*EFFECTIVENESS OF DESIGN JOINT-STUDIO IMPLEMENTATION IN ARCHITECTURE EDUCATION*

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**FRSB 2016 2**

**EFFECTIVENESS OF DESIGN JOINT-STUDIO IMPLEMENTATION IN ARCHITECTURE EDUCATION**

**By**

**SARA ZAVARI**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Master of Science**

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## DEDICATION

Every Challenging work needs self-efforts as well as guidance of elders especially those who were very close to our heart. My humble effort I dedicate to my Loving Parents, Kambiz Zavari and Mahshid Ahmadi, whose affection, love, encouragement and prays of day and night make me able to get such success and honor; along with all hard working and respected Supervisor.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science.

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**SARA ZAVARI**

**May 2016**

**Chairman : Assoc.Prof.Ir.Nangkula Utaberta, PhD**
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Architectural education is based primarily around the design studio as a pivot and gathering point of all knowledge and skill accreted throughout the curriculum; there is no simple answer or given approach to architectural pedagogy but a continuous routine framework. Delahaye in 2005 mentioned, Design studios universally apply the semi-structured project base learning strategy. Simple investigation on current publications in design Joint-Studios reveals a lack of how such an evolutionary education pedagogical framework processes took place in Malaysia therefore the research aim is to improve our knowledge base and quality of architecture education; because while the current design studio may represent the best teaching ideas for this profession yet they are not without problems. To address this objective and increase the particularities the research involves the design Joint-Studio of the 3rd year architecture design studio of UPM (University Putra Malaysia, Malaysia) and 3rd year architecture design studio of UIN (Islamic State University of Malang, Indonesia) for one semester with total number of 72 students; Two empirical studies are carried out with the intention of investigating lecturers' and students' perceptions and expectations from Design Studios and Design Joint-Studios. Base on this study it was found that the aspects of design studios like studio pedagogy, culture, and technology are limited and in terms of the future, a more comprehensive approach is needed.

# KESAN PEDAGOGI RANGKA REKA BENTUK BERSAMA-STUDIO

Oleh

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**Mei 2016**

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Studio reka bentuk adalah penting dalam pendidikan seni bina. Kewujudan kokurikulum berdasarkan tugasan studio membolehkan maklumat - maklumat disebarkan dengan lebih baik serta merangsang para pelajar terhadap skil – skil lain diantara mereka. Ini bagi memastikan tahap profesional dalam bidang seni bina terus terjamin. Delahaye menyatakan pada tahun 2005 bahawa, Pendidikan Seni Bina secara umumnya, mempuyai rangka pendidikan yang berdasarkan tugasan seni reka studio melalui projek.  Berdasarkan artikal – artikal yang diterbitkan oleh Joint Studio, rata rata rangka pendidikan seni bina di Malaysia didapati kurang berevolusi. Maka, tujuan penyelidikan ini adalah untuk mengupas isu – isu yang berkenaan dengan studio reka bentuk bagi memastikan kualiti pendidikan dapat dipertingkatkan.  Bagi mencapai objektif penyelidikan ini, program gabungan studio diperkenalkan, dimana, para pelajar Seni Bina tahun 3 UPM (University Putra Malaysia) digabungkan dengan para pelajar Seni Bina tahun 3 UIN (Islamic University Malang, Indonesia) bagi tempoh satu semester.  Jumlah pelajar yang terlibat adalah seramai 72 orang. Dua perkara penting yang diperhatikan dalam penyelidikan ini adalah pendapat dan jangkaan daripada para pengajar dan para pelajar terhadap program gabungan studio ini dan studio reka bentuk yang terdahulu. Melalui penyelidikan ini didapati secara amnya pencapaian tahap profesional dalam bidang Seni Bina, kebudayan dan teknologi adalah terhad. Pendekatan yang lebih menyeluruh amat diperlukan.

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My Sincere thanks also goes to my parents, Kambiz Zavari and Mahshid Ahmadi Tabriz for their unconditional love and support which has been an inspiration throughout this thesis and my life in general.

