

**Engendering entrepreneurial competencies in the youth of today: A teacher's perspective**

**Abstract**

**Purpose:** The purpose of this paper is to examine the creation of realistic, engaging entrepreneurial competencies in second-level students in the Republic of Ireland through the Student Enterprise Awards (SEA) programme. The focus of the paper will be on the interaction of teachers with the programme.

**Design/Methodology:** A mixed-methods approach was adopted, with an email questionnaire fully completed by 101 of the population 300, resulting in a 34% response rate, which was regarded as acceptable. The qualitative approach was 29 semi-structured interviews with teachers and 9 Principals/Head Teachers.

**Findings:** The findings suggest that there was strong endorsement by the teachers of the benefits accruing to students in all three areas of knowledge, skills and attitudes. This clearly reinforces the strength of the SEA programme which will become increasingly important for students who are facing uncertain career paths. The programme will help engender students with increased self-confidence, better communication and presentation skills. Better skilled students make them more employable. This programme was primarily delivered by teachers and completed by students who did it on a voluntary basis and have no official recognition of participation.

**Research limitations/implications:** The research has identified a notable lack of enterprise-related teacher training in the current education system in the Republic of Ireland. Such training is necessary to ensure effective teaching of entrepreneurship and could bring consistency to the quality of enterprise education received by students in different schools. Students enjoy participating on the programme and see lifelong benefits from doing it, therefore it would be beneficial to incorporate it as a mandatory subject in the curriculum.

**Originality/Value:** Integrating the theoretical principles underpinning entrepreneurship education, which were presented in the paper, with the empirical teacher findings leads to a number of recommendations that can be adopted by the teacher, Principal/Head Teacher and School Board.

## Introduction

There is a growing belief amongst politicians, researchers and educationalists that education needs to equip children with the mindset that will prepare them for the challenges they will face in the future. Miliband (cited in Claxton 2007, p.115) states that ‘one of the core functions of the 21<sup>st</sup> century education is learning to learn in preparation for a lifetime of change’. Echoing this, Birdthistle (2008) found that education is a critical shaper of attitudes and how one is educated today will determine the successes of tomorrow. Heinonen and Poikkijoki (2006) note that education is often focused on supporting the development of knowledge and intellect, whereas entrepreneurship education concentrates on the human being as a whole. In addition to equipping young people with the skills needed for the 21<sup>st</sup> century, entrepreneurship education is a means of preparing the youth of today to be responsible and to be able to solve more complex, interlinked and fast-changing problems. This paper aims to examine the creation of realistic, engaging entrepreneurial experiences in secondary schools in the Republic of Ireland through the use of the Student Enterprise Awards (SEA) programme thus leading to the following research question: *From a teacher’s perspective, does the SEA programme engender entrepreneurial competencies in the youth of today?*

The focus of this paper is on teachers interaction with the SEA programme. According to the European Commission (2012, p.2) teachers are identified as ‘pivotal agents of change in making entrepreneurship education more widely available in schools today’ and documenting their experiences with the SEA programme is one means of communicating this to other stakeholders. Additionally, Neck and Green (2011, p.55) highlight that educators have ‘the responsibility to develop the discovery, reasoning, and implementation of skills of students so they may excel in highly uncertain environments’. This further supports the focus on the teacher as the unit of analysis.

## Interpreting Entrepreneurship Education and Entrepreneurial Competencies

Galloway and Brown (2002) purport that entrepreneurship education should contribute to skills development including the ability to innovate, to be able to lead and instil an interest in and the ability to start a business. Heinonen and Poikkijoki (2006, p.80) propose that entrepreneurship education refers to ‘activities aimed at developing enterprising or entrepreneurial people and increasing their understanding and knowledge about entrepreneurship and enterprise’. However, recent thinking has shown that narrow definitions, such as those given here, which are based around preparing learners for the world of business, may place limitations on both learners and the teaching community. Based on this, the European Commission (2012, p.7) proposes a broader definition which states that

“Entrepreneurship education is a process through which learners acquire a broad set of competencies which can bring greater individual, social and economic benefits since the competencies acquired lend themselves to application in every aspect of people’s lives.”

There is consensus in the literature that entrepreneurship education has multiple objectives. It should provide training for business start-up and provide the learner with a set of learned steps and routines to start a business. It should also include the acquisition of a varied set of lifelong skills and create an ‘entrepreneurial mindset’ to foster greater enterprising and innovative behaviour in whatever career the student embarks upon (Garavan and O’Cinneide, 1994; Martin, 2004; Birdthistle, Fleming & Hynes, 2007; Birdthistle, 2008). In 2011, the

European Commission reported that the development of entrepreneurial mindsets is becoming embedded in policy across Europe. Many researchers claim the only way to make people more entrepreneurial is through a learning-by doing approach. It points out that it requires a 'sea change in the approach to education, emphasising active learning and the provision of new experiences for students outside of the classroom, which represents a fundamental shift from traditional approaches' (European Commission 2011, p.1). Krueger (2015a) highlights that at the core of these claims is the focus on the development of entrepreneurial mindsets rather than students gaining content knowledge.

