

The contribution of Realist Evaluation to critically analysing the effectiveness of entrepreneurship education competitions.

Abstract:

The purpose of this article is to explore the effectiveness of entrepreneurship education programmes through the lens of Realist Evaluation. The interest of the authoring team - a practitioner/academic mix with professional experience including developing entrepreneurship education in primary and secondary schools - lies with entrepreneurship education competitions, a type of intervention recommended for and delivered to students and pupils of all ages (Kormakova et al., 2015). Realist Evaluation is a *theory-driven* philosophy, methodology and adaptable logic of enquiry with which to conceptualise and analyse such programmes. In this study, we assume an act of *organised scepticism* (Pawson, 2013), to identify and question the declared outcomes of entrepreneurship education competitions in European Policy, over a ten-year period. However, our contribution goes beyond the application of an evaluation approach, novel to entrepreneurship education. We argue that whilst education generally, and entrepreneurship education specifically, appears committed to emulating 'gold standard' scientific evaluation approaches (e.g. RCTs, Systematic Review and Meta-Analysis), the field of evidenced-based policy making *has moved on*. Now alternative methodological strategies are being embraced and Realist Evaluation has evolved specifically as an approach which better aligns knowledge production with the reality of complex, socially contingent programmes. By utilising this approach, we not only establish that education and psychology theories challenge the outcomes of entrepreneurship education competitions declared in policy, but also demonstrate the wider relevance of Realist Evaluation to appraise and refine the theorising and practice of entrepreneurship programmes and interventions.

What is entrepreneurship education?

The propositions to answer this question are numerous and contested. Hannon (2005), describes several competing categorisations. Entrepreneurship education (EE), he summarises, is often presented as learning 'about' (as academic study), 'through' (as learning core capabilities embedded across curricula), and 'for' (preparation for entrepreneurial life and new business start-up or venture) entrepreneurship. An alternate conception he presents highlights different foci to be learned through entrepreneurship education (process focus, client focus, outcome focus and vision focus); yet another model proposes three basic categories for entrepreneurship education: the contextual application of entrepreneurial characteristics and qualities (entrepreneurship); a state of being (entrepreneurial) and the creation of an entrepreneurial climate and support structure (entrepreneurism). Matlay (2006), extends this thinking about *what* entrepreneurship education is, by summarising what it is meant to achieve, noting that it has been presented as a panacea for economic stagnation, a method for facilitating education to work transitions and a route to creating entrepreneurial culture inside and outside of education. Such debates are ongoing, and reflect a view put forward by Gibb (2002), where he suggested there was no common agreement on definitional terms, and that meaning could only be inferred from the focus and purpose of public policy 'initiatives' (for example, "the emergence of more small businesses; associated higher rates of small business creation; more fast-growth firms and technology-based businesses; social entrepreneurship, enterprise in public organizations and, increasingly, a basis for tackling social exclusion" (Gibb, 2002: 235). This indicates another response then, to the question: what is entrepreneurship education? Entrepreneurship education is an idea, or set of ideas, that is packaged up into a programme or intervention and is prescribed by policy makers, delivered by providers or recommended to educators in schools, colleges and universities as particularly effective at ameliorating or solving certain problems. Problems such as economic stagnation have been called by different names, for example, social messes (Horn, 2001), wicked problems (Head, 2008) and complex social problems (Chatterji, 2016). Such problems are characterised as complex, open ended and intractable, and as such, prompt complex responses in the form of programmes and

interventions designed to address the situation in some way (for example, countering economic stagnation by creating more and better entrepreneurs through entrepreneurship education). Chatterji (2016), has defined these responses as *complex social programmes*, which share certain characteristics, including that they: are socially mediated; are delivered by humans with varying levels of organisation and autonomy; have many moving parts and finally, that they operate in larger, multi-level communities with multiple agendas and actors that might be directly or indirectly influencing the functioning of the programme as well as its outcomes (Chatterji, 2016). For the purpose of this article then, we conceptualise entrepreneurship education programmes generally, and entrepreneurship education competitions specifically as *complex social programmes* (Pawson, 2006; Wong et al., 2013). Such a characterisation has been reflected by Pittaway & Cope (2007), who illustrated the complexity of entrepreneurship education when they presented it as nested within a number of layers (e.g. the programme and university context, the general enterprise infrastructure and the wider policy environment), in addition to pointing to the additional complexity emanating from the fact that individual actors in the programme (be they students, businesses or faculty), would have their own individual capacities and inclinations as well.