I certify that a Thesis Examination Committee has met on 12 May 2016 to conduct the final examination of Sara Zavari on her thesis entitled "Effectiveness Of Design Joint-Studio Implementation in Architecture Education" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

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**Declaration by graduate student**

I hereby confirm that:
- this thesis is my original work;
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**Declaration by Members of Supervisory Committee**

This is to confirm that:
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| | |
|---|---|
| AIAS | American Institute of Architecture Students |
| AA | Architectural Association |
| PAM | Pertubuhan Arkitek Malaysia |
| LAM | Lembaga Arkitek Malaysia |
| NAAB | National Architectural Accrediting Board |
| AIA | American Institute of Architecture |

# CHAPTER 1

## INTRODUCTION

### 1.1.    Background Study

Architectural education is based primarily around the design studio as a pivot and gathering point of all knowledge and skill accreted throughout the curriculum (Mostafa & Mostafa, 2010). First focus on the meaning of "studio", Within the design professions the term "studio" is used to both describe a physical space (the actual place in which the learning and teaching activities take place) and also the mode of engagement (as a pedagogical strategy) ( Phillip Crowther, 2013) . So Design Studios are often referred to as a place that knowledge and skills from the areas are integrated and applied (Stevens, 1998).  A casual review of any university architecture curriculum will reveal that studio is the central activity in every architecture student's life.

Before establishment of the design studio environment design was learned through an apprenticeship or a pupilage. Current method of receiving architectural training at an institution is the result of synthesizing the educational system from several countries. The origins of the design studios are attributed to four different system: Britain, France, Germany, United States and specially two art movements: Ecole des Beaux-Art (School of Fine Art) and Bauhaus which would be explained in detail in chapter 2 (Literature Review).

Design studios learning style are remarkably similar across the industrialized world (Phillip Crowther, 2013). The design studio is type professional education, traditional in schools of architecture, in which students undertake a design project under the supervision of a master designer therefore it is considered the key activity for an architect. Learning environments vary in size and type depending on the function and type of learning anticipated like discussion, meeting, training or workshop. The environment is the loft-like studio space with drawing tables, papers, books, pin boards, pictures and models this classrooms is a learning environment which support all activities stated in figure 1.1 like design tutorial for all students, group discussions in pairs or more (Team-Work) and Solo space for student to apply what he/she learned on his/her design in one big classroom which is called studio. (See Figure.1.1 and 1.2).
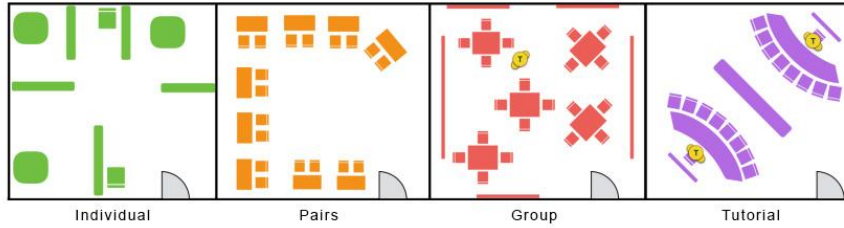
**Figure 1.1: Classroom Arrangement**



**Figure 1.2: UC Berkeley Architecture Studio (Source: http://ced.berkeley.edu)**

Typically students will attend the studio where an academic gives instruction. This usually occurs in small groups of from 12 to 20 students for a period of time from half a day to two days a week. Students will engage in simulated real world activities of designing an artefact to a given brief which outline the goal of the project, user requirements, site condition and other technical information. Students will respond to weekly feedback given by the academic over their drawings, models or diagrams which it calls "tutorial section". Chart 1.1 is a summary diagram of student design process. Furthermore the project of designing is in itself usually the major component of the assessment activity of the studio. The semester of study typically culminates in a public presentation of the design project, referred to as a crit, at which time it is assessed by a jury of academics (Bender & Vredevoogd, 2006).
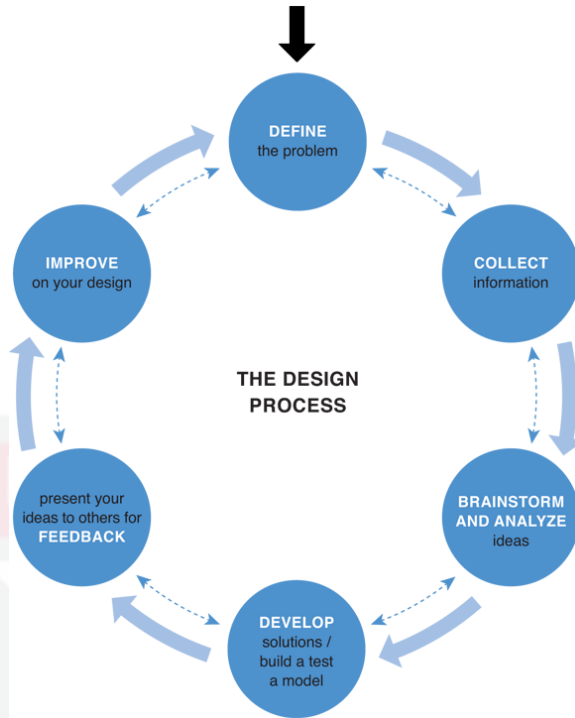
**Figure 1.3: Design Process (Source: discoverdesign.org)**

