

AN ENTREPRENEURSHIP EDUCATION, TRAINING AND SUPPORT FRAMEWORK FOR SOUTH AFRICAN ARCHITECTS

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ABSTRACT

This article will report the findings of research undertaken to put forward an amalgamated education and training framework that has the potential to enhance the entrepreneurial functioning of South African Architects' firms whilst adding to the present-day dialogue on entrepreneurship education and training.

Some South African architects' firms are battling to stay afloat (Corbett 2015, 44). While there could be many reasons for this situation, the absence of fitting entrepreneurship education, training and support for architects could be a contributing aspect.

Significant agreement occurs between entrepreneurial education and training theorists that a phased methodology, that contains enacted learning is most suited for entrepreneurship education and training. Therefore, the article puts forward a framework as a structure wherein the education and training can be offered.

The study used a combined methods approach since a single source was considered inadequate and because the use of manifold phases or projects, could best realise the overall study objective (Creswell and Plano-Clark 2011, 8).

This article aims to bring the findings and recommendations to the attention of those who can put them into effect and to contribute to the conversation on entrepreneurship education and training.

Keywords: entrepreneurship education, entrepreneurship training, architects

INTRODUCTION

The function and importance of architects is changing, requiring adjustment from practitioners and education programmes in response to the changed social and economic situations, in order to stay relevant (Kievit 2015, 49). Corbett's statement (above) points to this struggle. The study that this article is reporting on determined that the profit margins of architects' firms are inadequate and that many are battling to meet their financial obligations. In addition to that only 52,2 per cent of firms have been able to build up substantial financial reserves (Vosloo 2017, 228).

Odile Decq is one of the eminent architectural personalities who believe that there is a need to prepare architectural students to function as architectural entrepreneurs (cited in Dezeen 2016, 1). The most recent edition of the American Institute of Architects' (AIA) publication, *The architect's handbook of professional practice* asserts that "twenty-first-century business realities require that entrepreneurial architects and their staffs develop skills in business management" (Klein 2014, xvi). Based on this belief, the current edition includes a segment titled "Entrepreneurial practice: Starting an architecture firm" (Choi and Klein 2014, 185) and suggests that a greater accent be placed on the prerequisite for "an entrepreneurial approach" when starting a new firm. The Royal Institute of British Architects (RIBA) asks if architectural education shouldn't feature entrepreneurial skills (Ostine 2013, 32)? In Germany, Tobias Maescher (2016, 4) cites four shortcomings in present-day architectural programmes at universities. These are the absence of multi-disciplinary projects, business orientation courses, soft-skills courses and entrepreneurship courses.

However, in South Africa, the South African Institute of Architects' (SAIA) Practice Manual pays hardly any attention to anything related to entrepreneurship (SAIA 2007). The situation is worsened by shortcomings in the education and training system. The study this article is reporting on discovered, based on an investigation into the content of architectural programmes in South Africa, the curriculum of the Professional Practice Examination used by the South African Council for the Architectural Profession (SACAP) and topics of Continuing Professional Development courses offered in the past – that entrepreneurship and related facets hardly feature during any of these phases (Vosloo 2017, 92).

Therefore, while architects' firms are not doing well, and there are continual calls for architectural education to adapt to changing circumstances and place a greater emphasis on entrepreneurship and business management in education and training offerings, this aspect is still a shortcoming of the South African Architectural education and training system. The study responded to this need by researching what such a framework for entrepreneurship education and training should include, and how it should be structured, given the already overloaded

education system.

ENTREPRENEURSHIP, ENTREPRENEURSHIP IN ARCHITECTURE AND ENTREPRENEURSHIP EDUCATION AND TRAINING

Entrepreneurship

Entrepreneurship can be regarded as a way of reasoning, understanding and proceeding (Timmons and Spinelli 2007, 79). Entrepreneurs and entrepreneurship perform an important role when the performance of national economies and businesses are analysed. This is important in so far as the creation of employment opportunities and economic development is concerned (Wickham 2006, 159; Kumar 2008, 8; Nieman 2006, 3). Despite this, a generally acceptable definition of entrepreneurship does not exist (Iversen, Jørgenson and Malchow-Møller 2008, 1; Nieuwenhuizen 2014, 9). Hence, for practical reasons the study used a definition based on that proposed by Fayolle and Toutain's (2013, 169). This definition regards entrepreneurship as a social and economic occurrence that can be found at the individual, organisational, institutional and societal levels. This phenomenon is driven by an entrepreneur who in doing so, generates and grows additional economic and social value.

Timmons and Spinelli (2007, 88) believe that there are essential elements that form the development of higher-potential ventures. Such ventures should:

- Be opportunity driven.
- Be driven by a lead entrepreneur supported by a team.
- Use creativity and apply resources cautiously.
- Require an appropriate mixture of the foregoing attributes.
- Be integrated and all-inclusive.
- Be resilient.

Pretorius and Wlodarczyk (2007, 509 citing Sánchez 2013, 447 and Vanevenhoven 2013, 467), hold that a wide agreement exists that entrepreneurship is teachable and does not hinge solely on innate traits. Nevertheless, the role of innate abilities and traits cannot be disregarded. Authors such as Hisrich, Peters and Shepherd (2005), McClelland (1986), Birley and Muzyka (2000) and Kuratko and Hodgetts (2007) regard these traits as critically important. Thus, though entrepreneurial attitudes can be learnt, individuals vary and some can rely on innate skills that will be advantageous for entrepreneurial action.