An important question to ask is how should one evaluate complex social programmes? If public money is spent on such programmes because they are presented as solving certain social problems, it is reasonable to ask if they are a good investment – indeed, this is part of the rationale for evidenced based policy making (Pawson, 2006). Rideout & Grey aim to answer such a question in their 2013 paper ‘Does entrepreneurship education really work?’, conducting a review of empirical studies that evaluate entrepreneurship education programmes. They draw a clear line between methodological rigour and the scientific model of evaluation, citing approaches involving treatment and matched comparison groups, and quasi experimental controls as the foundation for drawing causal conclusions. However, the authors concede that such studies appear to be unable to answer the question ‘does it work?’ and furthermore are nowhere close to answering the more significant question of ‘how does it work?’ By way of remedy, they suggest that future research should utilise the ‘gold standard’ of evaluation research - quasi-experimental and experimental design - in order to move on the debate (Rideout & Gray, 2013: 345-347). However, we contend that such approaches can only ever tell us what worked, they can only provide *a score* for a particular programme at a particular time. The crucial elements of increasing scientific knowledge – cumulation, theory testing and improving and deriving knowledge from tacit understanding and experience - are ruled out by models which pre-judge what is to be proven (Hammersley, 2001). Realist Evaluation (RE) has been developed as an alternative methodology developed specifically to explore and evaluate complex social programmes (Pawson & Tilley, 1997; Pawson, 2006; Pawson, 2013; Wong et al., 2013). The approach aims to address weaknesses such as the *incomplete* knowledge developed through experimental methods, systematic review and meta-analysis where findings can be mixed or inconclusive and don’t provide sufficiently useful *explanations* to practitioners or policy makers about what might work, for whom, and why. When applied to evaluating social programmes, such methods can obfuscate complexity and lead to artificial and misleading results:

“...hypotheses are abridged, studies are dropped, programme details are filtered out, contextual information is eliminated, selected findings are utilized, averages are taken, estimates are made...this is all done in an attempt to wash out ‘bias’...however, in this purgative process the very features that explain how interventions work are eliminated from reckoning.”

Pawson (2006: p42).

A basic realist assumption is that programmes are ‘complex interventions, introduced into complex social systems’ (Pawson, 2013: 33) and as such require a different approach to evaluation which

takes this into account. In the next section, we reflect on our motivation to evaluate and introduce some relevant principles of Realist Evaluation.

Realist Evaluation as an alternative approach to navigate complexity

Weiss (1987), identifies that knowledge generated through the evaluation of programmes serves different functions: as a warning (that things are going wrong), as guidance (direction for improving policies and programmes), as reconceptualization (making sense of activities and outcomes) and to mobilise support (stiffen support for, or weaken adherence to, a particular position). Our lived experience as practitioners in the field of entrepreneurship education is that competitions and competitive pedagogies are ubiquitous. The expansion of competitions has been charted in historical accounts of entrepreneurship education in higher education and schools (Katz, 2003; Sukarieh & Tannock, 2014). Competitions have been identified as a staple part of the extra-curricular entrepreneurship education menu in universities (Preedy & Jones, 2015), and the most frequent and familiar activity delivered in schools (Mann et al, 2017). For us, they epitomise an example of a 'taken-for-granted' practice, which Fayolle (2013), argues should have more critical attention. As a result, we employ a Realist Evaluation approach to counteract the taken-for-granted assumptions and "musty sameness" of existing policy (Weiss, 1987: 16), by assessing entrepreneurship education competitions in European guidance over a ten-year period.