As explained earlier, since nineteen century, the design studio has remained at the core of architectural design education. In recent years education has faced global changes socially, technologically, and pedagogically, there are no boundaries from one country to another but while design studio occupy more than 50 percent of the architectural education the traditional studio-based pedagogy has remained fundamentally the same; the current situation of teaching architectural design produced an enormous gap between education in design studios and professional practice. It is a fact that we can talk about changing the trend of architectural design studios by study the current trend and the history behind it and propose new frameworks that covers the current pedagogy gap.

## 1.2.    Significant of This Thesis

Education is a continuous process. Therapy learning skills and knowledge in any context requires strong and potent academic basis. Design process is a thinking process and the process adopted must generate creative thinking. Creative thinking involves visualization which is the skill and ability to convert vision into visuals. The element of creativity can be nurtured if creative stimulus is introduced and technique of problem solving is explained (MASA, 2010). The knowledge of design transmits to students during Design Studios so it serves an important purpose of initiating creativity. Design

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Studies can often be enhanced more by curiosity and experiences than, by the theoretical content of the subject but unfortunately schools teach from distance. Therefore this study lays the foundation and accomplishes the task of understanding the architectural Design Studio and introducing Design Joint-Studios which remarkably little has been written about the aspect of it to increase the knowledge background of the students.

This study will help the in the development of future studies that emphasize the importance of interaction in the architectural design studios environment and its potential for positively influencing teaching and learning in higher education. For decades Design Studios have followed the same framework from history but now is a global war; there are no boundaries from one country to another so our graduates must be able to work with this globalization scenario so we need to design graduates which actually can work in different countries with different cultures or systems. The results of this study are important because there is value in understanding students and teacher's experiences and expectations, to merge them together and define a new practical framework for Design Studios.

## 1.3. Problem Statement

Design studios learning style are remarkably similar across the industrialized world and while the current design studio may represent the best teaching ideas for this profession yet they are not without problems and a more comprehensive and holistic way is needed. Followings are few factors and facts represented by different organization and researchers in order to show the need of a change in current design pedagogy;

### Global Changes:

The design studio environment has remained the same throughout the past century. As the Studio Culture Task Force of the American Institute of Architecture Students (AIAS) (Koch, 2006) noted, the ongoing changes in architecture education are not aligned with today's fast-changing world, especially in the context of architectural practice. AIAS analysis reported doubts on effectiveness of current design pedagogy, these difficulties which are common in architectural schools are global call for a change in studio environment.

### Creative Performance:

Since design studios occupy more than 50% of the architectural program, methods and techniques of teaching design studio become very critical. A review of current design studio pedagogy throughout higher education in the United States conducted by Fasko

(Fasko, 2000-2001) pointed out that the available information indicates that deliberate training in creativity is rare. In 2005 Lewis summarized the literature by Stating that we still have some way to go before creativity becomes a more central feature of the teaching of design studio in the US and elsewhere. Therefore if creative behavior is to be the central theme in designer's education new pedagogical approaches are needed.

**Digital Technologies:**

Studio pedagogy has a long tradition of stability. Recent decade was a challenge for architecture profession and its education due to development of technology. Rabee Reffat start his paper with a review of the young history of the presence of computer in architecture field and how computer have caused a real "revolution" in knowledge production. He points out the new opportunities this development have for architecture through creating new expertise. Reffat comments on the tradition of architectural education and research that seems more backwards than forward. He also calls for a more proactive approach for future.

