dissertation's main concern lies with an investigation focussed on the making of space through the manual fabrication of space-defining elements. With this in mind, this dissertation employs a hybrid research strategy. This hybrid strategy is the product of the amalgam of the Practice-based Research method and the Action Research method. The Practice-based Research method demonstrates a contribution to knowledge through the making of an artefact as creative outcome. The method's success relies on the rigorous documentation of the research process as well as the artefact's role within the creative process (Creativity & cognition studios, 2015).

The incorporation of the Action Research method within the framework of Practice-based Research, assists with the act of making. Here, the iterative and cyclical nature of the Action Research method contributes positively to the development of a well resolved artefact.

2.1.1. PRACTICE-BASED RESEARCH

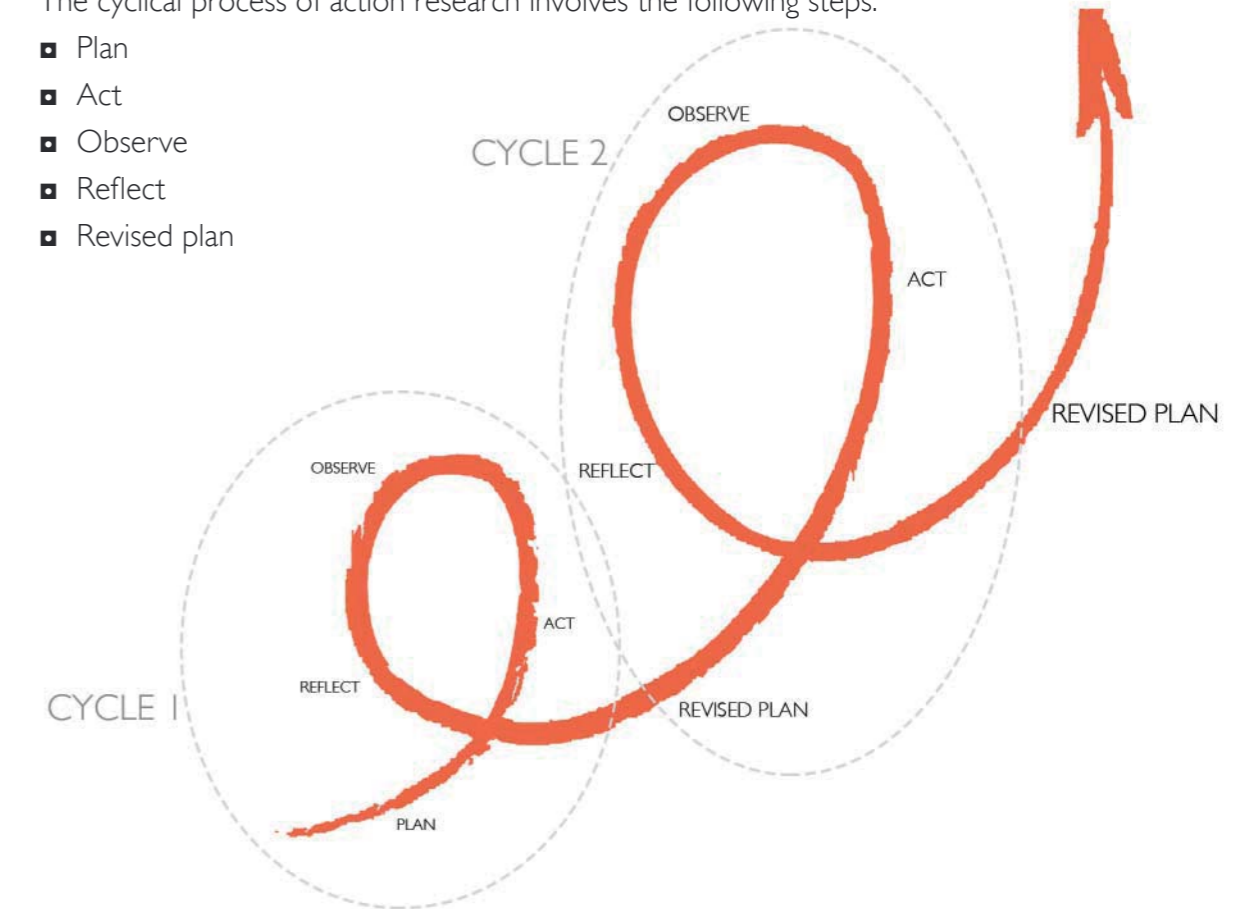
- Practice-based Research is a research method by which:
- New knowledge is gained partly by means of practice
 - The creative outcome is illustrated by means of an artefact
 - The significance of the artefact is described in words
 - Documentation of the process is of importance
 - A textual analysis supports the position and
 - The textual analysis demonstrates critical reflection

2.2.1. ACTION RESEARCH

Action research, is the cyclical iterative process of action and reflection on and in action. Action research is systematic, rigorous, scrutinisable and verifiable (Zuber-Skerrit, 2001: 2).

