

Dichotomous research in architecture

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Abstract : In architecture profession ,it is evident that research can be the intellectual fuel for the engine of innovation and growth in architects' practices apart from being a strong enquiry system in the field of architectural education. Research is an essential tenet for architecture and serves as a form of knowledge that can and should identify the unique aspects –originality, significance and rigor. The diversity in research and the multiple dimension of architecture enable a unique system of enquiry and research design to be applied in the quest to benefit knowledge. The dual range of the architecture enables the research elemental philosophy to be in dichotomous manner, which is discussed in the paper.

IndexTerms – architectural research, dichotomous types, research enquiry system.

I. INTRODUCTION

For architects, research can be an advanced concept to use when compared with the conventional mode to generate abstract design ideas and building types. But what is clear is that research can be the intellectual fuel for the engine of innovation and growth in architects' practices apart from being a strong enquiry system in the field of architectural education. Significantly, the present times implies that the advancement in architecture is inextricably linked to the acquirement of knowledge. Research is to be understood as an original investigation undertaken in order to gain knowledge and understanding of the context and the issues. Research is an essential tenet for architecture and serves as a form of knowledge that can and should identify the unique aspects –originality, significance and rigor. The advancement of architecture and the promotion of the acquirement of the knowledge of the various arts and sciences connected therewith.

II. ORIENTATION TO RESEARCH PROCESS

The diversity in research and the multiple dimension of architecture enable a unique system of enquiry and research design to be applied in the quest to benefit knowledge. As a simple version, the philosophy on the system of inquiry can be envisages broadly as dichotomous type of framework. This framework is conceptual types which provide insight to the direction in which the research is conducted and also establish the standards of research quality being the base of system of enquiry. The whole research process has major two aspects, namely the foundation of research and the domain of research which can enable the research process to be zoned to initial phase and the last phase. The foundation of research provides the intellectual base and understanding for the researcher to decide on the language and the narration of his/her research. It shall provide the valid and continuity to the whole of the research process .while, the domain of research which deals with methods and types of enquiry in the research design.

III. RESEARCH PHILOSOPHY

The dual range of the architecture enables the research elemental philosophy to be either a myth or science type. When the scientific reviews of research expresses mathematic training, with the research design to be of reductionist and convergent type i e from larger complex issues /matter to reduced and converged data at the end of the process. While, the qualitative aspect of the architecture allows the research to be anecdotal and myth type, allowing the exploration of the research and the processing of information to be divergent and

generative with its beginning from either a seed of idea or from subjective perspective to a collective holistic hemisphere. Scientific research are more prevalent in technology, engineering and behavioral issues of research in architecture while research on abstract design theory and architectural design process shall be taken into consideration.

IV. QUALITATIVE AND QUANTITATIVE

Even within the family of physical science, the dichotomous research of qualitative and quantitative types exist in architectural research with undue importance to the strategies and tactic methods, instead of epistemological and ontological limitations. The qualitative research is a very objective and specific mode of enquiry, which is strengthened by the quantum of data collected which are analyzed in a formal and rigid fashion. These research types are important in many outcome or target related research, that can be used to explore the need or cause-effect related enquiry. And in other end of the spectrum, the qualitative research method provides opportunity to architectural exploration in understanding the attitude, opinion and behavior of uses and utility of spaces and buildings in a structured manner with authenticated and validated assumption and analysis. The strength of this research is by involving more stakeholders within the scope of or as resource subject/ study with the processes being multiplied and repeated in nature. Projective technique, focus group interviews and in-depth interviews with individuals are some of the means by which the information collected can strengthen the opinion and observation.

Table 1

ASSUMPTIONS	QUESTION	QUANTITATIVE	QUALITATIVE
Ontological assumption	What is the nature of reality?	Reality is objective and singular, apart from the researcher	Reality is subjective and multiple as seen by participants in a study
Epistemological assumption	What is the relationship of the researcher to the research?	Researcher is independent from that being researched	Researcher interacts with that being researched.
Methodological assumption	What is the process of research?	Deductive process Cause and effect	Inductive process Mutual simultaneous shaping of factors.

The assumption as given in table 1, gives an comparative assumptions under the ontological and epistemological approach within the context of methodological presumption.

V. AUXILIARY RESEARCH SYSTEM

The dual natures of the research methods do exist in large extent in other research systems which are primarily objective type versus subjective types. Refer table 2 for the comparison and correlation.

Analytical and descriptive research: A descriptive approach to research is called as a foundation for research. Its logic is based on the statistics of the research analysis. So, the descriptive research can't take into account the validity of the research results, because it does not explain the causes of the result. While, Analytical approach concentrates on the process of the final result rather giving importance to the result. Analytical approach stands applicable in all stages of research, right from the articulation of thesis to the formulation of arguments on the issues mentioned in the research.

Fundamental and applied research: Fundamental research answers the germinal question of how things are considered for performance. This fundamental enquiry is then used by professionals and architects to make improvements on existing products, technologies and processes. Similarly, basic researchers take the

convenience of improved technologies to probe into the functioning in order to answer new fundamental questions. It is a crucial cycle for advancement. Applied research is designed to answer specific questions aimed at solving practical problems. New knowledge acquired from applied research has specific financial viability and objectives in the form of products, procedures or services.

Empirical and conceptual research: Conceptual research is that related to some abstract idea(s) or theory. It is generally used by researchers to develop new concepts or to reinterpret existing ones. On the other hand, empirical research relies on experience or involves observation alone, often without due regard for system and theory. It is a data-based research, with analyses coming up with conclusions, which are capable of being verified by observation or experiment.. In such a research, the researcher must first provide himself with a working hypothesis or guess as to the probable results. He then works to get enough facts (data) to prove or disprove his hypothesis. Empirical research is appropriate when proof is sought that certain variables affect other variables in some way. Evidence gathered through experiments or empirical studies is today considered to be the most powerful support possible for a given hypothesis.

Table 2

Type of research based on system of inquiry	
Analytical	Descriptive
<ul style="list-style-type: none"> •Analyze the facts and information available •To critically evaluate the issue/subject 	<ul style="list-style-type: none"> •Description of the state of affair as it exists •No control over variables but can decipher the causes.
Fundamental (pure or basic)	Applied (action based)
<ul style="list-style-type: none"> •Generalization , formulation of theories •Area of human behavior. •To find information for a broad base of application. 	<ul style="list-style-type: none"> •To find a solution to a issues /problem. •Applied to society , industry, business •Marketing research •Evaluation research
Quantitative	Qualitative
<ul style="list-style-type: none"> •Deductive process •Cause and effect 	<ul style="list-style-type: none"> •Inductive process •Motivation ,attitude/opinion research
Empirical	Conceptual
<ul style="list-style-type: none"> •Based on existence ,experience or observation •Experimental research –work with hypothesis-prove/disapprove it. •Variable under control of the researcher 	<ul style="list-style-type: none"> •Relates to abstract idea/theory •New concept/reinterpret existing one

VI. CONCLUSION

The researcher's affinity for a particular system of inquiry is likely to frame the choice of a school of thought, the way in which the research question is posed, the selection of a research design, the tactics of information gathering and analysis, and even the practices of the researcher as he or she conducts the inquiry. Although the dichotomous research system exist, it is very unlikely for the research in architecture to be confined to one end of the pole, but rather take the mixed and continuous method of both the system .it is suggested that readers will nevertheless find it useful to keep in mind these paradigmatic perspectives and associated quality standards when considering the underlying assumptions and diverse contributions of the research reviewed.

VII. Reference

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