Realist Evaluation (also sometimes known as Realistic Evaluation) is an approach and logic of thinking evolved specifically for researching and evaluating complex, socially contingent programmes (Pawson & Tilley 1997). From the Realist Evaluation (RE) perspective, whenever a programme is implemented, it is testing a 'theory' about what might change and how (Westhorp et al., 2011). As such, it is an approach that aims to surface and track ideas inherent in the design and delivery of social programmes and explain *why* complex interventions work (or fail), in order to provide the policy and practice community with new ideas and knowledge to achieve or improve outcomes for intended beneficiaries. Researchers have developed protocols and standards for realist review and realist synthesis (Pawson *et al*, 2005; Wong et al., 2013), identifying 19 steps which can be followed systematically. But the logic of realist evaluation and methodologies is also a resource which "imbues a way of thinking" (Astbury, 2018: 75), and can be adapted and applied flexibly, for example, to isolate and investigate a particular element of a policy or a programme, and its underlying theories (Pawson, 2006).

There are a number of assumptions and expectations described by Pawson (2006), inherent in the RE approach which are relevant for the adaptive approach undertaken in our study *and* which have wider implications for the evaluation of entrepreneurship education programmes and interventions:

- the 'same' intervention will meet with success and failure (and everything in between) when applied in different contexts and settings.
- tracking successes and failures in programmes will lead to elements of explanation about the reasoning and reactions of different stakeholders.
- we should examine which intermediate outputs need to be in place for successful outcomes to occur.

As practitioners involved in the design and delivery of entrepreneurship education programmes, these assumptions align well with experience. Interventions *are* received differently, aspects appear to 'work' for some and not for others and there are always contextual issues – at individual and institutional level, and in the wider environment - which influence the reactions of participants and the patterns of outcomes. As such, we were keen to adapt the logic of RE to make explicit the assumed outcomes of entrepreneurship education competitions and purposefully search for alternative and unintended outcomes so as to critically enrich perspectives and encourage a reconceptualisation. Criticism of such adaptive approaches are based on the lack of clarity and

reproducibility of studies (Pawson et al., 2004). But from a realist philosophical standpoint, standardisation and reproducibility in the evaluation of complex social programmes - as they are presented in scientific experimentation - are an *impossibility*. Furthermore, researchers using RE question if objectivity in science even stems from procedure, standardisation and reproducibility, and instead assert that ‘validity rests on refutation rather than replication’ (Pawson et al., 2004: 38). The consequence is that researchers should *surface the logic of their reasoning*, and try to show their workings; but ultimately all findings should be considered tentative and fallible and exist to *expose a theory about how a programme works to criticism* (Pawson et al., 2004: 38). In the next section we describe how the realist logic of thinking was applied in the context of our chosen policy setting – European Policy and Guidance on entrepreneurship education over a ten-year period from 2006 to 2016.

Methodology

Our approach is inspired by the logic of RE which recommends researchers undertake an act of *organised scepticism* where claims about a programme (in this case, entrepreneurship education competitions) are exposed to critical scrutiny through ‘precise, vexatious cross-examination’ (Pawson, 2013: 108). This endeavour is conducted to ensure alternative theories and unintentional outcomes receive as much research attention as do widely promised benefits. We surface the logic of our reasoning by describing the process of our study. The table below summarises the stages of our research and related questions, which are then detailed over the following pages.

Stages	Research question
1) Identifying a focus	To what extent do competitions and competitive pedagogies feature in European policy and guidance?
2) Data extraction and initial synthesis	What are the benefits and outcomes declared in policy and guidance?
3) Cross-examination of short and intermediate outcomes declared in policy and guidance	What rival theories can help explain the mixed results of competitive entrepreneurship education experiences?