The cyclical process of action research involves the following steps:

- Plan
- Act
- Observe
- Reflect
- Revised plan



PHASE	ACTION	RESEARCH TECHNIQUE	SOURCE	MATERIAL	PURPOSE	TIME FRAME	PHYSICAL MANIFESTATION	Notes
1	Design and build testing model 1	Design and construct		MDF, Paint and Hardware	Act as testing site, vessel	4 DAYS	Scale 1:1 model, Fastening frame and backdrop	Test site built with knowledge accumulated during previous research and precedent studies
2	Determine types and characteristics of traditional space-defining elements (As found in built environment) HARD SPACE	Literature Review Drawing/Sketches Examples	CHING BROOKER & STONE EDWARDS	N/A	To understand traditional space-defining elements. To inform design and design process of textile space-defining elements	4 DAYS	Text, diagrams and images of examples	List and illustrate space-defining elements, List and present contemporary examples
	Investigate textiles as alternative space-defining elements SOFT SPACE	Literature Review Examples	KADOLPH KRUGER	N/A	Determine and compare alternative elements with traditional elements		Diagram: Textiles as space-definer, Images and examples	Assess terminology of original diagram
3	Identify types of traditional space-defining elements present in intervention site	Diagrams Photos	SITE	N/A	Define parameters for model 2 and inform design and design process	1 DAY		
4	Establish characteristics of rope and familiarize with terminology of rope	Literature Review Material exploration		Rope	Inform material choices for sample testing	2 DAYS	Sketches	ITERATIVE process, refer back and forth between PHASE 4-PHASE 6
5	Investigate knots, knot types and knot terminology	Literature Review Material exploration	ASHLEY PENN PETTIGREW	Rope	Inform sample testing	Continuous process	Rope, knots, sketches and images	ITERATIVE process, refer back and forth between PHASE 4-PHASE 6
6	Test rope as manual fabrication material	Making Iteration Observation and documentation	Preceding phases Subsequent phases	Rope and rope-like materials, hardware	Test types of manifestations to consider for large scale textile space-making	Continuous process	Photographs, sketches and process documentation	Iterative process using information from phases 2-5 as well as applying design concepts to intervention site
	Limitations Opportunities	Observation and documentation						
7	Determine spatial intervention and characteristics	Observation and documentation	PHASE 6		Determine spatial intervention		Sketches, End-to-end; middle of rope; end to hardware; end to plane; etc.	Iterative process, refer back and forth between PHASE 6 & 7
8	Design and build testing model 2	Design and construct	PHASE 2-7 and parameters of intervention site	MDF, Paint and Hardware	Act as testing site, vessel	4 DAYS	Scale 1:10 or 1:20 model	Site parameters informed by preceding conclusions
9	Document conclusions	Analysis and Synthesis	PHASE 6,7		Synthesise data for presentation purposes	Continuous process	Documented information	
10	Present conclusions	Presentation	PHASE 6-9		Relay importance of process and artefact	1 WEEK	Presentation posters and dissertation document	

(above) Table 2.1. Plan of Action, part 1

	MAY																	JUNE																
	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F					
SETUP																																		
PHASE 1																																		
PHASE 2																																		
PHASE 3																																		
PHASE 4																																		
PHASE 5																																		
PHASE 6																																		
PHASE 7																																		
PHASE 8																																		
PHASE 9																																		
PHASE 10																																		

(above) Table 2.2. Plan of Action schedule, part 1

- COMPLETED
- TO COMPLETE
- CRIT DAY

2.3.

APPLICATION OF THE HYBRID RESEARCH METHOD

The creative outcome of the project is demonstrated by means of the hand knotted, textile element, while the significance of the knowledge obtained through making is described by means of words. The hand knotted textile plays an essential role in the bearing of the research, and therefore the research could not have been conducted without the hand knotted textile. The written description includes documentation of the research process, in other words, the process of making and knotting the textile space-defining element. The documentation takes the form of tables, sketches and photos. This process of research through making is represented in cycles as prescribed by the Action Research method.

The following key elements are identified by the Creativity and cognition studio as part of the process of Practice-based Research. The basic framework includes:

- A motivation for the project
- A time frame for the works to be performed. See Tables 2.1. Plan of Action, part 1 and 2.2. Plan of Action schedule, part 1, on poster 3 (left).
- The role of the creative artefact in the creative process
- Environments and tools needed to achieve the required output
- Information to be gathered
- Methods for the research and design process (**Action Research method**)
- Expected outcomes of the research process
- The relationship of the practice outcomes to the argument of the dissertation

The hybrid **research strategy** is initiated with the provision of an articulated and structured plan that incorporates a variety of **research techniques**. See Table 2.1. Plan of Action part 1. The plan of action table incorporates some of the key elements as suggested by the Creative and cognition studio and forms a basic framework for the process of making.

The plan of action table includes a number indicating the **phase**, a description of the **action** performed within that specific phase, the **research technique** applied and the **purpose** for the action. Further information such as the primary source used as basis for the action, the time frame to perform the action, as well as the **physical manifestation** of the action performed is included. The plan of action is divided into two parts. Part one was planned before the mid-year exam and part two was planned as a response to the results of part one as well as in response to feedback received during the exam. See Plan of Action part two in **CHAPTER 5**.

2.4.

CONCLUSION

The discussion on Practice-based Research and the role of the artefact as well as the Action Research method provides the outline for the hybrid research method. Further, the chapter introduced a research strategy based on the plan and act components of the Hybrid research method. The Plan of action indicates foreseeable situations where the Design Process allows for more dynamic situations. The Design Process (observe and respond) is discussed further in **CHAPTER 5: Design application**.

Reflection follows each round of observation and response, as well as each design cycle. Final reflection on the dissertation follows in **CHAPTER 6: Final reflections**.