Krueger (2015a, pg.6) assumes that 'entrepreneurial mindsets' reflects deep cognitive phenomena, occurs through transformative learning experiences and helps learners move from a more novice mindset to a more expert mindset'. A mechanism for enabling 'cognitive change' to occur can be achieved through 'venture creation' as it 'invokes all the elements of constructivistic learning (i.e. reflection, peer support and mentoring) and all the tools of developing a startup (Krueger 2015a, p.12). This is echoed by Lackéus et al (2015, pg.4) who report that value creation is a pedagogy enabling the student to get emotional ownership over the process, interaction with the outside world, working in interdisciplinary teams, working iteratively and learning from failure. Their study has shown that venture creation triggers increased self-efficacy in students and teachers are at the core of this. Krueger (2015b) reports that teachers need to act as facilitators and not merely the 'teller of truths'. This echoes King's (1993) observation of teachers having to be more a 'guide on the side' rather than being a 'sage on the stage'.

The European Commission (2015, p. 29) points out that entrepreneurship as a method 'strengthens pupil's non-cognitive entrepreneurial competencies, such as creativity, generating new ideas, and how to translate ideas into action'. Krueger (2015a, pg.8) believes that in order to 'build a more entrepreneurial mindset then one must pay close attention to both course content and course processes'. This is supported by a study conducted in Denmark which found that self-efficacy and intent can be raised through knowledge content and non-cognitive skills increased through the use of experiential learning. Farrington et al (2012) identify that there are similarities between non-cognitive factors and entrepreneurial competencies, such as perseverance, self-efficacy, learning skills and social skills. Lackéus (2014, p.13) provides a framework (see Table 1) of key entrepreneurial competencies and their relation to both cognitive and non-cognitive competencies.

"INSERT TABLE 1 HERE"

Volkman et al (2009, p.11) highlights the key skills, abilities and behaviours which should be developed through entrepreneurship education: enhancing entrepreneurial behaviours and mindsets; building self-confidence, creativity, innovation, managing complexity and unpredictability and developing negotiation skills. Krueger (2009) also proposes a number of dimensions of the entrepreneurial mindset, which includes resilience, innovativeness, risk-aversion, tolerance for ambiguity and uncertainty, persistence, domain-specific self-efficacy, displaying entrepreneurial behaviours and intentions. When one examines these dimensions with Lackéus's (2014) and Fisher et al's (2008) explanation of non-cognitive attitudes one can see similarities between the subthemes. Therefore one can infer that an entrepreneurial mindset is a non-cognitive competency within the attitude theme.

### **The Learning Environment to Achieve the ‘Learning-by-doing’ Approach**

Sarasvathy and Venkataraman (2011) propose that entrepreneurship could be regarded as a generic method for creating potentially valuable change by unleashing human potential, and has contrasted this to the scientific method designed to harness Mother Nature. In order to ‘unleash this human potential’ students need to be in an environment conducive to entrepreneurship and that is what an “Entrepreneurial School” is. The European Commission (2011, p.7) highlight that the entrepreneurial teacher and school are in practice inseparable and one can ‘never establish an institutional framework through which entrepreneurship education can be fully implemented and sustained unless you have entrepreneurial schools’. Furthermore, the European Commission (2015, p.10) reports that ‘institutions implementing entrepreneurship education notice a higher engagement of teachers and it can lead staff to act innovatively, which leads to a shift towards an entrepreneurial school’.

In developing a school to be viewed as an ‘entrepreneurial school’ it is crucial that the Principal/Head Teacher is part of its development. Deakins and Glancey (2005, p.242) highlight that they need to be ‘seen as critical agents for change’. They further argue that unless ‘this role is taken into account merely introducing other elements of enterprise education policies and strategies will have little effect on their own’. Subsequently, the role and influence of the Principal/Head Teacher is a critical element as part of any change in strategy in enterprise education. The European Commission (2011) proposes a number of requirements of a school in order to be classified as an entrepreneurial school which includes having a clear vision and policy for entrepreneurship education, which expresses it as an entitlement for all pupils. There should be communication, debate and dialogue to develop a shared understanding of entrepreneurship education. The school should have a range of strategies and procedures developed such as specific timetables and the scheduling of annual entrepreneurial activities.

Part of the entrepreneurship environment that needs to be present in the school includes having a flexible time schedule (Lackéus 2015), support from the school management and the capacity to build organisational strength, clear goals and incentives (Sagar et al., 2012). Engaging and cooperating with the local community to deliver the entrepreneurship education curriculum is a further critical feature of an entrepreneurial school (Ecorys, nd; Krueger, 2015a). Lackéus (2015) discusses the need to be connected to the environment outside, interacting with and learning from society’s cultures, markets and professional actors. Some of those professional actors might even be parents and the school should capitalise on their existing links which can lead to the development of relationships with new contacts, and extend the range and value of contributions from external partners. Through this, new role models can be identified for the student. Krueger (2015b) notes that alumni from the school and/or someone from the local community are often valued more than a high profile celebrity. The reason for this is ‘a power distance disconnect’, which Hofstede (1991) identifies as being less inspirational. This is further supported by Bosma et al (2012, p.421) who conclude that ‘next door’ role models are more impactful than icons and ‘act as exemplars and supporters’.