Furthermore thesis found out in 2011Mohammad Tajuddin in his book by name of "Malaysian Architecture Crisis Within" stated about silence crisis in Malaysian architecture. He believes that architectural education is in crisis because neither the professional body nor academic institution emphasize the important need of documenting nor publishing their practice and education experience that is why simple investigation on current publication in Malaysia will reveals the lack of review over design studio pedagogy.

## 1.4. Research Questions

This research is an Action research meaning is an investigation designed by teachers to attempt to solve problems and improve professional practices in their own classrooms. It involves systematic observations and data collection which can be then used by the practitioner-researcher in reflection, decision making and the development of more effective classroom strategies (Parsons and Brown, 2002). The previous discussion of the intent of this research derived from the problem proposes general questions which are:

- What are the current types and categorization of Design Joint-Studio?
- If Design Joint-Studio Pedagogy can be the change needed to bridge gap between these global changes and architectural studies?
- What is the Proposed Framework for Design Joint-Studio?

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## 1.5.    Research Aim

The main aim of this research is to analyse the effectiveness of Joint-Studio methodology as an alternative for Architectural studio base courses.

## 1.6.    Research Objectives

The following are the specific objectives of this study:

- To analyse, investigate and describe the idea of Joint-Studio and its kinds in different schools.
- To investigate the behaviour of design Joint-Studio base on students experience's and comments of focused group as case study.
- To develop practical framework for design Joint-Studio for future education in architecture.

To address these goals, the content is based upon five chapters each chapter seeks to reach a conclusion that supports the objectives of this study but chapter three aims to identify "How" the research will address these goals.

## 1.7.    Methodology of This Thesis

To the research action reported in thesis, a qualitative approach was used. Due to lack of literature review on Design Joint-Studio, its pedagogy and its categories a new definition been presented. To understand more on different kinds of Joint-Studio few universities around the world have chosen as comparative study model. To increase particularities the research involves the  joint studio of the 3rd year architecture design studio of UPM (University Putra Malaysia, Malaysia) and $3^{rd}$ year architecture design studio of UIN (Islamic State University of Malang, Indonesia) for one semester with total number of 72 students which are 35 (UPM) and 37 from UIN. Two empirical studies are carried out with the intention of investigating lecturers' and students' perceptions and expectations from Design Studios / Design Joint-Studios.

More over six of lecturers and 49 of overall students answered to specific questions after final submissions to record their satisfaction level from implemented model. Direct observation used for whole study period which is for one semester. The summary of research methodology is presented in chapter 3, chart 3.1 (Research Methodology).

## 1.8. Scope of Research

This thesis will employ a qualitative approach to explore perceptions of Design Joint-Studio. The qualitative analysis is to provide an indication of the effectiveness of the implemented model. So the general outline of the thesis is:

1. Action research is the used framework and approach of this research that will be detailed up at chapter three.
2. University of Bath, University of Architect Association (AA), Harvard University, UTM University, MIT University and the Joint-Studio between Tsinghua University and UK and Us Universities, Diponegoro University (UNDIP) in Indonesia and Seoul National University (SNU) in Korea are used as a case studies to in this thesis to structure the research approach and comparative study. Focus group of this study is Malaysian and Indonesian Students from UPM and UIN Universities.
3. Sample of this research are $3^{rd}$ year architecture design studio of UPM (University Putra Malaysia) and $3^{rd}$ year architecture design studio of UIN (Islamic State University of Malang, Indonesia) for one semester with total number of 72 students which are 35 (UPM) and 37 from UIN.
4. Design Joint-Studio categories, its framework and its effectiveness would only be focused.

## 1.9. Structure of the Thesis

In chapter one background of architectural education around the world was briefly presented. Then the objectives of this thesis was given, which was evaluating the current pedagogical design studios with design joint-studios. Next the issues and scope of work were discussed. In chapter two, the related literature about architectural education generalities of the advantages and disadvantages of the most common pedagogical have reviewed. Base on chapter two evaluation chapters three provides an action research and the multilayered methodology of the proposed pedagogical frame work of design-joint studios. Then an overview of how the study was organized from data collection phase based on questionnaires and interviews was provided.

Chapter four describe the findings based on instructors and student perceptions and point of view. Chapter five evaluates the weak and strong points of the implemented pedagogy and presents recommendation for improvement. At the end, chapter six presents the conclusion and suggestions for future work.

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