Entrepreneurship in architecture

Choi and Klein (2014, 185) are of the opinion that entrepreneurship has formed part of architectural practice for many years. To them, continuing adjustments in the profession have now caused a state of affairs where architects require business and managerial understanding and entrepreneurial attributes such as dexterity, a risk-taking predisposition and the skill to identify and explore opportunities. They believe that without these, the endurance and success of an architects' firm would be in question.

Because of the advantages allied to owning a firm, not only to the entrepreneur but to the wider society, newly qualified architects and students must be supported to go on their own as soon as they have built-up the necessary capacity. RIBA believe that a compromise between starting as soon as possible and holding back until adequate experience has been acquired, with a concomitant network of potential clients, must be drawn (Ostine et al. 2010, 78). McAsian (2005, vii) considers that firms should be established the moment the entrepreneur-architect(s) have enough experience. To him this would be when they have been in charge of the different work stages of a project while employed. However, Moreno (2008, 85) holds that it not possible to tell when the time is ripe to leave your current position and start your own firm.

Architects might be "pushed" (forced into it by circumstances) or "pulled" (attracted by the advantages of working for themselves) to start their own firms (Botha 2014, 34). Thus, despite the foregoing, circumstances or an opportunity appearing could lead to a situation where young architects have to take this step despite inadequate experience.

Piven and Perkins (2003, 6) and Foxell (2015, 2) believe that firms are most often started due to:

- Unemployment due to redundancy and retrenchment.
- The attraction of a higher income.
- The wish to attain one's own aims and to follow one's own interests.
- Being able to balance personal and professional pursuits.
- Having more control over questions of personal importance and greater design freedom.
- The opportunity to perform the full scope of architects' services.
- The lifestyle associated with working for oneself.
- Working with likeminded colleagues, spouses and friends.
- The quest for artistic freedom and opportunity to develop one's own design signature.
- The search for greater independence and to maximise the benefits of one's own creative strengths.

From the above, the case for starting a firm is compelling. However, architects may want to or be forced to do so, before they are ready, as described above. This emphasises why entrepreneurship education and training are necessary to provide guidance and support for these and other entrepreneur-architects. Moreno (2008, 82) points out that start-up architects will have to take many decisions and choose between alternatives. According to her, this will require strategic thinking and careful planning because choices made at this stage could have long-term implications.

While the field of entrepreneurship, in many instances, is characterised by differences of opinion, it is widely regarded in the literature that the entrepreneurial processes must follow from a recognised opportunity. Starting a new firm in pursuance of an identified and feasible opportunity or “gap” is valuable for the on-going accomplishment of the firm (Timmons and Spinelli 2007, 88). Should the identified opportunity constitute an attractive, appropriate, robust one that is of a kind that will benefit future clients; and if the entrepreneur-architect(s) are able to develop a way to work the opportunity that could be feasible, then the first steps in designing the new firm can commence.

Foxell (2015, 3–7) believes that the process must start by analysing and developing the plan of going on your own. Various authors suggest starting this procedure by articulating a mission and vision statement for the future firm (Kogan and Bobchek 2014, 205; Foxell 2015, 16–17; SAIA 2007; Pressman 1997, 77; Kaderlan 1991, 18). Kogan and Babchek 2014, 205 hold that the start-up architect must clearly articulate what the intention with the new firm is, i.e. the mission statement. The vision statement, on the other hand, should articulate what the firm would like to develop into. This will allow those who must plan the firm to “begin with the end in mind”. This is where Entrepreneurial Orientation (EO) becomes relevant. EO refers to the strategic stance and acts, developed by entrepreneurs to realise their business’s purpose and maintain its vision while creating a competitive advantage (Vosloo 2017, 15).

The requirement of pursuing a viable opportunity is followed by the requirement to differentiate the proposed firm from competing firms (Vosloo 2016, 18). Focussed differentiation can enable an architects’ firm, that has an established proficiency or skill, to combine it with the potential added value they can offer, to increase the fees commanded (Johnson Scholes and Whittington 2008, 226; Vosloo 2016, 19) The greater the level of differentiation, the higher the fees the firm can command.

Other important decisions that the entrepreneur-architect(s) will have to take include setting goals and objectives (Foxell 2015, 3–7). According to Foxell, the process will require time allocated to development and preparation. However, the need to respond to an available opportunity in a timely way might not leave time for this.

Before finalising the decision, the entrepreneur-architect(s) should conduct an initial feasibility study; the initial ideas must pass through a range of tests. The tests must address the three issues of sustainability; economic, social and environmental sustainability.¹

Thereafter, they should follow the process of outlining and developing the business case as a required precursor to the writing of a business plan (Foxell 2015, 17). The proposed firm's context must be considered as part of the firm design process. Thus, the process should include an environmental analysis for instance a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis. Possibly, this could already have taken place during one of the earlier stages where it could have been used to identify an opportunity and ways of exploiting it. The appropriate style of practice, mitigation of risk, funding and the terms and conditions of partnership (Articles of Association) must also be explored, where possible with the use of financial and legal advisors. Other decisions that must be taken at some point comprise the firm's values, culture, design culture, management structure, operating procedures, practices and policies (Vosloo 2017, 60; Foxell 2015, 22–25).

Once the required decisions are made, the process of preparing a business plan can begin. Business plans are regarded as a very important aspect in all entrepreneurial guidelines. They constitute a “work in progress” type of document. In addition, business plans are required by various stakeholders and organisations, particularly as part of funding applications (Foxell 2015, 25).

Foxell (2015, 25) and most entrepreneurship specialists regard the preparation of a good business plan as essential (Choi and Klein 2014, 195; Moreno 2008, 86; Piven and Perkins 2003, 174). Foxell believes a business plan is required because:

- It provides the chance to examine and articulate exactly why a new firm has been set up, what the founder(s) is hoping to achieve, and the income that could be expected.
- It forces the founder(s) to examine the logic used thus far.
- It enables advisors to evaluate the proposals and give guidance.
- It acts as a base for loan applications.
- The plan constitutes a basis for measuring progress and instituting corrective action (if necessary).
- The plan can explain to outsiders the firm's status, intentions and financial requirements.

Following the completion of the business plan, the implementation and launching process can begin.

Entrepreneurship education and training

Entrepreneurship education and training encompasses academic education as well as formal training interventions (Valerio, Parton and Robb 2014, 41). It has the broad intention of creating in individuals the mindsets and skills required for entrepreneurial activity and to inspire and boost the quality of various entrepreneurial and associated executive actions. Once again, a generally agreed theory or definition for entrepreneurship education remains elusive (Baptista and Naia 2015, 339).

The academic conversation on entrepreneurship education and training is vigorous and vibrant. In 2005, B  chard and Gr  goire (2005, 22) were able to compare 103 related peer-reviewed articles. Their analysis discovered that the themes can be grouped into the following broad areas:

- The socio-economic advantages that entrepreneurship education and training offers individuals, society and higher education.
- Systems and frameworks for entrepreneurship education and training, including content matter and modes of delivery.
- The importance of acknowledging the aims and needs of students when designing offerings.

Despite the fact that in 2005, as many as 103 articles were included in the above analysis, Pardo (2012, 2), citing Carayannis, Evans and Hanson (2003), states that entrepreneurship education and training is but in the initial phases of development with little agreement concerning content or methodology.

Entrepreneurship education and training should be distinguished from general business management education (Valerio et al. 2014, 22). According to them some of the most important differences from business management education are that entrepreneurship education and training includes the creation of specific mindsets and the skills required by entrepreneurs. The skills included are the socio-emotional ones such as leadership, risk propensity, self-confidence, creativity, resilience, motivation, and self-efficacy. Furthermore, entrepreneurship education and training include a general appreciation and understanding of entrepreneurship and entrepreneurs. It includes general business acumen but also the knowledge and skills needed to create and run a business. Management education, by contrast, prepares participants to function inside existing businesses and management structures. A degree of overlap exists but entrepreneurship education and training include the problems associated with the entrepreneurial process (Valerio et al. 2014, 22). Kuckertz (2013, 63) believes that

entrepreneurship education and training must furthermore cover negotiation and selling skills, creative thinking and aspects that often are not part of general business management education such as leadership and people management.

Rauch and Hulsink (2015, 187), having researched the success of entrepreneurial education, hold that students who went through entrepreneurship education developed greater entrepreneurial ambitions. However, not all researchers share this emphatic attitude.

Valerio et al. (2014, 3) hold that the outcomes of any entrepreneurship education and training programme will be substantially different. They believe that a programme's outcomes will be determined by the programme's characteristics, the needs of the attendees and its socio-economic, political and contextual characteristics (Valerio et al. 2014, 35).

Fretschner and Weber (2013, 423), in turn, suggest that the outcomes should be determined using to the following principles:

- Start off by creating an entrepreneurial attitude (mindset). Skill development could follow at a later stage.
- Develop students' self-efficacy and confidence that becoming an entrepreneur is an achievable goal.
- Include the positive and negative aspects of starting your own business.
- Include the use of entrepreneurial role models to give an experienced view of what it means to be an entrepreneur, thereby enthusing learners.
- Avoid indoctrination and explicit pressure; rather offer support and reassurance.
- Include intrapreneurship as an alternative.

They think that the need is for programmes with two distinct objectives:

- Firstly, to develop an awareness about entrepreneurship: This is a forerunner to entrepreneurial intentions.
- Secondly "start-up" education: The development and refinement of entrepreneurship skills (Fretschner and Weber 2013, 422).

A more detailed proposal comes from Kozlinska (2011, 207) who believes that the customary outcomes are to:

- Modify mindsets, increasing understanding and fervour for entrepreneurship.
- Imparting the skills required for the entrepreneurial process.
- Develop the knowledge, skills, techniques and ability to handle typical challenges and the

development of appropriate solutions.

- Prepare learners to operate in a dynamic environment.

Table 1 illustrates how this can be structured.

Table 1: Aspects of learning outcomes found in assimilated socio-economic and educational offerings (Kozlinska 2012, 12).

Learning outcome	Aspect
Mindsets	Ambition An enquiring mind Resilience and risk propensity Creative problem resolution
	Entrepreneurial disposition Self-belief
	Drive towards entrepreneurship Autonomy Dedication
Comprehension	Essentials of finance, accounting, computers, marketing, planning Looking for and recognising opportunities Entrepreneurship theory Starting a new business
	Entrepreneurship and creativity Resourcefulness Risk and risk mitigation
	The entrepreneurial personality
Abilities	Developing and maintaining human relations Management by objectives Market research and analysis The art of marketing and selling Lifelong learning Thriving in chaos Creative problem solving
	Business management Leadership and people management Finding creative solutions Opportunity recognition Relying on intuition during conditions of uncertainty
	Strategic planning. Risk management, risk taking and rewards

These outcomes should determine the goals, teaching methodologies and learning outcomes shown in Figure 1 and Table 2.

Table 2: The core aims of entrepreneurship education and training (based on Kozlinska 2012, 12).