Table 1 – Research stages and related questions

Stage 1 - Identifying a focus for study

RE does not have the same hierarchy of evidence that exists in scientific research, instead it seeks out any situation specific wisdom about how a programme may (or may not) work. This opportunity to study everything can lead to researcher becoming overwhelmed with data, therefore identifying a focus is important. As an authoring team which spans England and Spain and has current and historic involvement in European projects to develop enterprise, entrepreneurship and social innovation projects in school settings, we were interested to explore how entrepreneurship education competitions were positioned in policy and guidance issued by the European Commission. In the last decade the European Commission (EC) has acted as a catalyst and a facilitator for the promotion of entrepreneurship education. It identifies entrepreneurship as a driver of innovation, competitiveness and growth (as well as considering it a vehicle for personal development and social cohesion), and in 2004 it convened European member states in Oslo to share experiences and good practice and create an action plan for the ‘European Agenda for Entrepreneurship’ (EC, 2004). The outcome of this conference - ‘The Oslo Agenda for Entrepreneurship Education in Europe’ (EC, 2006) – signalled the start of a decade of entrepreneurship education policy and practice promotion. Reviewing these documents provides a valuable overview of the policies and good practice which

have been recommended to schools over the last decade, as well as capturing the national strategies, curricula and learning objectives of member state countries. Furthermore, we reason that this EC guidance is promoted to national governments across 28 member states and aims to influence those who have responsibility for developing policy for entrepreneurship and enterprise in education, and those involved in providing entrepreneurship education experiences, for example teachers or charities or enterprise promotion groups. By way of example, there are more than 42 million young people in lower and upper secondary education across Europe who are the target of 'entrepreneurship and creativity' policies (EC, 2015). The body of policy and guidance we chose to focus on will be used by a variety of actors to inform and justify decisions made at many levels: by teachers in the classroom, by school leaders at an institutional level, by programme commissioners at a district level, and finally, by national governments who decide how public money is spent on entrepreneurship education. We identified that the Oslo Agenda (2006) offered a useful line in the sand at which to start our study and extend up to and include the report Entrepreneurship Education at School in Europe (2016). This body of work¹ consists of 11 publications including state-of-the-art reports on policy and practice, guidance and case studies focussed on entrepreneurship education in *non-HE* settings.

Stage 2 - Data extraction and initial synthesis

Based on the scope we identified, school focused European Commission policy documents from 2006 to 2016 were studied, searching for the inclusion of the terms: competitions, contests, prizes and awards. Where these terms existed, the context of their inclusion was logged and direct comments collated. Pawson et al., (2004) describe how researchers may make use of 'data extraction forms' to assist the sifting and sorting of materials, and we used four initial headings to organise information: the year of publication, the policy document name, the context of a term's entry within the document and direct quotes. This process equates to what Pawson et al. (2004) call 'theory tracking mode', where documents are scoured for ideas on what an intervention is and what it is meant to be doing. These ideas are then highlighted, noted and are given an approximate label. Our data extraction form ran to 20 pages (and is available in the supplementary materials online). It included *any and all* text which related to competitions, contests, prizes and awards. Whole direct quotes were harvested and ascribed an approximate label (these are identified in Table 3 and Table 4). We provide an example of our form in Table 2, with sample extractions from different years. Then we present an initial synthesis of how competitions are characterised in policy before cross examining the assumed short and intermediate outcomes.

*****Insert **Table 2** about here – Examples from data extraction form*****

Something that struck us was how the positioning of competitions shifts dramatically after their first mention. They are initially described as an 'effective communications activity' in The Oslo Agenda, yet within a decade the method is qualified as: "a learning form where competitive elements are used in order to achieve better learning outcomes" (EC JRC, 2015). The summary presented in **Table 3** demonstrates how competitions are characterised.

*****Insert **Table 3** about here – how competitions are characterised*****

Competitions feature as both an integral part of strategy, a model of good practice and a teaching method. National, regional and local competitions successfully engage students as well as incentivising teachers. They are the vehicle which drives young people into performing to the best of their ability and the nature of competition itself assumed to transform learning and outcomes:

¹ Appendix 1 - European Policy and Guidance reports on entrepreneurship education in schools, colleges and VET (non-HE settings), 2006 – 2016.

“...[students]...discover and develop their abilities through school and national competitions.” (EC 2012).

“...competition engages the community and motivates teachers...” (EC, 2012).

“...competitive elements.... give learners the opportunity to validate their ideas and experience the entrepreneurial/start-up environment.” (EC Eurydice, 2016).

Competitions feature as a method for engaging the private sector. They are a means of raising the profile of activities, attracting media interest and therefore increasing the commitment of the private sector. The competition *itself* is seen as crucial (rather than simply holding a celebration event), because it enables the recruitment of *judges*. These are people from the business community, local politicians or education authorities who help to get support behind *their* project.

Competitions are also characterised as an assessment method and pedagogical approach. Assessment is achieved through the critique and evaluation provided by business people, measurement against the performance of peers and summative assessment provided by performance in competitions and pitches. Finally, a significant number of reports (73%), included competitions and competitive learning within sections on ‘teacher development’, ‘teacher support’ or ‘teaching materials,’ recommending the method within content or case studies as a technique which educators should apply in classroom situations to achieve entrepreneurial learning outcomes. Such advice may have contributed to the extensive promotion and adoption of the competition method. This is reflected in one state of play report which summarises: ‘...traditional start-up methods (pitches, competitions, events, business or idea plan), are to some extent, and often in an adapted way, applied across all levels of education...’ (EC JRC, 2015). This report summarises that learning-by-doing combined with collaborative and competitive teaching methods are *the most common* pedagogical approach in entrepreneurship education. Indeed, successive reports position competition as a teaching method in its own right, describing it as something delivered not just by providers, or as part of an extra-curricular activity, but by entrepreneurship educators at all phases of education as part of their entrepreneurial pedagogical toolkit.

Table 4 presents the declared benefits of competitions with four of these (better employability, better start-up rates, higher earning and economic growth) describing significant long-term impact.

*****Insert **Table 4** about here – benefits of competitions in EC policy and guidance*****

Amongst all the benefits and positive outcomes declared for competitions, there is just one example where concern is reported. Promoters of the Junior Entrepreneur Programme in Ireland report "Initially, the JEP programme was based on a competition with one winner. During the pilot phase, the feedback showed this competitive environment had negative effects, creating unhappiness among teachers and pupils" (EC JRC, 2015). For the first time in European policy, a note of caution is sounded about the widespread use of entrepreneurship competitions, at least for lower education levels. The next stage in our research process was to purposefully search for more of these, and to look for theories and research which would add to this alternative perspective. The results are presented in the next section.

Stage 3 - Cross-examining short and intermediate outcomes declared in policy and guidance.

Pawson describes the importance of *organised scepticism*, where claims about a programme are exposed to critical scrutiny through ‘precise, vexatious cross-examination’ (Pawson, 2013: 108), so that alternative theories and unintentional outcomes receive as much research attention as do the widely promised benefits. To focus this element of our study, we chose to limit our cross-

examination to the most frequently cited short and intermediate benefits declared *for students*. Policy and guidance most commonly declares that: competitions develop students' skills, that competitions are motivating, that students are inspired by their peers in competitions and that students find competitions rewarding. We focus our cross examination on these outcomes for two reasons: first, as an authoring team including teacher educators, we are sensitive to Guskey's model of evaluating professional development (2002). He identifies impact *on students* is the bottom line for educators. Does an activity benefit students? Does it achieve its stated goals? Were there unintended outcomes? If educators don't see positive impact on students he suggests, they will not be interested and motivated to continue with and develop a practice (Guskey, 2002). Second, we are minded of the realist call for greater inspection of the 'implementation chain' – that is, what intermediate outcomes should be in place to lead to longer term impacts (Pawson, 2006: 29). We wondered how likely it is that long term benefits will be realised if short and intermediate benefits aren't secured. The inherent logic of a programme and its theory may start to break down if such outcomes aren't achieved. As such, we purposefully searched for research from other fields (for example, education and psychology), which would offer alternative theories on the short and intermediate outcomes declared in policy and guidance. We present our cross examination in the following sections and conclude with a cross cutting discussion of social context, which emerged as an important factor to consider.

