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Architecture Education in Malaysia: Antecedent or Traditional Inheritance Reprisal along the Pace of Globalization

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Abstract

The quest for ready-employed graduates for the building industry is not only happening in Malaysia; instead, it has become a topic of Architecture schools worldwide. The dichotomy of the school of thought streams from the old scholars and those in the industry have always criticized each other on the basis that is rooted in education. Architectural pedagogy has never been a space of reflection; instead, it has constantly been a political act. The industry always presumed that the knowledge taught in school is regarded as theoretical, academic and implicit. The discourse is continuously on the action, reaction and interaction that is transferred effectively and efficiently through "learning by doing". The appropriate architecture education syllabus and system of delivery for the discipline of Architecture developed quite late as in the 1930s. It improves along the lines of modernization and the changing trends in the world. This paper attempts to foster the quest for more intellectual discourse on Architecture education in Malaysia. The stakeholders in architecture education, namely the parents, industry, the ministry of education and even the Board of Architects, maintain the academic focus on the issues that benefit all. The dilemma of architecture both in practice and education, especially in Malaysia, needs to be addressed accordingly so that it is not saturated as the knowledge and architecture pedagogy is not maintained by a single body. Architecture discipline cannot spin the old wheels, and the progress of technology, as well as world revolutions, are closely related to architecture because architects are the medium of predicting the future through images.

Discipline: Architecture Education

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1 Introduction

This paper establishes a new horizon in Architecture Education in Malaysia. Today, there are twelve public universities, three state universities and seven private universities (accredited programs) offering Architectural Education in Malaysia. With a population of 30.3 million people and a number of registered architects of 2,182 (as of June 2019), it seems that we are lacking figures when compared to developed nations. Are we concerned about the number of graduates in architecture, or are we seeking the quality of education in the architecture discipline? Moreover, the situation and reality of Architectural education are moving into the 21st century and beyond. The quality of architectural education and the ready-employed graduate is at the forefront when the topic of Architecture education is discussed. The industry expects graduates to fit into the job market and constantly criticizes the quality of graduates and the level of understanding among graduates in the trade of architecture. Largely, the academics who teach at the local higher institutions are the product of western universities, and the type of Architectural Education transferred to the students is the reflection of these lecturers. On the other hand, the Ministry of Education is monitoring the local university with reference to the QS Ranking and their position in the world universities on par with world education trends. The Ministry of Education is comparing the local higher institutions with foreign universities both in terms of ranking and the standards of education. Whenever the ground moves either in Europe or America - the locals will feel it. The outset of change in Architectural Education in Malaysia occurred in 2006, with a shift in the nomenclature from B. Arch (Bachelor of Architecture) to M. Arch (Master of Architecture) awarded to graduates after a five-year program at local higher institutions. The change of the nomenclature was seen as a drastic move, corresponding to the Bologna and Washington Accord that became the benchmark for architectural education reform. The reform has had an impact on the change in syllabus, duration of the study, and the courses presented, focusing on student-centered learning in serving architecture education in line with the system of education in any country. Although the Bologna Accord set out three years for the baccalaureate degree, and it matches another two-year program for a Master of Architecture or Bachelor of Architecture at most American universities. The international agreement for professional academic degrees set by Washington Accord facilitates to ease of the mobility of professionals. The shift in the nomenclature also has a broad perception with regards to the syllabus, learning unit credit hours and the changes in the content as well as the duration of study from year one to year five.

Historically, the traditional architectural education in Malaysia is inherited from the British educational system with its long history that was tested at Kuala Lumpur Technical College in the late ’50s, later became Institut Teknologi Kebangsaan in the ’70s (National Institute of Technology) and changed its name to University Technology Malaysia (UTM) in 1975. The graduates from UTM are widely spread across the country, either becoming architects and teachers or pursuing their higher degrees elsewhere and becoming lecturers at local universities directing architecture education as a proposed discipline at other higher institutions abroad. These are the pioneering

lecturers who started the architecture school at University Mara (formerly Institute Technology MARA-UiTM) and Universiti Sains Malaysia (USM), to name the first three universities that offered architecture programs in Malaysia in the early years. The graduates from these three universities then continued their studies. They became lecturers to the expanding faculties at the University Putra Malaysia (UPM), Universiti Kebangsaan Malaysia (UKM), Islamic University of Malaysia (UIAM) and Universiti Malaya (UM). Hence, the circle of Architecture education began and revolved along with the demand of the growing number of populations, the information-knowledge revolution with the growth of digital technology, the changing social and culture, the global economy, and the rapid pace of urbanization.

2 Literature Review

The buzzword of IR 4.0 and changes in the 21st century in education and the post-millennium push the limits of almost everything in the world, especially in developing countries. Interest in architectural education, particularly in Malaysia, is responding to education 4.0 in accordance with the changes and advancements in digital technology. The 21st-century students are expected to not only acquire skills and knowledge but know their resources (Hussein 2018). Architecture as an innovative discipline to meet these changes is faced with various perceptions from the architects, the public and educators. The educators realized the variations in transformations in teaching or selections of subjects conforming to the changes in society and new building process (Legeny et.al 2018). The 21st-century students are equipped with gadgets and technologies, yet, most of these technologies evolved during the post-World War II era. We are not alighted with the post-millennium inventions, needless to say, the new theories related to architecture. Today, writing on architecture education once again generates a venue to improve pedagogy in the discipline. Traditional architectural education was based on the guild and craftsman developed from the Bauhaus School at Weimar, Germany, which was aligned with the so-called modern industrial development of the late 19th century. The curriculum expressed a belief *in necessity with an aesthetic sensibility* for daily utilitarian households.

The rise of the Nazis in 1930, which attempted to control the freedom of education, led teachers at Bauhaus to migrate to the United States of America (Wolfe 1984). The migration of the Bauhaus teachers opened new frontiers in Art and Architecture in America and abroad. The Bauhaus scholars celebrate industrialization with a futuristic manifesto in painting, sculpture and definitely architecture. Customarily, the generation of traditionalist architects who practised in the late 1960s to 1990s taught themselves principles through mentors, books and travels. Maverick educators and close mentors are more powerful by giving encouragement and guidance while books nourished their imagination and travel established beliefs. Even before the coming of the Bauhaus scholars, the Chicago School of Architecture inherited a system of mentors and guilds through the trade of undergraduate learning. Good architects such as Louis Sullivan and Frank Lloyd Wright produced fine works, and they became the reference of most of the generations who pursue architecture today.

Architecture is not progressing by itself as a discipline, yet the development of technology, the economy and the changes in the world impacted its progression. The changes brought about by electronic technology allow a path in the way architects think. The design process and design principles are fundamental, while the integration of new materials and technologies relies on the innovation of an individual. The growing proximities of the design process through digital technology is increasingly accessible; however, the students do not understand the basic elements of arts and architecture, and the depth of change may be baseless if its relationship with human is misleading. Architecture is about human beings; underlying principles of good life result from good architecture and good cities that care for both society and individuals. The studio as the medium of space to stimulate the interest of the student, similar to the office environment during architectural training, comes in many sets up. Some tutors employ experimental cases in real practice through gaming and conceptual situation to apply real practice ideas.

Rattenbury at Westminster claimed that "... these tactics undermine notions of individual authorship, ... addressing urgent issues through imaginative thinking about forms of practice" that encompass the profession's scope in teaching. Pragmatically, seeking the right way of delivering the subject to the students in architecture according to the current trends in architectural practice in the industry can be astonishing.

Colomina (2019) argued that the architectural pedagogy is decayed and most higher institutions offering architecture spin the old wheels and possibly, that the progress of technology and the revolution in the world has nothing to do with architecture. While others complain that the decadence of the "master-led" unit system in teaching also undermines the value of architectural education. The conflict between practice and education has been argued by some who care about architecture. Griffths (2019) voiced out that "it is not the job of architecture to mimic practice" however, undeniably, there are some lecturers who treat the whole thing as an ego trip. Yet, mediocre practitioners might think that education's role has nothing to do with education. On the other hand, RIBA (Royal Institute of British Architects) wanted to reform education from the early time. Patrik Schumacher (2019) believes that experimental methods still propagate and are useful for young architects to define architects in the future. Many schools of Architecture still consider running a studio as the centre of architecture education by looking for several options. For example, at UCL (University College London), the lecturers enhance the field of design and its potential for representation of the design process through technology, while Robert Mull of Brighton's head of school, works directly with *the refugee, prisoners and locals focusing on social practices and engagement with the local communities*. These are some of the experimental approaches that blend studio learning and practised openly.

On the contrary, Bermudez (1999) testified that the skill inherited by traditional cultures might not be relevant to the new realities of education in the future. The issue may not be the same as that of the past as compared to the present situation of architectural practice. The service industry of architecture is based on the image of the future, and architects indirectly predict the

future through images. Although the future world cannot grant the paradigm of forecasting the future with reference to the past, the extrapolations of the present will surpass it, Bermudez (199) added. Again, when future issues are discussed seriously, it does not directly relate to education. Cobb (1985) pointed out that the recent expansion of PhD programs in architecture has distanced themselves from "*the real concern of active, creative practitioners*". The depth of the research focuses on the "art-historical model" rather than pointing toward improving practice. The practice and education with respect to the direction of architecture discipline are not articulated according to the essence of teaching as required by the industry and the board or authority that monitor the progress in each particular country. Some teachers are overly concerned about their place in the institutional hierarchies, and the structure of the curriculum has not changed for decades (Colomina 2012). She added that there are universities trying to transform future architects into political agents by deploying subjects that may deviate from issues of the architectural discipline. As a result of these dialectic opinions, the changes that transform the architecture discipline to meet the trends and globalization need to administer the equilibrium between practice and education in architecture, especially in the developing world.

3 Method

In this paper, an exploratory technique is applied together with an interview with academic staff in the architecture discipline. Written documents and established materials from local and abroad were examined, focussing on dialectic discussions on architectural education. The discussions on Architectural discipline, either oriented to traditional or industrial, were observed and referred to the requirement of the Board of Architects, Architecture scholars and Architects in practice. The writing on Architecture today is most interested in the topics that praised Architecture and its masters.

This paper will also examine the pedagogy of architecture and inquire about the pace of advancement and trends of architecture in the world, relating it to the Malaysian context.

3.1 Hypothesis

The new architecture Education needs to focus on the trend of globalization and the progress of digital technology, not on the industry's requirements.

4 Architecture Education in Malaysia

The two-tier tertiary education spanning five years is required to complete the cycle of study for candidates to pursue architecture with three (3) years for a baccalaureate and another two (2) years for a master's (3+2). In America, the system can be four (4) years for a baccalaureate with another year for a master's or Bachelor of Architecture (4+1). Since the duration for a baccalaureate should not be less than three (3) years, a vast number of countries opt for the 3+2-year model of study, which then awards a Bachelor of Architecture (B.Arch) or Master of Architecture (M.Arch). Malaysia opts for three years for a baccalaureate and two more years for a Master of Architecture (3+2).

The liberation of education worldwide and increased expenses in the higher institution as well as the maturity of candidates' exposure to knowledge as well as candidates' mobility make the credit system suitable for learning. The flexibility and opportunity for exchange programmes or earning credits at other higher institutions with an equivalent standard of syllabus also enable the students to gain different exposure and learning experiences. The total number of credits signifies the required annual load and justifies the duration transparently with respect to the two semesters system per year including lectures, laboratories, tutorials, site visits, workshops and other academic activities that do not deviate from architectural interests.

The Council of Architectural Accreditation and Education Malaysia (MAPS) is working together with the Malaysian Qualifications Agency (MQA) to ensure quality and promote excellence. The Board of Architects Malaysia (LAM) maintains to make the programme reliable, and credible and complies with the competency standards comparable to any other universities worldwide. The MQA approves once it is managed by the Board of Architects. The components of the syllabus in Figure 1.0 consists of the selected subjects undergone by students to enroll in the programme in order to pursue a degree level in architecture. The composition of the courses represents the gist of all courses that are believed to equip the students to be ready for the industry. The question is not on the curriculum; nonetheless, the teaching staff and the quality of the education are to be deported by the lecturers. The hierarchy of the faculty in conducting the courses may influence the level of knowledge for lifelong learning as found in the teaching process of Outcome-Based Learning (OBE). In the OBE, the role of the faculty is essential to the outcome where there is no single way of assessment, and it depends on the role of the lecturer or tutor. Thus, the Programme Learning Outcome (PLO) and Course Learning Outcome (CLO) are indicated as a guide to correspond with the matrix of the audited body at the end of the semester to check whether they fulfil the objectives as outlaid by the faculty.

The direction toward accreditation may allow the program to be accredited. However, expectations by the industry are turning away from the "real world" practices. The visualization of images in the process of design in architecture is influenced by the availability of drawing tools applied by the students. Manual sketches and graphic illustrations no longer adhere during the design stage. Computers are commonly used by students to explain directly their ideas, and yet the components of art in architecture are disappearing. Once the student enters the post-graduate level, the advanced design discourse is oriented toward the industry requirements. The complexity and the scale of the design are aligned with the manual indicated by the Board of Architects. The focus on the capability of the students to design the building with the intention to introduce innovation and complexity in the building may not be achieved. The tools of digital architecture, from simple *Sketch Up software to Revit, Building Information Modelling or Parametric*, are as important as the formal language in operative potential. Transformation in architectural education does not completely transgress the modernist tradition. On the contrary, the industry is not expecting the architecture school to produce technicians who can only design functional buildings

after a period of five or six years in the program; otherwise, the pedagogy of architecture will be stale and decay.

4.1 Architectural Cluster

The new architecture program at the local universities in Malaysia tends to be interested in gaining accreditation from the MQA (Malaysian Qualifications Agency) and LAM (Board of Architects Malaysia). On the other hand, radicalism and the revolutionary approach in the syllabus do not guarantee the program will be accredited.

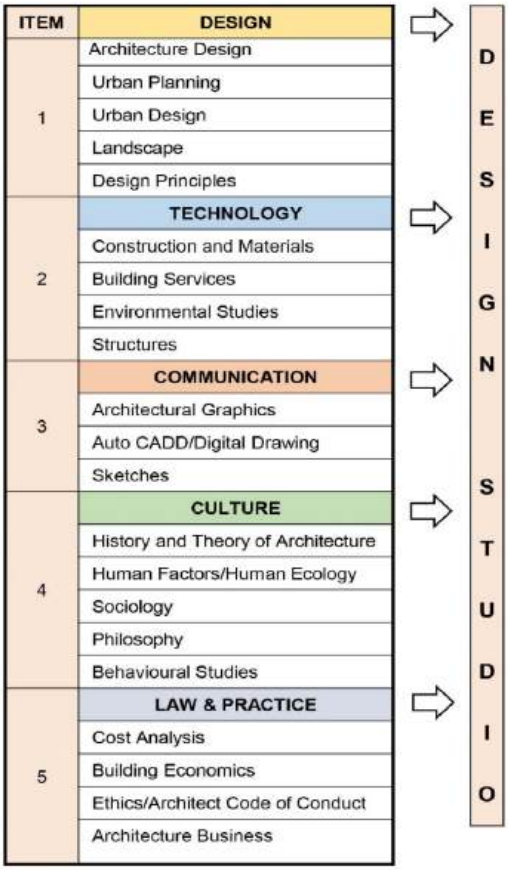

Figure 1: The Components of Architecture Syllabus (Source: Lembaga Arkitek Malaysia Manual, 2013)

Thus, any architecture program needs to be tailored to the route of getting accredited. During the establishment of the programme, the programme proposal has to be submitted to the MQA and LAM. Any feedback on the submitted document will be adjusted to suit the favour of obtaining accreditation. According to the guideline, as proposed by LAM, the category of courses according to its cluster (Figure 1.0) strengthens its connection with the studio, termed mapping. Each of these clusters will channel knowledge in the design studio shown through student works, whether students truly understand construction techniques through drawing sections, the conventions they learn in graphic communication, architectural drawing, or any structural analysis logic indicated in the drawings or otherwise. These are the basic visual judgement to evaluate the understanding of the student's work in architectural design. Although the clusters determined the interrelated courses to support the ability to design, sometimes the courses are electives that led the student to skip taking the courses. If we judge from the cycle of the interrelated courses in the

mapping, it is still inherited the Modernist tradition disseminating against the core of architecture teaching. The root of Architecture that emphasizes the language may deviate from its essence due to the incapability of the lecturer in interpreting innovation according to his or her understanding.

5 Discussion and Conclusion

The educational route and content that fulfil these immediate demands and, at the same time, highly anticipate the future needs of the industry do not provide a clear paradigm.

The interview with some graduates in architecture indicates that they have high expectations of their role in society and even proudly say that they may help to change the world and the surface of the earth through their designs. This statement is aligned with Bermudez's (1999) idea of the future shown through images. If the future is relying on spinning the inherited knowledge without going to surpass the extrapolation of the current wildest trends, then the evolutionary leaps are obscured. A future plan has to correspond with the pace of contemporary progression; otherwise, there is no purpose to human action. Surprisingly, architecture education in Malaysia is similar to any other teaching subject where the handing down of the existing knowledge to the next generation is routine. On the other hand, political and economic situations may encumber or slow down the intentions, and even the critics of opposition parties in Malaysia said that it is better to be a burger seller with a promising income as compared to spending time and money for five to six years completing architecture degree and receive a salary of 1,500 Ringgit per month (equivalent to 360 USD).

Radical changes in the teaching of architecture by rethinking the core of the discipline permissible to suit the present trend and demand of the industry became another aperture in the methodologies of teaching. Disciplinary attention from the roots of architectural language to the integration of each course until the final product of design becomes an example of

inquiry in the learning process.

Architects still believe in conjecturing the future through images and imagination. On the other hand, the new vision of learning does not entirely rest on skills and knowledge. The industry only assumed that knowledge taught in school is regarded as theoretical, academic and implicit. Fisk (2017) clarified that the scope of education is essential for it to align with technologies and humans. The emergence of the present through modernism in architecture exhibits the continuity of hopes for the next generation. Architecture must evolve and must not be lost out to other disciplines. The level of knowledge of the lecturers and critical pictures through the imagination of the students rely heavily on the syllabus and curriculum of the programme.

Lecturers in Malaysian institutions of higher learning play a huge role in allowing interactive learning and are equipped with the latest trends and knowledge and should not be underpinned by restricted pre-set courses with outdated theories. The trend of architectural technologies and progression through digital discourse and conventions as that of the pre-pandemic world inculcates awareness as well as peer learning processes over the years.

The very instantaneous worry is the level of knowledge of lecturers who teach the Architecture program at the university in Malaysia. Lately, it has been a leadership position at the university for those who have obtained a Professional Practice Examination. They are considered qualified practising architects after spending five years in architectural education, two years of working experience and sitting for the "Part Three" Examination conducted by the Architectural Examination Council of the Board of Architects Malaysia. Can we equate these practising architects (those with Part 3 Examination) as good teachers as compared to those who had gone through five-year architectural education, plus another year or a year and a half for a master's degree in a specialized field and a doctorate in a pure research work of a specific architectural topic as not a good teacher due to lack of exposure as practising architect?

Thus, there is confusion among the university administration to recruit the new lecturer and the "impetus" insolence of the industry to push these practising staff presumptuously injecting the spirit of entrepreneurship into education hampering the objective of continual education pedagogy in architecture. Henry Cobb (1985) of the Graduate School of Design at Harvard said that practice-oriented character seems to devalue architecture as a discipline. On the other hand, the Director General of the Public Work Department of Malaysia in 2013 reminded us that the change in nomenclature from B. Arch to M. Arch must be seriously observed so that the content of the syllabus truly reflects the quality of the post-graduate degree that emphasizes the subject of Architecture. The reform of the syllabus as indicated in Figure 1.0, fulfilled a vital source of nourishment of both academics and industry judging from the distribution of courses by cluster in line with the design studio. On the other hand, the structured curriculum toward accreditation goals may not develop the scholarly direction or advancement of the architecture discipline. Instead of producing scholars, we are producing technicians by spinning the old program over and over again.

6 Availability of Data and Material

Data can be made available by contacting the corresponding author.

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