Aim	Description	Manner	Learning outcome
To understand entrepreneurship	Entrepreneurship theory	CONCERNING	Comprehension
To become entrepreneurial/enterprising	The entrepreneurial process, entrepreneurial role models and opportunity recognition and evaluation	BY WAY OF	Mindsets
To become an entrepreneur	Starting, developing and growing a business.	TOOLS	Abilities

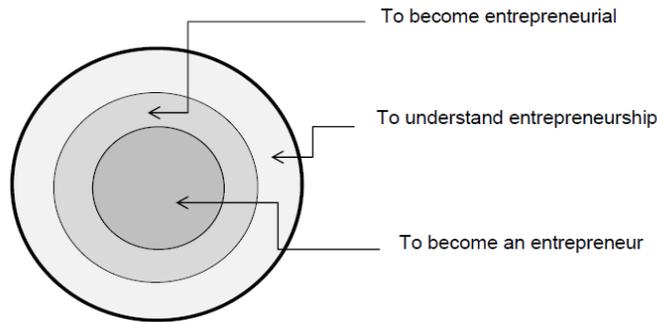


Figure 1: The goals of entrepreneurship education and training in order of priority (based on Kozlinska 2012, 21).

Valerio et al. (2014, 36) suggest that programme design should evolve from the programme's context, the participants' needs and requirements and the regulatory environment, coupled with previous experience. They also differentiate entrepreneurship education from entrepreneurship training in the following way: Entrepreneurial education aims at creating a positive disposition towards entrepreneurship while entrepreneurship training aims to impart the knowledge and skills required for starting or operating a business (Valerio et al. 2014, 2). Figure 2 illustrates this distinction.

They believe that the two types of programmes have unique objectives and are aimed at unique types of attendants or participants. Hence, offerings can vary from short learning programmes to formal academic programmes (Valerio et al. 2014, 46). They believe that a portfolio or framework combining both types would be beneficial because entrepreneurship education and training comprise many different aspects. Based on the above, they propose that a framework or portfolio could include different components for instance teaching and learning activities and support services, such as guest speakers, support groups, mentoring, opportunities to build networks, and inter-institutional collaborations (Valerio et al. 2014, 48). By implication this will require a variety of trainers, including academics and practicing entrepreneurs. It also implies different delivery methods and settings. This could also include online teaching and experiential learning.

Figure 2 indicates that the outcomes for entrepreneurship education and training offerings should be based on the needs and requirements of the attendees and the context of the offering. Also, there is significant agreement that education and training offerings should be combined into an encompassing envelope (Valerio et al. 2014, 35; Fretschner and Weber 2013, 422; Gstraunthaler and Hendry 2011, 125; Kozlinska 2012, 21). Thus, as suggested by Sánchez (2013, 459) and Valerio et al. (2014, 48) the different phases should best be combined to form a single framework.

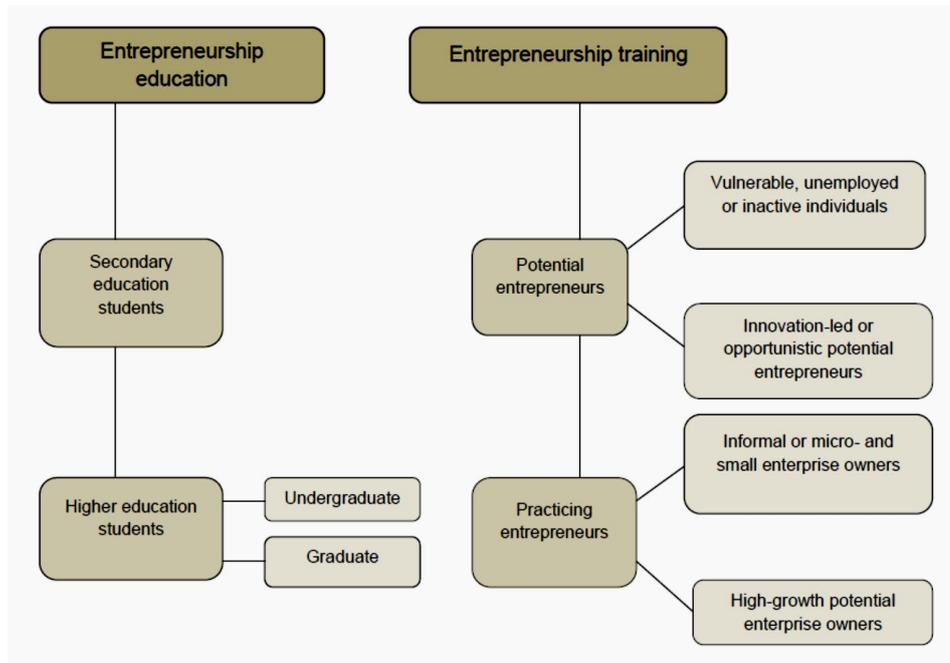


Figure 2: Differentiating between entrepreneurship education and training. (Valerio et al. 2014, 2)

Neck and Green (2011, 56) believe that offerings should teach entrepreneurship as a method. According to them, the method should go beyond simple understanding and knowledge. To this end, application, acting and practice should be incorporated. They regard the world as dynamic and ever-changing and that teaching a method will allow what is taught to remain relevant when many variables might change. What it means to think entrepreneurially is at the core of their understanding.

Hence, teaching entrepreneurship as a method necessitates doing, application and role-play supported by insight, knowledge and communication. Thus, it constitutes “teaching a way of thinking and acting built on a set of assumptions using a portfolio of techniques to encourage creating” (Neck and Green 2011, 62–63).

The value of learning by doing, experiential or enacted learning² is espoused by a number of authors such as Antonites and Van Vuuren (2004, 1), Williams-Middleton and Donnellon (2014, 194), Markov and Kuzmanovic (2011, 456), Pretorius and Wlodarczyk (2007, 505) and Maritz and Brown (2013, 554). Cope (2003, 429) proposes a process comprising doing followed by a time for thinking or reflecting on what was experienced. He believes entrepreneurship is best learnt during “learning events”. To him, learning depends on “significant, discontinuous events that occur during the entrepreneurial process”. Pittaway and Thorpe (2012, 840) explain that Cope believes in the value of a “lived experience” resulting in an intimate understanding of the business’s current situation. He believes that, because of this,

experiential learning should form an integral part of the entrepreneurial training process because there are important aspects of entrepreneurship that cannot be simulated in a classroom. This could be because of ethical obstacles or because it is simply impractical (Pittaway and Cope 2007, 230).

Valerio et al. (2014, 49) are of the opinion that continuous support for start-up entrepreneurs can greatly enhance the success of their ventures because it will help them overcome many of the challenges they might face. Support could include financial grants, mentoring, administrative support, technical assistance and peer groups.

The foregoing indicates that a phased approach, with the phases combined into a framework, is widely recommended. It is also suggested that in such a framework, the first phase should be aimed at changing the learners' perceptions, attitudes and mindsets about and towards entrepreneurship.

The next phase should aim at developing learners' socio-emotional expertise. The focus should turn to developing aspects such as leadership self-confidence, risk propensity, creativity, resilience, self-efficacy and maintaining interpersonal relations.

The third phase could then aim at growing the student into an entrepreneur. Hence it should work on developing the entrepreneurial orientation of learners. This phase should focus on imparting the competencies, knowledge and approaches required to successfully setup, nurture and grow enterprises.

Finally, a fourth phase offering a range of support services should be included. Services such as administrative support, mentoring, peer support and technical assistance could be offered. Furthermore, this phase of the framework should comprise elements of experiential learning coupled with a facilitated mentoring process. However, every aspect must be customised for the context, namely architectural practice in South Africa.

RESEARCH METHODOLOGY

As mentioned earlier, a combined methods plan was utilised. Creswell and Plano-Clark (2011, 8) believe that this approach is indicated in situations when a single research method is inadequate or situations where the overall research goal is best accomplished through numerous phases or methods.

The overall study consisted of a literature review followed by an empirical study. In turn, the empirical study involved both qualitative and quantitative investigations. Combined methods research, in this case, comprises the collection of both quantitative and qualitative data followed by the analysis of the data in a rigorous process (Creswell 2014, 217).

The combined methods research design used in this study was of the “convergent parallel

combined methods design” kind. Here the qualitative and quantitative studies were conducted simultaneously. Afterwards, the results of the quantitative process were amalgamated with those of the qualitative process through comparison and integration.

RESEARCH RESULTS AND INTERPRETATION³

The literature study made findings regarding the structure of the proposed framework (refer to paragraphs on Entrepreneurship education and training). It also found that the current South African education and training system comprises of three stages. These are university programmes comprising Bachelors, Honours and Master’s degrees, followed by a two-year in-service training period and finally a CPD intended to enforce life-long learning.

Findings of the quantitative study

The study used two questionnaires. The first questionnaire required of respondents to reflect on the coverage given to entrepreneurship and related themes in the education and training received during, and since, their university education. Thereafter, they were asked about the relevance of a list of themes that might be included in a future entrepreneurship education and training framework. Table 3 tabulates the results by indicating the percentages of “not covered/limited cover/insufficient” coverage, and applicable responses received for each theme.

It can be seen that respondents believe that most of themes are covered insufficiently. At the same time, respondents regarded these themes as “applicable”. Applicable themes should thus be included in a profession-focused entrepreneurship education and training framework.

Table 3: Coverage received and applicability of themes (Vosloo 2017, 290)

Theme	Insufficient coverage %	Applicable %
AWARENESS OF THE IMPORTANCE OF ENTREPRENEURSHIP		
Importance of entrepreneurship	90	92
The importance of entrepreneurial-mindedness	87	92
Benefits of a developed entrepreneurial attitude	87	90
ATTITUDES FOR ENTREPRENEURSHIP		
Entrepreneurial-mindedness	93	88
Advantages of being creative	22	94
Advantages of innovation	34	94
Advantages of pre-emptive thinking	57	93
Dealing with risk	79	86
The role of competition	67	84
Starting your firm	87	89
Causes of new firm establishment	89	87
Benefits of working for oneself	88	90

Theme	Insufficient coverage %	Applicable %
ABILITIES FOR ENTREPRENEURSHIP		
Finding an opening in the market	88	92
Creativity and innovation	42	94
Gathering means	93	91
Starting and nurturing your business	91	92
Risk	93	90
Compensation	90	85
Running the firm	87	93
ACCOMPLISHMENT		
Start-up goals	94	87
Aspects affecting performance	96	86
Measuring goal attainment	96	82
Measurement of performance	96	93
ESTABLISHING YOUR OWN PRACTICE		
Procedures	94	91
Articulating your long-term objectives	86	92
Your competitors	89	89
Firm survival	89	91
PRACTICE PLANNING		
Formats that can be used	53	93
Types of practice	86	91
Long-term strategy	82	89
Competing in today's environment	91	86
The practice's market position	92	88
The role of size and ethics	90	87
GIVING EFFECT TO YOUR PLANS		
Choosing your business model	94	90
Planning strategically	93	91
Entering the market	95	88
Drawing up your business plan	92	92
Finding support	91	90
ACQUIRING MANAGEMENT PROFICIENCY		
Managerial roles	83	91
Finding an opening	92	89
Management and leading	89	88
The challenge of a knowledge-based business	93	88
Business Strategy	94	88
Dealing with uncertainties	93	87
Organising your finances	85	88
PROFESSIONAL BACKING		
Experienced guidance	57	90
Enacted learning	56	89
Lifelong learning	63	89
ADDITIONAL THEMES		
Stimulating Small Business establishment	96	83
Government and other support	97	85
Legal matters	95	85

Theme	Insufficient coverage %	Applicable %
BBBEE	92	80
Support organisations	96	82
Entrepreneurial legislation	83	88
Opportunities in Architecture	94	89
Competing with other firms	93	86
Performance benchmarks	95	86
Resilience	95	88
FIRM MANAGEMENT		
How to compete	93	81
Policies and management styles	92	84
Financial management	93	87
Operations management	92	85
Risk management	93	85
Marketing management	92	85
Client bases and relationships	83	87
Fee determination and policy	66	87

Themes covered sufficiently, are the ones with fewer than 50 per cent “insufficient coverage” responses. Likewise, the themes that did not receive 50 per cent “applicable” responses need not be included. Only the remaining themes should thus be included in the proposed entrepreneurship education and training framework. They are:

Awareness of the importance of entrepreneurship

Arousing an appreciation of entrepreneurship and the advantages it can offer the country and individuals.

Attitudes for entrepreneurship

Education that aims to develop knowledge about entrepreneurship to give learners a general understanding and appreciation of entrepreneurship.

Abilities for entrepreneurship

Education for entrepreneurship; how to become an entrepreneur.

Accomplishment

Being an entrepreneur; assessing and improving entrepreneurial performance.

Establishing your own practice

The foregoing should now be turned into profession-specific education and training.

Practice planning

The design of the individual firm, including firm-types and business models.

Giving effect to your plans

Refining and finalising the original plans.

Acquiring management proficiency

Obtaining and developing the competencies and know-how that will help to implement your initial plans.

Professional backing

The support available from government and private initiatives and how to gain access to it.

Additional themes

These themes can form part of the formal education programme or continuous education offerings:

- Financial support offered to South African entrepreneurs.
- Legislation and initiatives offering support for South Africa's Small, Medium and Micro Enterprises.
- Economic transformation and Broad-Based Black Economic Empowerment and how these impact architectural firms.
- Governmental entrepreneurial support agencies.
- Laws and regulations that affect operating an Architects' firm in South Africa.
- Openings available to South African Architects' firms.
- Competition within the South African Architectural profession.
- Financial yardsticks for survival.
- How to endure economic downturns.

Themes that are presently covered sufficiently can, where possible be given greater prominence to include the lessons from enduring architects' firms described below.

Results of the qualitative study

The founder or most senior partner/directors of 26 enduring architects' firms who responded to the survey pointed out that the themes hereunder should form part of the proposed framework:

Entrepreneurial orientation

- Financial risk taking.
- Stimulating the entrepreneurial disposition of participants.
- Enhancing the traits often associated with entrepreneurs.
- Stimulating competitive behaviour.
- Group support such as support groups.
- Motives for starting a firm and the advantages of opportunity-based firms.
- Opportunities for architects: how to recognise them and where to find them.

Creativity

The proposed framework should encourage the application of creativity throughout founding and administrative endeavours.

Innovation

Being innovative should be encouraged as part of the proposed framework.

Organisational learning

The proposed framework should urge architects to accept the concept of the "learning organisation"; and emphasise the advantages to be gained from staying up-to-date with business/financial developments and discussions. It should encourage learners to read various kinds of financial literature on an ongoing basis.

Firm structure

The available options and the advantages or disadvantages of each.

Firm values

The proposed framework should:

- Emphasise the role and importance of having clearly articulated value statements.
- Articulate the advantages "practice-centred businesses" can have over "business-centred practices".
- Build the entrepreneurial orientation of earners.

Competitive positioning

The framework must cover strategic management and competitive behaviour.

Business management style and policies

- The advantages of both big and small firms.
- Human relations are often a problematic aspect in the profession. Thus, the framework must cover the need for policies and their role in building and maintaining relationships with all stakeholders.
- Leadership styles and skills.

Financial management

The proposed framework should point to the advantages of ongoing and thorough financial management and imbue learners with the required know-how and abilities.

Operations management

The framework must include time (including cost) and project management (including the need for punctuality).

Risk management

The proposed framework must cover risk management and actions to mitigate the risks architects' firms are exposed to.

Marketing management

Include marketing management that highlights the following in the proposed framework:

- Offering exceptional service and quality is crucial.
- Not to be too indifferent towards any marketing strategy.

Social capital

- The programme must cover the most common sources of appointments.
- The importance of building relationships and expanding networks.

Fee determination and policy

The proposed framework must highlight the advantages of having and applying an appropriate

fee policy which is linked to cost accounting and cost estimating principles. Furthermore, it should include negotiation strategies and tactics.

Entrepreneurial support

Respondents agree that start-up architects should receive entrepreneurship and business management training. In addition, if possible, they should first learn from an established firm and/or get the support of a qualified and experienced mentor.

Other topics to be included are:

- Relationship management.
- Negotiation and assertiveness training.
- Mercantile law.
- Building and property development.

CONCLUSIONS AND RECOMMENDATIONS⁴

As shown earlier, substantial agreement was found that a phased strategy works best. Furthermore, the phases should be packaged and presented into a framework. The framework should incorporate experiential learning. In addition, this framework must offer a range of supportive components. Thus, it can be accepted that entrepreneurship education and training for architects should comprise a variety of phases packaged into a single framework which must be incorporated into the current education and training system for South African architects.

Phase one should aim at developing entrepreneurial consciousness and should happen early in the programme. Phase 2 should focus on getting learners interested in becoming entrepreneurs and should promote amongst learners the necessary socio-emotional skills (including self-efficacy, risk propensity, self-confidence, leadership, creativity, resilience and maintenance of interpersonal relations) and mindsets. It must also include an overview of the entrepreneurial process found in architecture. Phase 3 must firstly set-out to further develop the entrepreneurial leaning established in phase 2; and secondly focus on becoming an architectural entrepreneur. Hence, it must cover the knowledge, abilities and attitudes required to start, establish and grow businesses in architecture. In turn, Phase 4 must comprise a support system that offers a range of services such as mentoring, administrative support and technical assistance. It could include setting-up peer support groups.

As stated previously, the different phases must be incorporated into or built around the existing South African architectural education and training system as described previously.

Figure 3 and Table 4 indicate how this can be accomplished.

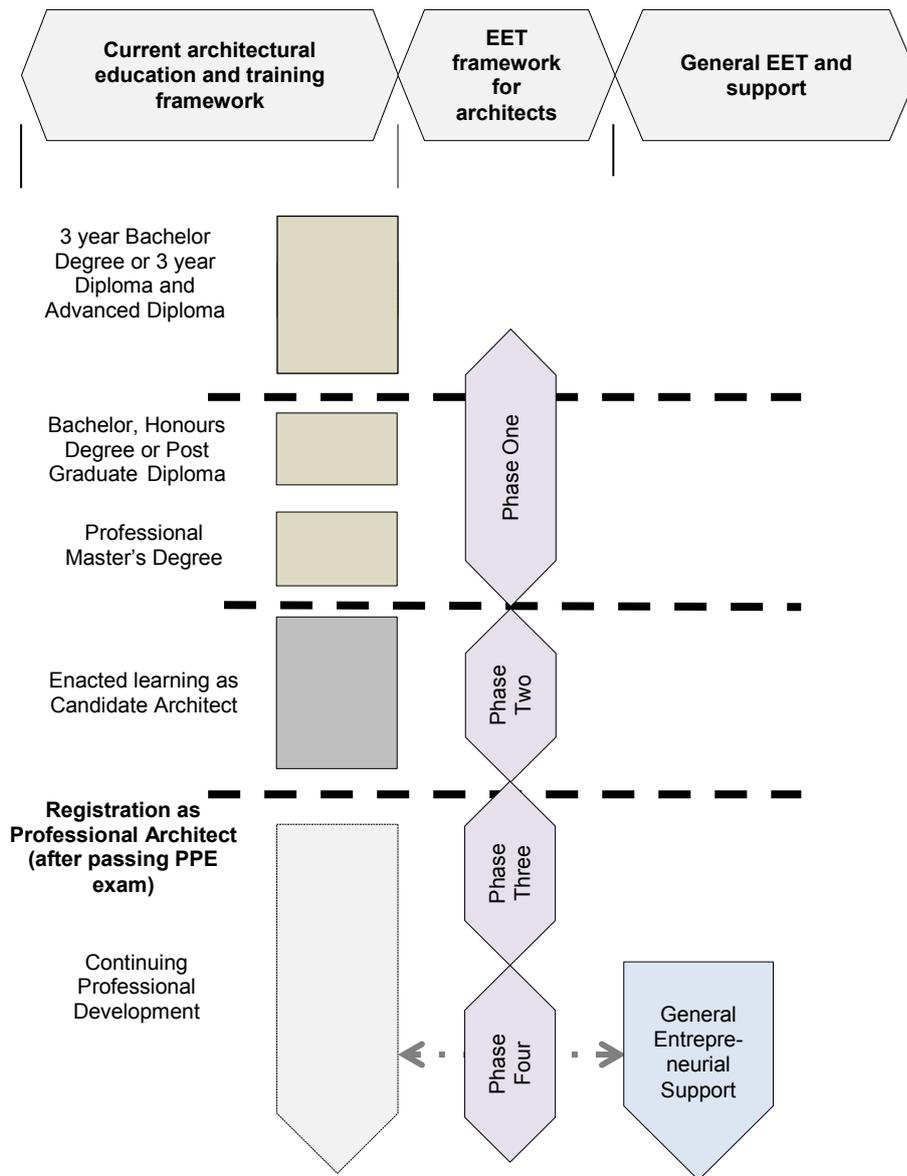


Figure 3: An entrepreneurship education and training framework for South African Architects (Vosloo 2017, 306).

Table 4: An entrepreneurship education training and support framework for South African architects (Vosloo 2017, 308).

PHASE 1: GROWING ENTREPRENEURIAL CONSCIOUSNESS
<p>Programme features: The phase should start before the end of the first qualification and continue until the final degree. The phase must be at this level since students would now have a general grasp of the architect's function. Many might have had, or will soon have, their first experience of working in an architects' firm. It can consist of learning units slotted into suitable modules or a dedicated short module(s) and/or workshop(s) situated anytime in the final three years of study. The objective should be to grow consciousness regarding entrepreneurship and an appreciation of the importance of entrepreneurship to the populace and the individual.</p>
<p>Facilitators Entrepreneurship experts and architectural entrepreneurs acting as role models.</p>

<p>Content: The importance and benefits that entrepreneurship offers the individual and the populace. The structure and content should inculcate in participants a consciousness about entrepreneurship including the benefits it offers the populace and the entrepreneur.</p>
<p>Learning Outcomes:</p> <ul style="list-style-type: none"> • Learners must be able to describe entrepreneurship. • Learners must be able describe the importance and advantages entrepreneurial actions offer individuals and society. • Learners must be able to explain the entrepreneurial process.
<p>Role players:</p> <ul style="list-style-type: none"> • Senior architectural learners. • Entrepreneurship experts and architectural entrepreneurs.
<p>Context: To form a credit bearing part of the architectural curriculum. Designed to extend over the last three years of the architectural programme. The offerings should have negligible disruption of the current curriculum.</p>
<p>PHASE 2: BECOMING A NASCENT ENTREPRENEUR</p>
<p>Programme: Experiential learning while a Candidate Architect.</p>
<p>Facilitators: An architectural entrepreneur acting as supervisor.</p>
<p>Content: During this period learning is monitored by SACAP. Supervisors must be required to share with Candidate Architects the motivation for starting their firm, why it is advantageous to own a firm, the process leading to the establishment and evolution of the firm they are employed in. Supervisors must ensure that Candidate Architects are given tasks that can ensure the achievement of the outcomes hereunder. To this end SACAP can require a 1500-word essay on entrepreneurship and business management at the practice where the Candidacy period took place.</p>
<p>Learning Outcomes:</p> <ul style="list-style-type: none"> • Learners to be able discuss the motives for establishing a new firm, the benefits of having your own firm and the processes required. • Learners should display the indicated socio-emotional skills. • Learners must be able to discuss the entrepreneurship and the managerial aspects of the firm.
<p>Role players:</p> <ul style="list-style-type: none"> • Candidate Architects. • An architectural entrepreneur.
<p>Context: An architects' firm.</p>
<p>PHASE 3: GROWING AN ENTREPRENEURIAL LEANING</p>
<p>Programme: A university course aimed at Professional Architects intending to begin a new practice, offered by Departments of Architecture (supported by their Faculty of Management). It should be offered as a post-professional programme in Architectural Entrepreneurship. Theory to be supported by an intense focus on skills development. To this end, it should utilise workshops and role-play, case studies and talks by established and revered architectural and other entrepreneurs. This could take the form of a Postgraduate Diploma or a Professional Master's Degree as per the Higher Education Qualification Sub Framework. Themes as per 4.1 and 4.2.</p>
<p>Facilitators: Offered and managed by a group of entrepreneurship, business and strategic management experts and architectural and other entrepreneurs used as role models and advisors.</p>
<p>Content: Must be decided by the facilitators. Must cover all the aspects listed in 4.1 and 4.2. Specific attention should be given to skills development, the writing of business plans and managing human relationships. Case studies, practical exercises and simulations to be used extensively.</p>
<p>Outcomes: Learners must be able to:</p> <ul style="list-style-type: none"> • Explain the entrepreneurial process. • Describe the requirements for business opportunities in architecture. • Prepare strategic and business plans • Explain the values and processes that can contribute to a positively performing architects' practice. • Compile and implement business and strategic management plans. • Describe the entrepreneurial processes and strategies implemented by some of the most prominent entrepreneurial architects' firms. • Suggest solutions to problems regarding personal relations. • Apply entrepreneurial skills and competencies during simulations, role-play and practical exercises.

<p>Participants: Professional Architects intent on starting their own firms or who are in the process of starting their own firms. Facilitated by entrepreneurship, strategic and business management experts and architectural and other entrepreneurs.</p>
<p>Context: University programme presented to qualified architects. Programme to make extensive use of role models and visits to/by prominent local and international entrepreneurial architects' firms. Strong focus on group work and skills development.</p>
<p>PHASE 4: ENTREPRENEURIAL SUPPORT</p>
<p>Programme: Learning by doing, with support and an enablement available to start-up architects. The programme is to be offered and managed by a professional organisation such as SAIA. It could be expanded to include mechanisms such as support groups, funding and technical or administrative support.</p>
<p>Content: Learning by doing as described by Cope (2005). Learning comprise doing something and then reflecting about what took place. Cope believe that entrepreneurs learn optimally from "learning events". In this programme learning triggered by "significant, discontinuous events that occur during the entrepreneurial process" (Cope 2003, 429). Trained and experienced mentors practicing the so-called maieutic or non-directive mentoring approach available to support learners.</p>
<p>Participants: Professional Organisation. Start-up architects with some experience and/or have completed a Phase 3. Participants to form support groups to provide support by sharing experiences and lessons learnt. Support offered by trained mentors (experienced architectural entrepreneurs).</p>
<p>Context: Emerging South African architects' firms.</p>

The proposed framework can assist future architects in starting and nurturing practices that can survive and flourish in a dynamic environment, it could also help them explore new areas in which to expand the influence of the profession. Organisations that can put these recommendations into effect should take note and consider how they can facilitate its introduction.

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NOTES

1. See Foxell, S. 2015. Starting a practice; a plan of work. 2nd Edition. RIBA, Newcastle upon Tyne: 8–12 for details on how this can be determined.
2. Kolb (1984, 41) describes experiential learning as "the process whereby knowledge is created through the transformation of experience". He believes that "knowledge results from the combination of grasping and transforming experience".
3. The limitations of an article such as this one mean that all the findings cannot be reported. Hence, this section will focus on findings regarding the content that should be included in the proposed framework. Please refer to Vosloo (2017, 160–265) for more details.
4. This section comprises extracts from Vosloo (2017, 267–314).

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