Of course the main actor is the entrepreneurial teacher, without whom the entrepreneurial school would not exist. Neck and Greene (2011, p.55-57) propose that entrepreneurship requires ‘teaching a method, which goes beyond understanding, knowing and talking but demands using, applying and acting’. They are quite adamant that in teaching entrepreneurship, teachers need to allow students to practise and through this practise they develop the skills and competencies required to be entrepreneurial. Nian et al (2014, p.40)

concur with Neck and Greene in that 'though traditional teaching methods can impart the necessary knowledge and strategies for success, it is unable to develop the critical characteristic of entrepreneurs such as creativity and need for autonomy amongst students, and it is through the entrepreneurial teacher that this can be achieved.

However, research carried out by the European Commission (2010) found that the core skills and values linked to entrepreneurship education are seldom a priority in initial teacher education programmes. Curavić (2011) concurs with this as he believes that teachers should be taught entrepreneurial content in their teacher training programme. So what constitutes an entrepreneurial teacher? The European Commission (2011, pg.7-12) has identified a composite suite of characteristics that they note are at the 'heart of entrepreneurial teachers'. Entrepreneurial teachers need to have a positive attitude, be inspirational, confident in their teaching and are capable of being leaders themselves and not waiting for senior staff to take the lead. They should be capable of networking effectively and 'make connections to a wide range of stakeholders.' The Commission's (2011, p.7) findings also state that

*Entrepreneurialism also requires teachers to be flexible and to push the boundaries with respect to established norms within education, without being a maverick. At the same time, they need to have a balanced approach, be 'down to earth' and, of course, remain professionally responsible.*

Having these characteristics means the teacher is better equipped for delivering the entrepreneurship education curriculum within the school. The Commission (2011, p.8) provides a word of caution as well, in that, where the entrepreneurial teacher tries to achieve their objectives in 'un-entrepreneurial school', they may find themselves suffering from 'burn-out' quite rapidly as they constantly run into constraints and boundaries.

### **The SEA Programme**

The Student Enterprise Awards (SEA) programme, coordinated by the Local Enterprise Office<sup>1</sup> (LEO) is offered to all secondary school children in the Republic of Ireland. All LEO have a coordinator who liaises with the schools in the region and each LEO organises a County/City final and the winners go forward to National finals. There are three categories of awards: Junior for 1st year students (12 – 13 age group), Intermediate for 2nd and 3rd year students (14 – 16 age group) and Senior for students from Transition year to Leaving Certificate (16 – 18 age group). Over 17,000 students in the Republic of Ireland participate on the SEA programme each year. The programme is centred around helping students to grasp real life skills associated with running a real enterprise including working as part of a team, managing production and finances, organising a sales and marketing campaign and liaising directly with customers, judges and the media.

Typically, the duration of the SEA programme is one school year i.e. 9-10 months. The programme can be delivered on a mandatory or voluntary basis. For those schools where the programme is embedded in their curriculum, activities take place once or twice a week for 1 to 2 hours accompanied by out-of-school work where time is devoted to, for example, producing goods or services. For those schools where the SEA programme is voluntary, the teacher and students meet outside school hours and complete the same tasks as those who complete the programme on a mandatory basis. None of the students get official recognition for their participation and teachers are teaching the subject outside of their normal teaching schedule. There are other competing programmes that students can participate on, such as the Young Social Innovators, CoderDojo etc. The Young Social Innovators (YSI) is a

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<sup>1</sup> LEO are a branch of the Irish government and provides assistance to anyone seeking information and support on starting or growing a business in Ireland.

programme that enables students to solve social issues using their creativity. Similar to the SEA programme, YSI is targeted at students in the junior and senior cycle however YSI charges €15 per student whereby the SEA programme has no fee attached. Like the SEA programme, CoderDojo is a voluntary programme which focuses on developing student's creativity however CoderDojo does not have the same level of involvement with government agencies and the external communities.

### **Research Methodology**

To examine the SEA from the perspective of the teacher a questionnaire was devised with the assistance of the LEO. The questionnaire was pilot tested with six teachers and after minor amendments, it was administered via e-mail, however, where necessary it was hand-delivered at regional exhibition events. Using the framework of entrepreneurial competencies (Fisher et al 2008; Lack  us 2014) the questionnaire was designed to discover if the SEA engendered entrepreneurial competencies (i.e. attitudes, skills and knowledge) in the students. Table 2 indicates the application of the framework to the questions posed to the teachers.

“INSERT TABLE 2 HERE”

Some 300 teachers were surveyed and 104 responses were received. When the data was reviewed, 3 were omitted from the study due to incomplete responses, which resulted in 101 valid responses. resulting in a response rate of 34%. Frequency analysis, cross-tabulations and chi-square tests were adopted as the means by which to analyse the data.

Teachers were interviewed at the regional exhibitions and at the national finals in Dublin and the interview centred on a key question: ‘Can you engender entrepreneurial competencies in the youth of today using the SEA programme?’ This question was posed to 29 teachers and their anecdotal responses can be found throughout the research findings. Additionally, nine Principals/Head Teachers were also interviewed to examine whether the schools that participated in enterprise education could be considered ‘entrepreneurial schools’.

### **Limitations of the Study**

A key limitation of this study relates to gaining access to teachers as there is no central database for teachers in Ireland. Each school had to be researched online, which took a significant amount of time to complete. Another limitation was conducting the interviews with the teachers and principals at local/national exhibitions, which proved impractical. The noise in the room was quite distracting and at times the teacher/principal could not leave the students and therefore the interview was difficult to conduct.

### **Research Findings**

Table 3 below provides a demographic snapshot of the schools and teachers participating in the study.

“INSERT TABLE 3 HERE”

The majority of teachers taught in urban schools, with a higher proportion being female teachers. Volunteering to do the programme was high (66%) compared to those participating on a mandatory basis (34%). This indicates that the SEA programme is very much dependent on the teacher's decision to do ‘voluntary work’ and the extra hours without any recognition and the students' willingness not to receive any official recognition for the completion of the

programme. Some 18% are participating for either the first or second time, 16% for between 9 to 12 years and 15% for 12 or more years.

#### **Entrepreneurial attitudes/mindsets findings:**

Teachers were asked if they saw improvements in the entrepreneurial attitude/mindset (comprising of creativity, perseverance, self-discipline, self-efficacy, dealing with uncertainty (Krueger 2007, 2009; Fisher et al 2008; Farrington et al 2012; Volkman et al 2009)) on completion of the SEA and Table 4 indicates the results.

“INSERT TABLE 4 HERE”

The majority of teachers were in agreement that there were significant improvements in the student's attitudes post the SEA. It was found that there was a significant difference ( $\chi^2 = 7.446$ ;  $p = 0.05$ ) between increased levels of competitiveness and desire to win and the location of the school. No significant difference was found for any of the other subthemes.

A teacher indicated that her students benefitted from the programme in that students *'had a feeling of success from taking on a long term project and following it through to completion'*. Another teacher stated that her students who are not academically inclined somewhat blossomed as a result of participation:

*'What I have found is that students who have been very average in class, make suggestions, give ideas and very often it might be the weaker student who has the idea. There is a place for every type of student, the bright, the weak and the average, they could all play a role in the project'.*

More specifically a teacher pointed out examples of many of these attitudes in operation by the following statement:

*So many students who wouldn't be academically minded, went around to other classes and showed what they produced and all the other kids were asking them 'How did you do that?' For once in their life, somebody was asking them how to do it!*

#### **Entrepreneurial skills**

Teachers are of the opinion that students develop a variety of skills on completion of the SEA, which will benefit them in the future (see Table 5). It is worth noting that 'improved problem solving' is a skill that has some room for improvement. Additionally, it was found that there was a significant difference ( $\chi^2 = 8.652$ ;  $p = 0.034$ ) between 'enhanced planning and project management' and the schools location (urban versus rural). This was borne out by the fact that a number of teachers in urban schools stated that they could quite *'easily pop into the LEO since they were located nearby and get clarification on issues'*.

The teachers were asked if students developed any additional skills and teachers indicated:

*It has given them the confidence to sell their own products.*

*They have now developed a 'go for it' attitude*



*They're communicating with the outside community. We closet children in schools and we don't let me see what's outside – to give them that opportunity is very positive.*

“INSERT TABLE 5 HERE”

### **Entrepreneurial Knowledge**

Teachers were questioned about the improvements in students' knowledge in various areas as a result of completing the programme and Table 6 illustrates the results.

“INSERT TABLE 6 HERE”

In relation to market research and marketing knowledge, teachers firmly believed that students' knowledge improved significantly. More specifically a teacher indicated that:

*Having such a hands on approach, students learned what is involved in setting up a business – it develops their thinking and problem solving skills, and key business skills are explored such as market research and marketing strategy.*

In relation to product knowledge, teachers found improvements in students' knowledge of how a product is produced and the process of pricing a product/service: *'My students were able to negotiate with suppliers and understand how to develop a prototype'*. In relation to finance knowledge, teachers found the students' knowledge of the sources of finance was greatly improved. A teacher highlighted that the students *'got a taste of the adult world of business by having to go to the LEO and enquire about funding'*. Additionally, it was found that there was a significant difference ( $\chi^2 = 6.740$ ;  $p = 0.034$ ) between sources of funding and the advantaged/disadvantaged schools. Some teachers indicated their preference for a maximum limit to be put on the amount to be spent on the exhibition as some schools *'went all out at the exhibition'* and other schools who were limited by budgets felt somewhat aggrieved by this. There was also a significant difference ( $\chi^2 = 6.810$ ;  $p = 0.046$ ) between how to write a business plan and the gender of the students. Teachers in all girls' schools indicated that their students had no problem with writing however a number of teachers from all-boys' schools indicated *'additional assistance was required to guide the boys'*. Interestingly the majority of previous winners of the national final were predominantly female.

### **The Entrepreneurial School**

Principals/Head Teachers were asked about whether they have a clear vision and policy pertaining to enterprise education (European Commission 2011). All indicated that since enterprise is not mandatory to do for State exams there was no policy pertaining to enterprise within the school. They believe that enterprise education is beneficial to students as one principal felt *'it's about opening pupils minds to new opportunities and developing group work skills.'* One Principal/Head Teacher did indicate however that the Government was introducing changes to the junior and senior curriculum and enterprise would be formally embedded in the curriculum and *'this would then give the subject more credibility and we could schedule it into the timetable like other subjects'*. The biggest barriers Principals/Head Teachers saw in providing enterprise education in their schools were time and resources. Three Principals/Head Teachers stated that they could see a lot of cross over between enterprise and other subjects and that could reduce the time barrier. For instance the Principals/Head Teachers indicated that you could talk about pricing in Math class, literature and promotional material can be done in English classes and making ethical decisions in Social Studies, *'use a thematic approach and integrate enterprise across a wide range of*

*subjects*'. In providing resources to teachers the Principals/Head Teachers indicated that their budgets are very tight and *'every voluntary subject is vying for a 'small piece of the pie' so if you can get something for nothing and it's good, we would encourage this'*. The Principals/Head Teachers indicated that since the SEA programme is supported by LEO and they only had to provide time for the teachers to attend training programmes they are very happy to support this. However, on a whole there are limited resources available to enterprise.

### **The Entrepreneurial Teacher**

When asked why they participate on the programme when it is voluntary teachers said:

*I can broaden their minds and open them up to new possibilities*

*It's different, something that's not typically associated with normal schooling*

*They need to learn that they are responsible for their own future and enterprise can do that.*

All identified that entrepreneurship education was never taught to them during their training to become a teacher. Those who had a primary degree in business, felt they had sufficient knowledge to teach entrepreneurship, however, those who did not have a business degree, felt that they relied heavily on the SEA coordinator/LEO and the resources provided. A number of teachers expressed reservations about training due to the current economic climate and the additional pressure this meant to them:

*We're not getting funding for all this training any more. The climate is very bad why should we do more work for less money. Thankfully we have the LEO support.*

The teachers did indicate that if the support from the LEO was withdrawn or unavailable, teachers would be hesitant to participate on the programme.

*During my teacher training I was not exposed to teaching like this – experiential based teaching. Without the support of the LEO I would not have known what to do.*

The teachers considered it important to focus on the process rather than the outcome and that the competition in itself can be a de-motivator. There was a proposal to focus more on 'awards' as opposed to competitions and increase the emphasis on the 'fun' aspect.

*Competitions can take the fun element out of the project*

*I just see this as a fun aspect which should not be rewarded, kids participate if they want to, and there is enough competition already in schools without this.*

### **Discussion and Conclusion**

The educational system in any country should ultimately serve the student and maximize their potential. Necessary skills for future enterprise such as critical thinking, problem solving and other soft skills can be developed through the vehicle of the national education system. We believe that by conducting this study, educationalists will see that a programme like the SEA delivers on these skills and could be the 'vehicle' used to achieve them. While it may not be possible to teach students entrepreneurship in a formal, academic manner, students can be developed over time by replacing the emphasis on passive learning with a new focus on experiential, analytical learning. This is why the authors of this study believe that the SEA is

a 'best practice' example of 'learning by doing' since this pedagogical approach is at the core of the programme. The education system can also influence students' attitudes and play a role in actively promoting entrepreneurship.

Participation in enterprise education encourages students to consider becoming entrepreneurs in the future or selecting an entrepreneurial stream in third level. Enterprise education brings other benefits to students; it enhances creativity, improves communication skills and provides practical uses for business. The result of this study has indicated that students in the Republic of Ireland garner these skills by, in the majority of cases, volunteering to do a programme that provides this skills output. Failure to equate the changing needs of business with the skills developed in the educational system will result in students having reduced employment opportunities upon exiting the education system due to insufficient skills and aptitudes.

There is a notable lack of enterprise-related teacher training in the current education system in the Republic of Ireland. Such training is necessary to ensure effective teaching of entrepreneurship and could bring consistency to the quality of enterprise education received by students in different schools. This is supported by Curavić (2011) who believes that teachers should be taught entrepreneurial content in their teacher training programme. Teachers could then facilitate students working independently and encourage them to explore ideas, be innovative and think creatively. Therefore, it is imperative that teacher training colleges incorporate entrepreneurship within their curriculum so that the teachers of the future have this skill set that can then be taught to the entrepreneurs of the future. Furthermore, teachers must be trained in the 'teaching as a method' approach as endorsed by Neck and Greene (2011) and know and be able to incorporate the various methods that are available to them.

Overall there was strong endorsement by the teachers of the benefits accruing to students in all three areas of knowledge, skills and personal development. This clearly reinforces the strength of the SEA which will become increasingly important for students who are facing more uncertain career paths, particularly skills and attitudes that are garnered such as increased self-confidence, communication skills; and presentation skills which will create more employable students. To conclude, this study has shown that the SEA enables a 'learning-by-doing' approach through getting students to develop prototypes, test products/services and then get customers. This is achieved through a 'venture creation' approach thus enabling the cognitive changes to happen as recommended by Krueger (2015a). Because the SEA is both knowledge-content focused and it focuses on the development of student's non-cognitive skills, it can be concluded that it does align itself with the 'entrepreneurial method'. The European Commission (2015) highlights this strengthens student's non-cognitive skills, which has been subsequently supported by the teachers who participated in this study.

To conclude on the entrepreneurial school, there is a lot of scope for improvement. With curriculum changes and development coming in the future and the possible embedding of enterprise into the curriculum we might see the emergence of 'entrepreneurial schools'. At the moment though this is not the case. Policies and a clear vision for entrepreneurship was not evident in the schools examined. Scheduled timetabled classes were not the norm and the majority of the teachers did the programme voluntarily. These will need to change in the future if the school wants to be considered an 'entrepreneurial school'. Schools however were doing quite well engaging with the local community which is deemed a critical feature of delivering the entrepreneurship curriculum and this must be continued.

To conclude on the entrepreneurial teacher, there is no doubt that each and every one of the teachers interviewed, were leaders, were inspiring and had passion for the SEA programme. However, the study has highlighted that knowledge of the basic fundamentals of entrepreneurship and business is lacking. It is through the LEO that this knowledge gap is bridged. There is therefore an opportunity for teacher colleges to take up the responsibility of educating the 'entrepreneurial teachers' of the future, through including entrepreneurship into their curriculum.

Therefore, the key question that was posed at the start of this paper: *From a teacher's perspective, does the SEA engender entrepreneurial competencies in the youth of today?* can be answered in the affirmative. The study has highlighted how attitudes are shaped and how skills and knowledge are garnered through participating on the programme. In summary the study's empirical findings provide considerable support for the theoretical underpinnings of the importance of introducing entrepreneurship education at school level and the role that the SEA programme plays in engendering entrepreneurial competencies in the youth of today. The quantitative findings of this study provides evidence that factors in the educational institution, in particular the role of the teacher impacts substantially the degree to which individuals view entrepreneurship as desirable and feasible. Therefore, integrating the theoretical principles underpinning entrepreneurship education with the empirical teacher findings leads to a number of recommendations from a policy and educator (with a particular focus on the school) perspective.

## **Recommendations**

To maintain student involvement, motivation and enthusiasm, it is recommended that students are given more class time and that the programme becomes a mandatory part of the curriculum. Similarly, from a teacher's perspective, time constraints were a major obstacle in terms of delivery and positive execution of the programme. A number of teachers expressed frustration in that they wished to conduct more school trips and visits from entrepreneurs however pressure to complete the required materials reduced or eliminated these additional learning opportunities. By formalizing the programme into the curriculum, teachers would be able to overcome this hurdle.

From a schools' perspective engaging with a programme like the SEA programme will enable linkages to be created with local businesses and parents if they are asked to give a talk to the students or allow the students to visit their business, which can only benefit the school in the long run. As the paper identifies, the lack of recognition of the students' participation in the programme was evident. The voluntary nature of the programme could be recognized by having an awards night for the students. Teachers should also be recognized at the awards ceremony for their volunteerism.

In relation to programme rewards, the general consensus was that of de-motivation and dissatisfaction. Students become extremely committed to active learning but morale can be affected, as the hard work does not seem to be recognized, unless you were a regional or national winner. Like an employee, each must be rewarded in an organizational setting; students need to reap the benefits of hard work and commitment. A solution may be to create more awards such as an award for creativity, innovation and general hard work and/or every participant receives a Certificate recognizing their participation in the programme.

The following are a series of recommendations for teachers who would like to incorporate the experiential and active learning experience in their curriculum using the SEA programme as the teaching framework. Firstly, learning outcomes need to be developed which highlight the

various skills, outcomes and expectation of the programme. Teachers must be cognizant of the fact that these learning outcomes must be modified depending on the age cohort being taught.

Next, the goals of the programme need to be devised. Examples of goals could be the creation of an entrepreneurial mind-set in the student; fostering a behaviour that is both innovative and entrepreneurial and the development of a skill set that is used across disciplines such as team work, communication, presentations and report writing. Furthermore, teachers would greatly benefit from having a manual to support the delivery of entrepreneurship education. For a manual to be devised, it should have, at a minimum, worksheets and activities; guidelines for communicating with external stakeholders; content on teaching creativity and idea generation; how to assess the economic, market, and financial viability of a business idea; detailed examples of pricing, financial statements; and sample business plans. The inclusion of examples of business plans would also help alleviate the concerns in these areas as the students can see how they fit into the overall business plan process. In addition to best practice samples of business plans it would be worthwhile including plans of various standards (i.e. weaker standard business plans) so students know what to do and what not to do.

The pedagogies needed to encourage learning through active learning, need to inspire the fertilization of ideas, creative problem solving, and exchanging of ideas. This can be achieved by encouraging brainstorming, role plays, completing exercises and tasks and by enabling students to make mistakes and learn from those mistakes and be positive about the learning experience derived from this experience. Finally, for a programme to be successful it requires the support from Government. Benefits were greatly achieved by the teachers through having a LEO representative as a point of contact. Teachers could approach their local support agency and, using the SEA programme as a teaching model, enquire about the assistance they could provide to the teacher.

#### **Areas for further research:**

A number of issues have surfaced in the course of this research that would be worth investigating further and they include: a longitudinal study to be conducted on new teachers who interact with the programme and analyse their development as entrepreneurial teachers. This can then lead to producing teachers who are reflective, creative and innovative as well as being competent and knowledgeable in their fields. Additional research needs to be conducted to find out which sources of entrepreneurship training has the most effect on entrepreneurial behaviour. For example, is informal training more effective than formal training? Does in-school training provide a foundation for embedding entrepreneurial thought, or is it too early in the education cycle? The answers to questions like these could guide policy makers and educators in understanding the training needs of the entrepreneurs they rely on to generate new wealth in their economies. There is a paucity of research on the entrepreneurial mindset, with no deep review of the literature conducted as of yet (Krueger 2015a, pg.13) and this warrants further research. The role of principals as educational and enterprise leaders has been identified by previous writers in the entrepreneurship literature but their role and significance as a catalyst for change, which is necessary for the promotion of enterprise in education, has received less attention, this therefore warrants further research.

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Contact Author: Dr. Bridthistle now works at Swinburne University of Technology, Melbourne, Australia and can be contacted at: [nbirdthistle@swin.edu.au](mailto:nbirdthistle@swin.edu.au)

**Table 1 Entrepreneurial Competencies**

	Main themes	Subthemes	Examples
<b>Cognitive competencies</b>	KNOWLEDGE	Mental modes Declarative knowledge Self-insight	Declarative entrepreneurship knowledge, procedural entrepreneurship knowledge, knowledge about oneself as entrepreneurial
	SKILLS	Marketing skills Resource skills Opportunity skills Interpersonal skills Learning skills Strategic skills	Marketing, strategy, resource acquisition, opportunity identification/creation, learning skills, interpersonal skills, leadership skills, collaborative skills, creativity
<b>Non-cognitive competencies</b>	ATTITUDES	Entrepreneurial passion Self-efficacy Entrepreneurial identity Pro-activeness Uncertainty/ambiguity tolerance Innovativeness Perseverance	Entrepreneurial passion, entrepreneurial self-efficacy, entrepreneurial identity, pro-activeness, perseverance, uncertainty and ambiguity tolerance

Adapted from Lackéus (2014), Fisher et al (2008)



**Table 2      Framework of Entrepreneurial Competencies devised for SEA Teachers**

	Entrepreneurial competencies	Question areas:	Primary sources:
Non-cognitive competencies	Cognitive		
	KNOWLEDGE	Opportunity evaluation; market research, product development, knowledge of financial decisions, comprehension of marketing and selling methods, knowledge of legal issues, knowledge of business plan writing, and understanding managerial decision-making	Krueger 2015a Krueger 2015b Lackéus et al 2015
	SKILLS	Creativity skills, problem solving skills, decision-making skills, planning and project management skills, communication and presentation skills, improved self-confidence, greater negotiation skills	Fisher et al 2008 Volkman et al 2009 Farrington et al 2012 Lackéus 2014
Non-cognitive competencies			
	ATTITUDES	Improved self-discipline, perseverance with a task, team work, awareness of own strengths, increased level of competitiveness, management of uncertainty, consideration of entrepreneurship as a career option, increased knowledge and awareness.	Krueger 2007 Fisher et al 2008 Krueger 2009 Farrington et al 2012 Volkman et al 2009

**Table 3      Demographic profile of respondents**

	<b>Response</b> (n=101)		<b>Response</b> (n=101)
<b>School</b>		<b>Level participating</b>	
Mixed gender	58%	Junior	20% (n=20)
Single sex	42%	Intermediate	21% (n=21)
<b>Area</b>		Senior	85% (n=86)
Urban	63%	<b>Number of years participating in SEA</b>	
Rural	37%	1<3years	18%
<b>Participation in SEA</b>		3< 6 years	26%
Voluntary	66%	6 < 9 years	10%
Mandatory	34%	9< 12 years	16%
<b>Respondents profile</b>		12+ years	15%
Male	27%	Don't know	2%
Female	67%	Skipped the question	13%
No response	6%		

**Table 4 Entrepreneurial attitude improvements**

<b>Attitudes</b>	<b>Very Significant improvement</b>	<b>Significant improvement</b>	<b>Slight improvement</b>	<b>No improvement</b>
Greater ability to work as part of a team (n=94)	<b>61.7 %</b>	<b>36.2 %</b>	2.1 %	0 %
Ability to persevere with a task (n=94)	<b>43.6 %</b>	<b>50 %</b>	5.3 %	1.1 %
Improved self-discipline (n=93)	<b>45.2 %</b>	<b>45.2 %</b>	7.5 %	2.2 %
Greater awareness of personal strengths (n=94)	<b>45.7 %</b>	<b>45.7 %</b>	8.8 %	0 %
Greater awareness of areas requiring development (n=94)	<b>34 %</b>	<b>39.4 %</b>	23.4 %	3.2 %
Increased level of competitiveness and desire to win (n=94)	<b>46.8 %</b>	<b>36.2 %</b>	14.9 %	2.1 %
Manage uncertainty better (n=94)	<b>21.3 %</b>	<b>53.2 %</b>	22.3 %	3.2 %
More focused on future career options (n=93)	<b>24.7 %</b>	<b>43 %</b>	23.7 %	8.6 %
Encouraged them to consider entrepreneurship as a career option in the future (n=93)	<b>34.4 %</b>	<b>43 %</b>	20.4 %	2.2 %
Increased their knowledge and understanding of what starting a new business is about (n=94)	<b>52.1 %</b>	<b>39.4 %</b>	7.4 %	1.1 %
Increased their awareness of entrepreneurs and their characteristics (n=94)	<b>47.3 %</b>	<b>40.9 %</b>	11.8 %	0 %

**Table 5            Entrepreneurial skills improvement**

<b>Improvement in entrepreneurial skills</b>	<b>Very Significant improvement</b>	<b>Significant improvement</b>	<b>Slight improvement</b>	<b>No improvement at all</b>
Enhanced creativity skills (n=92)	<b>41.3 %</b>	<b>46.7 %</b>	10.9 %	1.1 %
Improved problem solving skills (n=93)	<b>41.9 %</b>	<b>41.9 %</b>	16.1 %	0 %
Greater decision making skills (n=93)	<b>40.9 %</b>	<b>52.7 %</b>	6.5 %	0 %
Enhanced planning/project management skills (n=93)	<b>34.4 %</b>	<b>40.9 %</b>	23.7 %	1.1 %
Improved communications/presentation skills (n=93)	<b>54.8 %</b>	<b>41.9 %</b>	3.2 %	0 %
Improved self-confidence (n=93)	<b>61.3 %</b>	<b>35.5 %</b>	3.2 %	0 %
Greater negotiation skills (n=92)	<b>50 %</b>	<b>37 %</b>	13%	0 %

**Table 6            Improvements in Entrepreneurial Knowledge**

<b>Improvement in entrepreneurial knowledge</b>	<b>Very Significant</b>	<b>Significant</b>	<b>Slightly Significant</b>	<b>Not at all Significant</b>
<b>OPERATIONAL AND PLANNING KNOWLEDGE</b>				
Methods of generating new business ideas (n=91)	<b>52.7 %</b>	<b>37.4 %</b>	9.9 %	0 %
Different legal business structures (n=89)	15.7 %	<b>27 %</b>	<b>34.8 %</b>	22.5 %
How to write a business plan (n=91)	<b>50.5 %</b>	<b>42.9 %</b>	6.6 %	0 %
How to choose a management team (n=91)	<b>38.5 %</b>	<b>46.2 %</b>	14.3 %	1.1 %
Government assistance for start-ups (n=91)	17.6 %	23.1 %	<b>28.6 %</b>	<b>30.8 %</b>
How to complete a SWOT analysis (n=91)	<b>39.6 %</b>	<b>49.5 %</b>	11 %	0 %
<b>MARKET RESEARCH AND MARKETING KNOWLEDGE</b>				
Sources of secondary research (n=91)	<b>26.4 %</b>	<b>54.9 %</b>	18.7 %	0 %
How to conduct primary research (n=91)	<b>36.3 %</b>	<b>56 %</b>	7.7 %	0 %
Questionnaire Design (n=91)	<b>46.7 %</b>	<b>39.1 %</b>	14.1 %	0 %
The concept of marketing (n=91)	<b>39.6 %</b>	<b>53.8 %</b>	6.6 %	0 %
Comprehension of marketing and selling methods for a new business (n=89)	<b>49.4 %</b>	<b>39.3 %</b>	10.1 %	1.1 %
<b>FINANCE KNOWLEDGE</b>				
Sources of finance to start a business (n=90)	<b>38.9 %</b>	<b>43.3 %</b>	17.8 %	0 %
Completing a cash flow statement (n=90)	<b>32.2 %</b>	<b>36.7 %</b>	28.9 %	2.2 %
Completing a profit and loss account (n=92)	30.4 %	<b>37 %</b>	<b>32.6 %</b>	0 %
<b>PRODUCT KNOWLEDGE</b>				
The process of pricing a product/service (n=91)	<b>42.9 %</b>	<b>38.5 %</b>	17.6 %	1.1 %
How a product is produced (n=91)	<b>48.4 %</b>	<b>37.4 %</b>	12.1 %	2.2 %