Skill development

Seven reports identified that one of the benefits of competitions is that they are successful in developing students' skills. Positive outcomes are facilitated by the nature of the competitive model itself, which enables young people to 'discover and develop their abilities' (EC 2012), 'develop or improve entrepreneurial/ business skills' (CEDEFOP, 2011), develop 'team working and communication skills', 'pursue entrepreneurial ideas and ambitions' (CEDEFOP, 2011), and which promotes '...creative ideas, teamwork, solving of real problems...' (EC 2012). One argument for competition is that it is part of the DNA of society, evident in relationships and dynamics at home, work, hobbies and entertainment (Vansteenkiste & Deci 2003, Fulop, 2009), and therefore learning to compete is learning the skills required for life, as well as work. However, educational research has looked at the effects of different tasks and structures on students' learning and outcomes and calls into question the uncritical use of competitions as a vehicle for such skill development. Whilst competition can increase productivity or performance on rote, speed or basic tasks (Slavin, 1977; Johnson et al., 1981) it can undermine performance on problem solving and creative tasks (Johnson et al, 1981; Amabile 1983; Butler 1989,). 'Creativity' and 'problem solving' often feature on the entrepreneurial competencies wish list. For example, the recent EU EntreComp Entrepreneurship Competence Framework includes creativity as a specific competency, and problem-solving features in descriptors for other skills such as taking the initiative and spotting opportunities (Bacigalupo et al., 2016). Further research is required then to clarify the declared benefits and actual effects of competition in entrepreneurship education on the development of such skills. Theorists distinguish between 'performance goals' and 'mastery goals' and the different ways these conceptions influence the development of skills. Central to a performance goal is the idea that one's *skill* is evidenced by doing better than others, and that this performance is publicly recognised (Ames, 1992; Dweck, 1986). As a result, learning and skills *development* is viewed as a way to achieve a desired goal, rather than an end in itself. As a consequence, if considerable effort is invested but does not lead to 'success' it can lead to a negative evaluation of competences (Ames, 1992), and disengagement from developing that skill. In contrast, mastery goals focus on the intrinsic value of learning and utilising effort to develop skills and competences (Ames, 1992, Dweck, 1986). So, to summarise, a competitive process may incentivise *performance outcomes* to be prioritised over *skill development*. For example, in a group working on a competitive pitch, those who might most benefit from developing presentation skills are least likely to take the lead, despite being most in need of development (McCollough et al., 2016). Competition is not then, in and of itself, a strategy that

guarantees the development of skills and competencies. A risk is that competitions focus students on the ends - winning (or losing) - rather than on the valued building of new skills and competences (Bergin & Cooks, 2000; McCollough et al., 2016). Furthermore, if students' efforts do not lead to success, their sense of competency may be diminished and future interest put in jeopardy, potentially leading to the opposite of developing 'can do' entrepreneurial skills and competences (can't do, won't do).

Motivation

A positive outcome, commonly cited in European Policy for the use of competitions in entrepreneurship education, is that they motivate students. Such benefits are described generically, for example 'Business planning ideas/competitions...motivate young people' (CEDEFOP, 2011), and specifically, in that they motivate young people to 'take part' (CEDEFOP, 2011), motivate them to 'perform to the best of their ability' (CEDEFOP, 2011), and that young people report higher self-perceptions of motivation (ECfEI, 2009). But Self-Determination Theory defines the act of motivation as requiring the subject to be 'moved to do something.' Proponents such as Deci & Ryan (1985) recognise there exists different types, and different levels, of motivation. For example, intrinsic motivation is doing an activity for its inherent satisfaction, for fun, challenge and out of curiosity; whereas, extrinsic motivation refers to doing something because it leads to a separable outcome (Ryan & Deci, 2000). Competitions *per se*, are a special type of extrinsic activity as they necessitate measuring one's own performance against that of others, which can tend to decrease intrinsic motivation (Ames, 1984a, Ames & Ames, 1984). Arguments for competition in education suggest it can play a role in catalysing increases in performance (Slavin, 1977), but the use of competitive pedagogy as an effective strategy to motivate pupils in classroom environments remains largely contested in educational research (Deci & Ryan, 1981; Good & Brophy, 2008). Ultimately though, competitive processes will be qualitatively different depending on cultural, situational and personal/individual factors such as the way competitors view each other, the process they are involved in and the way they cope with winning and losing (Fulop, 2000; Fulop, 2009). A crucial process element we wish to draw attention to is the difference between the motivations (and subsequent experiences and derived meaning) of those participating in *voluntary* business contests, compared to those participating in *compulsory* competitions embedded in the curriculum. The former participants may introduce 'Volunteer Bias', an effect (where the nature of the volunteers causes the positive outcome as opposed to the intervention itself) that is difficult to control for (Heiman, 2002; Goldstein *et al.*, 2015; Keiding & Louis, 2016). However, being *forced* to participate in a competition through a compulsory curriculum activity changes the dynamic, and the potential effects, of the act itself. Competition can be experienced as 'coercive' (Good and Brophy, 2008) and be ineffective as a motivational strategy for *all* pupils (Meece et al., 2006). Motivation may be diminished through the focus placed on winning (Deci *et al.*, 1981; Ames 1984b, Butler, 1989), and the exposure to public failure (Rahal, 2010). Students who repeatedly perform poorly in comparison to peers will find little appeal in competitions (Good & Brophy, 2008). A crucial insight to heed, is the extent to which competition is experienced in different ways, by different participants. The dimensions that are proposed to underlie intrinsic motivation: (perceived competence and perceived effort, enjoyment and interest, pressure and tension) will result in different motivation being derived by different participants (Ryan & Deci, 2000) according to their performance and the perceived meaning they take from it and these individual perceptions can have a greater impact on intrinsic motivation than do competition outcomes.

Inspired by Peers

Another declared benefit of competitions is the opportunity to learn from and be inspired by peers. This includes the 'inspiration' young people gain from each other (EC, 2010), and how 'valuable learning' is achieved by observing and imitating those whose 'techniques and skills are greater,'

(CEDEFOP, 2011). But psychologists have identified that peer excellence can have a demoralising effect if students believe that their peers excellent level of performance is out of their reach. Rogers & Feller's experiments (2015) showed that incidental exposure to exemplary peer performances could undermine motivation and success, leading to de-identification with the relevant domain and finally, quitting. 'Discouragement-by-Peer-Excellence-Effect' challenges the notion that students will *automatically* be inspired by and learn from their peers, if being exposed to their excellent performance makes them feel less capable of performing at the level of those peers. Crucially, this changed belief appears to decrease student performance. Social Comparison Theory (Festinger, 1954), states that our sense of self is determined by making comparisons between ourselves and others in order to evaluate ourselves and can help explain these reactions. If a student compares them self and their performance unfavourably with others, it threatens, not inspires, their self-worth and motivation (Meece *et al.*, 2006). This effect is reflected in the findings of one empirical study which identified the negative impact participating in the regional finals of an entrepreneurship education competition had on students from lower-socio economic backgrounds: "When meeting other groups at regional meetings or at competitions, the pupils from the lower socio-economic background felt underprivileged, backward and less capable" (Heilbrunn & Almor, 2014: 8). These students scored lower in terms of self-efficacy, and perceived entrepreneurship as less feasible and less desirable after the intervention.

Rewards

A number of reports identified that competitions provide important rewards for students (ECfEI 2009; EC 2010; EC 2016). The assumed benefit is that competitions reward the 'best' (ECfEI, 2009), provide recognition (EC, 2010) and that rewards in competition 'keep motivation high' (ECfEI 2009). Deci *et al* (1999), distinguish between different types of rewards and their effects. Rewards that are perceived to be controlling (for example, contingent on task engagement, task completion or quality of performance) can have negative effects on intrinsic motivation, whereas, rewards that are informational (providing feedback or recognition), can provide satisfaction and have positive effects on intrinsic motivation. In competition, the reward - 'winning' - is extrinsic to the activity itself, and is dependent on beating an opponent/s (Vansteenkiste & Deci, 2003). In many cases, rewards have conflicting effects and are dependent on context, so many factors must be taken into account. A meta-analysis of the effects of extrinsic rewards showed that they have a substantial undermining effect on intrinsic motivation (Deci, *et al.*, 1999). Reinforcing a previous potential red-flag about the significance of student age, tangible rewards were more detrimental for children than college students, and verbal rewards were less enhancing for children than college students. This underscores the role personal context plays and that interpretations of competitive outcomes must be considered from the actor's perspective, rather than simply taking stock of who wins or loses (McAuley & Tammen, 1989). Ryan *et al.*, (1999), summarise that understanding the effects of rewards requires a consideration of the interpretation which recipients will give to the rewards in relation to their own feelings of self-determination and competence. Of course, the opposite of being 'rewarded by winning', is 'losing', and this can have significant negative effects on (Vansteenkiste & Deci, 2003, Good & Brophy, 2008). Good & Brophy (2008), identify the development of a loser's psychology where individuals and teams feel embarrassed or humiliated, and those who consistently lose may suffer losses in confidence, self-concept and enjoyment. Finally, and perhaps, more dramatically, winners are more likely to engage in unethical behavior, potentially due to an inflated sense of entitlement, and as a result, unethical behaviour may cascade from being rewarded in competitive settings (Schurr & Ritov, 2016). Whilst this research was conducted with adults, and therefore effects have not been demonstrated in the classroom, it can be taken as a provocation for critical thought on: unintended consequences; influences on social relations and possibilities for future enquiry.

Social context

Social context emerged out of our cross-examination as a factor that is likely to influence outcome patterns for participants in entrepreneurship education competitions. It has previously been argued that entrepreneurship education can be considered a success if it dampens unrealistic expectations and fulfils a type of 'sorting' according to aptitude and ability (Von Graevenitz et al., 2010). However, research in mainstream education has shown that such processes are rarely neutral in school settings, and children and young people from lower socio-economic groups are more likely to be failures due to the expectations of others and the opinions and actions of decision makers (Boaler et al., 2013). Heilbrunn & Almor (2014) illustrated that an overall positive statistical effect for a competitive intervention was shown to be misleading when social context was taken into account. Lower-socio economic students were practically (as well as perceptually), disadvantaged in the organisation and experience of competing, with less personal and institutional support and less individual capability to complete tasks (such as phoning sponsors), as well as feeling inadequate compared to better equipped peers at regional finals. The significance of these observations is that, clearly, the field on which teams and schools play in entrepreneurship education competitions is far from level. Suggesting that competition in these circumstances is a fair and effective 'sorting' process may well result in young people alienated from entrepreneurship according to context (not according to ability and interest), reproducing social inequalities rather than ameliorating them. Consider a key component of competitions – the public presentation, or pitch - identified in three reports as a valuable element of competitions, where students are evaluated by others and assess their own performance. The pitch represents a litmus test for finalists but may well favour teams from socially-advantaged backgrounds. Patterns of talk and interaction constitute a manifestation of class differences (Bernstein, 2009, Savage, 2015), and elevator pitches and other forms of interaction with the jury mean that socially advantaged teams who have the existing social skills to make the right impression may be more likely to be crowned winners.

In summary, our cross-examination indicated that competitions *can* lead to unforeseen outcomes, especially for those in 'at risk' groups (for example, students from lower socio-economic backgrounds). In particular, two distinct, but closely related characteristics of competitions can result in unintended effects:

- 1) *Unhealthy competitions implicitly reward the advantaged students* (Shindler, 2009). In the same way that Petersen & O'Flynn (2007), observed that Duke of Edinburgh Award participation can be viewed as a neo-liberal technology which enables further benefit for already advantaged students, Heilbrunn & Almor (2014), illustrated how the satisfaction and benefit which higher socio-economic students' reported masked the deterioration experienced by lower socio-economic students. The resources, which advantaged students, are able to bring to bear, as individuals, and in terms of school organisation, teacher commitment and family capital, result in a competition which is skewed, and more likely to reward advantaged students.
- 2) *Winners are able to use their victory as social or educational capital at a later time* (Shindler, 2009). Bold claims are made about the positive impact on employability and personal, professional and entrepreneurial success following participation in competitions. However, such new educational strategies may be an opportunity, or a constraint, depending on social class (Van Zanten, 2008). