# TOWARD A MORE ENTREPRENEURSHIP ARCHITECTURAL EDUCATION IN MALAYSIA

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## ABSTRACT

This article on entrepreneurship architectural education is to establish the important of entrepreneurship education in architectural curriculum structures as a result of current challenges facing the profession and based on students sustainable educational need to prepare them for professional career in a highly competitive economic driven society. The apprehension about the leadership position of architects in the construction industry and future of the profession has been growing in recent years. This phenomenon is fuelled by the recent economic recession and contextual debates that the existing curriculum structure of teaching and practicing architecture may not be appropriate to address the challenges of tomorrow, this call for a food for thought. Integration of entrepreneurship education in higher education has emerged in different educational contexts as a way to develop an entrepreneurial culture, to promote enterprise, to create new ventures, and to foster entrepreneurial mind-set through education and learning.

Examine the current educational system of architecture in Malaysia, as it relate to the need for entrepreneurship education and the influence it has on graduates of architecture. Developing a sound theoretical knowledge on entrepreneurship as relates to architecture, employment creation and sustainability. Some of the questions raised are; what does entrepreneurship education has to do with architectural profession? What is the need for architect to acquired entrepreneurship education?

This article recommends the establishment of more training programs related to entrepreneurship, the review of current curricular to indoctrinate entrepreneurship consciousness at all levels of architectural education.

**Keywords**: Architectural education, Entrepreneurship education, integration, Curriculum, Malaysia.

## Introduction

The global problems of poverty, unemployment, socio-economic and political instability situations pose great challenges to the survival of every citizen in any given society. There is a crucial requirement in every nation for creativity and innovation which called for entrepreneurship in all our unique talents we all independently possesses (Riata, 2012). Encouragement of entrepreneurship has

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become a topic of highest concern in every strategic policy of many nations (Luthje and Franke, 2003). In respect of this, entrepreneurship education in higher educational institutions is been promoted worldwide as a channel for educating and developing students for an entrepreneurial career and enhancing them with the necessary skills and competences to compete in a rapidly changing economy (Tessema, 2012; Matlay, 2006; Matlay, 2008). Unemployment is also a major factor for the growing recognition of entrepreneurship education development in higher education institutions (Yusof et al., 2010).

As a result of this economic meltdown which affects all professions, Brian, L. (2011) suggests that there is a need to restructure and reposition all professions toward the current challenges and sustainability. In addition to this, the architect's creative ability needs to be rechanneled for a better innovative and adaptive creativity to be more relevant in the present economic driving society (Mark, 2009). Creativity and high intellectual imagination ability are keys requirements in an architectural education, these key requirements have not contributed positive effect on the increase in employment rate among the graduate of architecture (Masud, 2005).

The design education should be redirected to the development of an ethical designer, one who could think and radically "design out design that delivers societal problem (Azlan, 2009; Fry, 1993; Edward, 2002). The introduction and integration of entrepreneurship education into architectural curriculum can help usher a promising future to young architects of tomorrow.

The main purpose of this article is to propose an integrated framework of entrepreneurship architectural education which takes into account the linkage between architects and entrepreneur. In doing so, discussion is central on the need for entrepreneurship education in architectural curriculum and its significance to graduate employment creation, societal development and national economic development. In addition the article also highlighted some important fundamental pedagogical issues as relates to architecture in our higher educational institutions. It further recommends some future strategies to improve the integration of entrepreneurship education in Malaysian architectural education.

**Background of the study**

Entrepreneurship is often understood to be for business discipline students but not for technical students. Innovative elements of entrepreneurship are such as assessing opportunity, emerging new products, and managing start-ups are fundamental components of most business management programmes. "As for technical discipline students interested in creating their own business organization after graduation, they seem to be left in the dark although in many cases they are the originator of product ideas" (Ahmad, F., el al., 2004,). The key creativity and high imaginative capacity of architects need to be redirect for more economic development in term of more job creation.

Entrepreneurship educations have been actively put into effect in most universities and higher leaning institutions in many counties, but the introduction of the entrepreneurship programmes varies across every nation. According to the study of (Charney, & Libecap, 2000), understand that entrepreneurship education varies across colleges and universities, from offering single courses in business

development or business plan preparation to integrated curricular that include marketing, finance, competitive analysis, and business plan development. But on the contrary, Gibb (2001) and Kirby (2002) said that, the core entrepreneurial skills and competencies are essential for pursuit of effective entrepreneurial behaviour, individually and collectively.

Increasingly, institutes are recommending enterprise-oriented professional development amongst members, to promote development and economic sustainability of their professions, via innovation, and entrepreneurship in the face of global competition (Robert, et al., 2009). In addition, professional bodies are recognizing the need for a more enterprise-aware/enterprise-equipped orientation and on the side of students, graduates can no longer expect to find the traditional job, but instead expected of them to take more personal responsibility for employment and financial affairs. Therefore, "Flexibility and creativity have become necessary skills"; therefore, there exists an obligation to meet students' expectations with regard to preparation for the economy in which they will operate.

The insight for this paper was as a result of conflict in our educational creativity and real world creativity requirement which bring conflict in the employment capacity of the graduating students in higher education institutes (HEI). The educational tests that we take, which determine many of our future educational opportunities are known as standardized tests (Stovall, 2007). According to Kevin (2007), in real world, the superstars are creative, unique, and out-of-the-box thinkers and these people challenge standards, normality, and conformity. Unfortunately for many architectural graduates discover that academic curriculum creativity are not enough to sustain them in the real world. However, this call for the need for an entrepreneurial Architect, who can evolve, expand, grow and reclaim his profession and take control of his destiny and modernize the practice of architecture for the generations to come.

## Architectural Education in Malaysia

Globally, it has been established that change is the only permanent thing in this world and development is inevitable. There is no doubt that our society or environment is not stationary but constantly undergoing dynamic changes which signifies growth and development (Olotuah and Adesiji, 2005). The standard of architectural education curriculum content determine standard of intellectual capacity and quality of the future architects, who's directly impacts our build environment (Findeli, 2001). There can be no responsible design without a responsible designer which implies that, there is a need to develop business conscious designer, one who could think and profoundly "design out design that provides solutions to environmental problems" (Abdul-Wahab, 2003).

Architectural programme in Malaysia was designed at the onset, to meet the challenges of modern architecture and relevant to Malaysian's national needs and aspirations, as well as meet current technological developments (Shari and Jaafar, 2006). In Malaysia, the Board of Architects Malaysia (LAM) and the Malaysian Institute of Architects (PAM) are two organizations that coordinate and have the statutory power to determine the standard for entry into the architectural profession and the accreditation of programmes of study in various schools of architecture in

Malaysia. In respect of this, the Council of architectural Education Malaysia (CAEM) was created under the supervision of LAM to regulate all matters relating to architectural education (LAM, 2005) while, PAM is a professional body representing architects in Malaysia with several corporate active role to coordinate, facilitate and advance the development of excellence in architectural education in Malaysian institutions; and to educate the future architects in preparing for professional practice in the construction building industry (PAM, 2002).

The Malaysian Architectural Education curriculum is fashion after the British system of architectural qualification process and requirement. The LAM Part I and Part II equivalent to RIBA Part I and Part II respectively and graduation from schools of architecture accredited by LAM, such graduates are automatically exempted from LAM Part I and Part II examination. Two years of post graduate working experience under the supervision of a registered professional Architect is a requirement for LAM Part III professional practice examination which finally determine full membership professional Architect (LAM, 2005). The professional regulatory bodies has recognized the important of economic sustainability and advancement of the profession by way of teaching relevant course in architectural curriculum as it has been indicated in LAM's Policy and Procedure for Accreditation of Architectural Programmes, the recommendation was concluded as:

*Intellectual capacity to develop architectural designs that satisfy both Aesthetics and technical requirements and which aim to be environmentally sustainable; Capacity to understand the basic principles of business management and factors related to current and emerging trends in the construction industry such as partnering, integrated project process (entrepreneurship), value engineering and risk management. (LAM, 2005).*

This has justified the acceptance, recognition and acknowledgment of the significance of entrepreneurship education in architectural profession. The most crucial bone of contention is the appropriateness of integration and implementation, which is currently receiving different reaction in term of teaching methodologies, assessment criteria and proportion of entrepreneurship education to integrate with already condensed architectural curriculum (Nguyen and Pudlowski, 1999).

## Current challenges in Architectural profession

The architectural profession now exists in a great period of change, so there is need to progress with the changes and impact positive changes on the current and future practice of architecture as a profession. The architectural service to clients and society in general are limited in the past, when project where developed simply to house and provide shelter but now services provided by architects are fast changing into a complex demand. So there is need for architect as a professional to modify his service to respond to the current challenges facing the profession. The challenges identified by Piper, and Rush, (2006) are as follows:

1. Competition from other related professions such as engineering, Building, Quantity Surveyor, and Estate Management etc.
2. Diversification: the need to move the profession into a multi-disciplinary profession.

3. Sustainability in every aspect of design requirement such as in socio-economic, energy, material and maintenance.
4. Technology and telecommunication advancement.
5. Redevelopment, Rehabilitation, and renovation are the new order of the day, where old building to new uses is replacing new project construction.
6. Availability of land on which to place the building are continuously changing:
    (i)    Less and less open land is available for conduction in most Central Business District of most cities.
    (ii)   Relocation and demolition are replacing new construction.
    (iii)  Zoning and other land-use regulations are becoming more rigid.
    (iv)   Transportation facilities are seriously having more consideration on the use of land resources.
7. Financial consideration is now a major determinant factor in building design and it is construction.

All these challenges are contributing to the rate of unemployment in the profession. This simply means there is need expand our professional service to suit economic demand of our society and discover the business component of architecture, by concretising the entrepreneurial initiatives and skill development in our educational curriculum structure. According to Anthony (2009), "Diversity is a set of human traits that have an impact on individuals' values, opportunities, and perceptions of self and others at work". This implies that creativity and innovation, design capability, technical skill, management skill, communication skill and most importantly excellent leadership quality are personality trait of a successful architect and he must be open to taking risks and see things from different perspectives.

**Current issues in entrepreneurship education**
The word entrepreneurship is "*the creation of new organizations*". Although definitions of entrepreneurship have been very inconsistent by various researchers, even though there are always common uses of words such as opportunity recognition, innovation, newness, organizing, creating and risk taking. Developing a worldwide accepted definition turns out to be difficult; however the proposed definition by Hisrich and Peters (2002) contains the most important elements: "*Entrepreneurship is the process of creating something new with Value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence*". According to Matlay, (2005) and Fayolle, Gailly, and Lassas-Clerc, (2006), noted that entrepreneurship is the most compelling economic force the world has experienced in the late two decades. They also recognized vision, passion, effort and risk taking as most important key word in creation and implementation of new ideals and creative solution.

Therefore entrepreneurship could also be defined in simpler term, as an entering, assess, opening into a progressive new line of process/ product or adding an innovative value to an existing process/product by way of getting monetary reward for the entrepreneur and contributing an improvement to the standard of

living of the citizen in the society. Nevertheless, most entrepreneurs show freedom and personal satisfaction as the most important personal rewards. In this context, how best can one describe an entrepreneur? Good number of scholars has described an entrepreneur as an individual has the following characteristics:

Creative skill, Innovative skills, Risk taker, Result oriented, Recognition, Strong personality trait, Self-confident and multi-skilled, Confident in the face of difficulties and most importantly total commitment traits.

Based on the characteristic qualities presented above, it clear that is just a typical reflection of an architect personality traits, so architect are entrepreneur who is yet to explore and discover their full potentiality of their creativity capabilities. So in this regard, if entrepreneur think like architect while not architect explore the dual advantage and take the initiative to act positively as an entrepreneurial architect. It is on this note that it is necessary to develop the business in architecture by way of integrating entrepreneurship education. The definition of entrepreneurship education also has never received common words just as the meaning of entrepreneur. Alberti et al., (2004), based on the definition adopted by Fiet, (2001); define entrepreneurship education as the structural formal conveyance of entrepreneurial competencies, which in turn refers to the concepts, skill, and mental awareness used by individuals during the process of starting and developing their growth oriented ventures. This could be clearly recognize that entrepreneurship program is aimed at developing entrepreneurial skills in students by way of inspiring, motivating, confident and competencies to become an entrepreneurs in future.

**The importance of entrepreneurship education in architectural profession**
Currently majority of young graduates of architecture are still seen the architectural profession from the traditional approach of design and construction only. Basically this is the primary cause of limited employment opportunities for graduating architects. There is need to diversify and specialise in the various entrepreneurial opportunities embedded in the profession such as Interior design, landscaping, furniture, fashion, tourism, and fabrication (aluminium and metal works). There is need to identify new opportunities against all the odds, challenges and threats facing the existences and survival of profession. Entrepreneurship education is needed to develop and refocus the creativity capability and analytical problem solving mind of young and old architects into commercialisation of their product (design) which will create more jobs and contribute to the economy development of the nation. Basically the importance for entrepreneurship education in schools of architecture could be outlined as follows:

1. Professional diversification: Lack of diversity in architectural profession impedes progress not only in the field but to the built environment. Architects need to pay greater attention to the diverse society it served.
2. Create employment opportunities: This has been one of the factors that made entrepreneurship popular in HEI and it is contribution to economic development of most countries. Opening new business opportunities by

which architect will go long way not only for economic gain of the architects but also for all others in built environment and society in general.

3. Channel for professional sustainability: Sustainability is the capacity to endure and survive as a relevant profession in the current highly competitive society and measuring up to professional responsibility. Entrepreneurship will open more ways of sustaining the profession, this entails many forms from controlling built environment, reappraising professional work practices by way of discovery new opportunities such as tourism, fashion, agriculture and using new technologies. All this new opportunities will not only sustain the architects as professional but equally add economic value to the nation.

4. Self-employment: Entrepreneurship is all about self and self. It serves as a platform for self-sufficient, self-reliance, self-satisfaction, self-realization, self-fulfilment and discovery of one personality potentials are all rewards and desire for an entrepreneurship (Sang, et al., (2008). Anderson (2008) confirmed that, self-employed architects appear to experience greater job satisfaction than employed architects.

5. Professional relevance: professional relevance is all about how importantly, connected, or applicability of the architectural profession to national goal. Professional relevance is the most important word on the path to leadership. So if architect must remain as the leader of building team we must significantly show both socio-economic and political relevance in building industry and in accordance with the nation aim and objectives. Relevance is a tool or state architect must establish to lead.

6. Professional Flexibility and adaptability are the quality of being able to perform, facilitates achievement and accomplishment as a professional. Architects need to think and act as an entrepreneur in the present economic dynamic society of today. Only entrepreneurial architects with the following qualities flexibility, versatility, resilience, variability, convertibility, changeability, adjustability, compliancy, modifiability, adaptableness and vision to identify opportunity and take action with his creative capability immaterial of recourses, that can survives the present economic dispensation.

7. Increase level of income: entrepreneurship also helps the economy by creating wealth for many individuals seeking business opportunities. Although this is not the absolute reason for individual engaging in entrepreneur activities, but research has proven that successful entrepreneurs are far more financial independent compare to the counterpart in pay job. Wealthy entrepreneurs create more jobs which has a resultant positive effect on our economy.

8. Freedom and job satisfaction: Evidence from various scholars have showed that entrepreneurship education enable (self-employment) individual to exercise greater control over the work and enhance job satisfaction as a result of increased autonomy, absent of hierarchy and opportunity to control working hours (Bradley and Roberts, 2004).

In the picture of the above points Wilson (2008), recommended the need to sincerely integrate entrepreneurship and innovation in the curriculum to inculcate a new entrepreneurial spirit and mind-set among students.

**The need for entrepreneurship in architectural education**

The provision of education is a dynamic investment in human resources, which is a collection of skills and knowledge acquired through training. Every country invests on education, especially at the tertiary level, in order to uplift the educational success of their labour force. The problem of graduate unemployment and global economic recession are basically the causes of the proliferations of entrepreneurship in HEI. A study conducted by Karissa, (2012) released by Georgetown University's Centre on Education and the Workforce states that, architecture graduates have the highest rates of unemployment from Census Bureau's American Community Survey (2010). The study analysis is illustrated in figure 1 below.
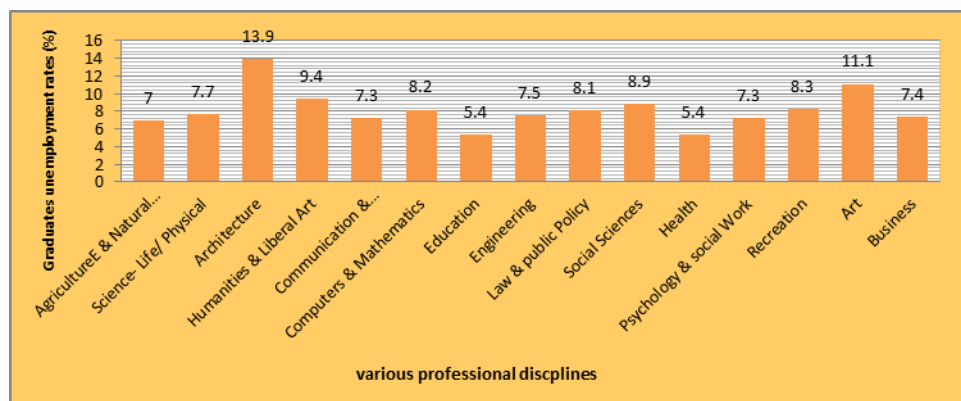


**Figure 1.** Professional discipline unemployment rates of graduates.
Source: Census Bureau's American Community Survey (2010).

Unemployment rates for recent college graduates who majored in Architecture start high at 13.9 percent and, due to its strong relationship with the collapse in construction and housing, unemployment remains high even for experienced college graduates at 9.2 percent (Carnevale, Cheah, and Strohl, 2012). Employment patterns among graduated architect's were of the opinion that the current graduates employment opportunities will improves as nations recover from economic recession and construction in particular has been known to be a symbol of buoyancy economy and economy indicator.

The situation in Malaysia is slightly similar as it was revealed by the Minister of Higher Education in 2009 that, out of the 170,000 graduates produced yearly since 2006, 30 % of these graduates were still unemployed (Azlan, 2009). In addition to this, a report prepared by the National Economic Advisory Council (NEAC) on the New Economic Model (NEM), also noted that, about 25% of graduates from public universities remained unemployed six months after completing their studies in 2008 (NEAC,2010). This is contrary to the objectives of Ministry of Higher Education, to produce competent graduates to meet the needs of the national and international workforce with the aim that 75% of the graduates will secure jobs in the relevant fields within six months after graduation (MOHE, 2004). According to Yusuf, M.,

Rohani, and Zulina, Y., (2009) study, showed that in 2008, 24 % of Malaysian graduates were unemployed as illustrated in figure 2, 3 and 4 respectively below.
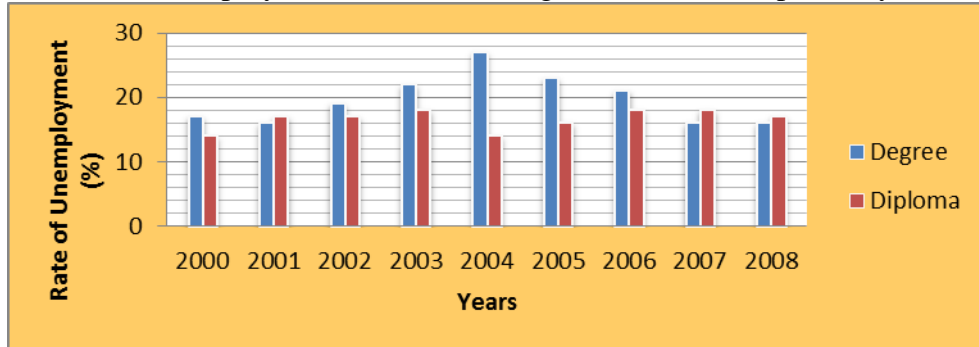


**Figure 2.** Unemployment rates of diploma and degree graduate in Malaysia.
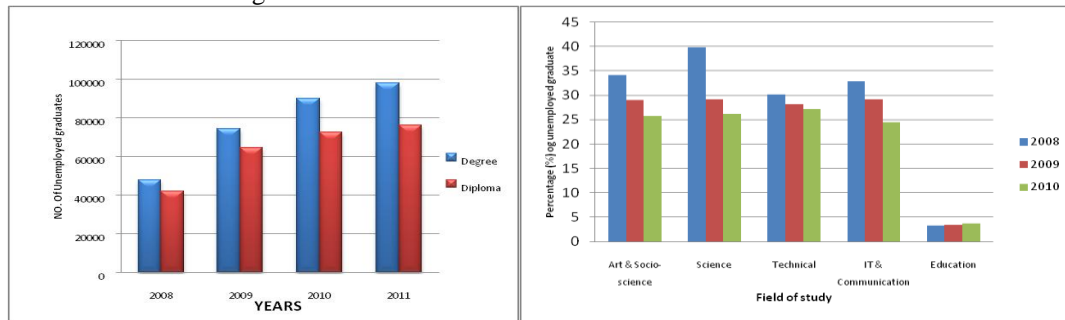Sources: Minister of Higher Education statistical data 2011.



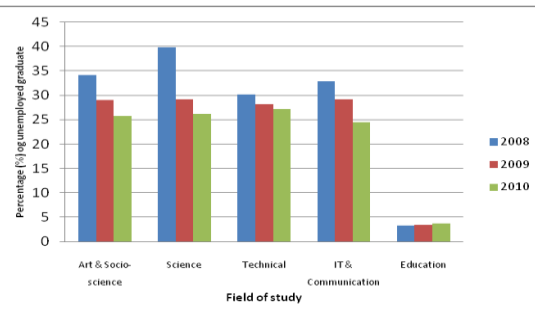| **Figure 3.** Graduate unemployment for period of 2008 – 2011 in Malaysia. | **Figure 4.** Employed graduates for period of 2008 – 2011 in Malaysia. |
|---|---|

Sources: Minister of Higher Education statistical data (2011).


Furthermore, a different survey study conducted by Federation of Malaysian Manufacturers (FMM) confirmed that, lack of industrial training and poor language proficiency (English language) are among the major contributing factors why graduates are finding it difficult to get employment offers and other contributing issues are lack of problem-solving skills, quick financial gain, job-hopping and lack of self-confidence, as supported by Prof Dr Mohd Fauzi Ramlan, Director of affair, Higher Education Ministry Student Development (Azlan, 2009).

**Issues in entrepreneurship education in architectural schools in Malaysia**

Based on the literature reviewed, the need for more entrepreneurship education in higher schools of learning in Malaysia is well supported by the Ministry of Higher Education. Despite that, many schools have not developed a clear structure on how to integrate these issues into the curriculum. Most schools of architecture tackle the problem by offering targeted electives on entrepreneurship, or by adding more information to already overburdened course structure. Some students are of the opinion that it is just a fashion trend which will soon face out. Some architectural educators are of the viewed that, Architects are not business administrator or business manager and should not concern themselves with business issues or venture related ideas. Many still fall short of see the importance of entrepreneurship in the professional practice of an architect. The base argument was that starting business and managing is a specialised area of domain where some professionals are trained in business administration and management and architecture is a pure technical

profession which deal with creation of built environment (Kamalapurkar, 2002; Hodgkinson, 1990). As a result of this, various architectural education survey and studies are ninety percent (90%) related to pure architectural issues with little or no consideration for commercialisation of the idea to market place (Abdul-W., 2003).

In addition, Greater emphasis is placed on the architectural design module than the other modules, and more than 40% of the required credits for the degrees are earned in the studio for most schools of architecture in Malaysia (Ahmad et. al., 2005). This showed that more attention is paid to the design studio in the entire architectural educational programme which means, any student with weak design ability is an overall failure. From the analysis of Ahmad, (2005), confirmed that the curriculum gives more importance to design and technological based subjects at first year and communication and professional practice courses are giving lesser priority at this level as illustrated in figure 5 below. Electives studies are introduced in the second year with broader preferences to theoretical, technological and professional practice courses respectively.
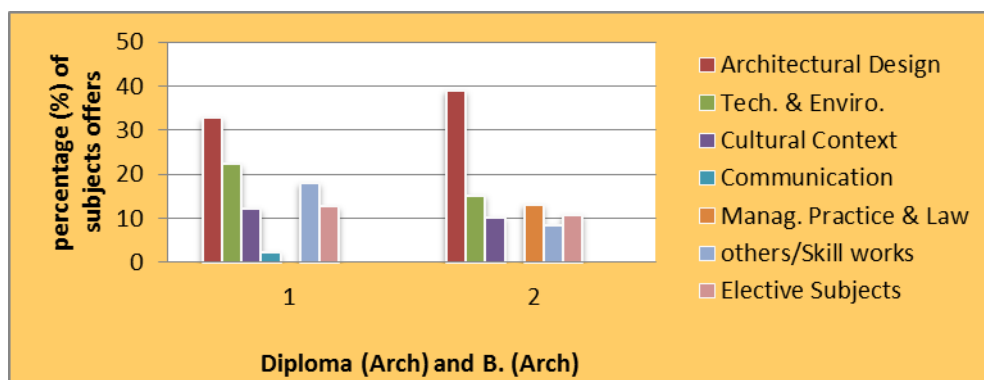


**Figure 5.** Percentages of subjects offer in the two degree of awards in architectural programme. Sources: Ahmad (2005)

## Theoretical framework for development of entrepreneur architect

The development of an entrepreneur has created a lot of arguments as whether is possible to train and develop graduates to become entrepreneur or is not possible to produce them within institutes of higher education. The articles of the following scholars (Matlay, 2006; Taatila, 2010; Li and Liu, 2011) recognised that entrepreneur can be develop and further established a theoretical framework consisting of four primary areas, where and how successful entrepreneurs can be trained. The identified areas of considerations are skills development, behaviour, mentality, and personality. He said, personality traits are difficult to influence but majority of knowledge required by entrepreneurs can be taught. This goes in accordance with the Watson (2000) position statement that, individual entrepreneurs are born, but enterprise entrepreneurship skills can be developed.
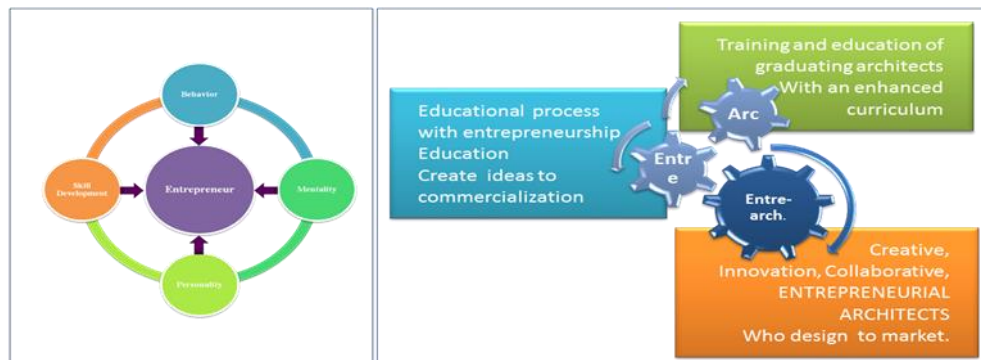
**Figure 6.** Frameworks for development of entrepreneur architect.

Based on the discussion and established understanding of the meaning of entrepreneurship and entrepreneur and how to develop an entrepreneur within the established framework, this lead us to entrepreneurship education. Many studies showed that entrepreneurship education does play a significant role to cultivating entrepreneurship spirit among graduates (Yasin et al., 2011).

**Ways of integrating entrepreneurship into architectural curriculum:**

- ❖ To successfully embedded entrepreneurship into architectural education, it is important to have competent and qualified educator in the field of entrepreneurship.
- ❖ Entrepreneurship should be incorporated into the design studio at all levels.
- ❖ Architectural design brief should be drafted to have a module of commercialization.
- ❖ Entrepreneurship ideas should be emphasized in courses such as Interior design, Tourism, Photograph, Lighting and painting, modeling and so on.
- ❖ The use of modern teaching aids in mode of delivery, Case studies, visitation to successful entrepreneur workplace and role model seminars and conferences.
- ❖ University and industry collaboration by way of establish demonstration projects.

**Entrepreneurial job opportunities in architecture**

The question arises about what other job opportunities are available for young architects besides working full-time in a company from 8-5, or in many cases extended hours. There are many different types of job opportunities for graduates in architecture with self-employment status.

The Interior design job opportunities are vast and endless. The architectural base interior design comprises: affordable homes, residential apartments, small commercial outfits, event ground centres, primary/middle/secondary schools, community/technical skill training centres, apprentice training workshops, professional artisans, textiles and fabric outfits, trade shows, home offices, offices, lighting, store interiors, furniture, daycares, kitchens, baths, hospitals, hotels, motels, restaurants, factories, urban planning, landscaping, sustainable/environmental friendly buildings, modular/prefabricated homes, space planning, online design

services, renovating, decorating, interior of airplanes/ships, wedding stage sets, film/theatre sets, exhibition stands, photography, exterior and interior painting, film's producer, educators (academician), real estate, builders, sub-contractors, general contractors, facilities managers, construction safety managers, scaffolding manager, window treatments, and many more.

The business-Start-Up costs for small scale architectural self-employment architect could be financially smaller compares with other professions like engineering. The simplest and most cost efficient (free) location is to create a home office but be sure to maintain separation between work and living. Need for office is to give clients assurance for professional competences and doing legitimate business. Renting a place to start a business is also an option but weigh the cost because new businesses acquire clients slowly.

## Conclusions and Recommendations

There is no doubt that graduating architects need to think different and find their innovative ways to contribute to the society. The societal pressures, cultural background should not hinder them of come up with innovative business ideas. Additionally they need to develop more employment opportunities with their high level of creative skill abilities and capacity. Furthermore, there are more entrepreneurial opportunities in "green design". This is a new direction of architectural design opportunity which could produce a new line of innovative employment solution for the young graduating architects. If we can think, we can achieve and sky is our limit. The various points below are recommended:

- ❖ Create award of degree in industrial architecture to facilitate more practical skill development for the gifted students.
- ❖ The integration of entrepreneurship into architectural education should be concretized in order to produce professional entrepreneurial architects, whose will be able to discover innovative career openings in the profession.
- ❖ There is need to identify the objectives of entrepreneurship education to determine the most effective teaching methodology.
- ❖ Enhancement of conventional teaching method with modern approaches such as case study, group project, business plan, business simulation, video and interaction with successful entrepreneurs.
- ❖ Training of educator by capacity building with seminar, conferences, sponsorship for higher degree in field of entrepreneurship.
- ❖ Funding supports from both government and private Organization and companies.
- ❖ Competition Organization with appropriate rewards for Best Innovative entrepreneur as motivational incentives.

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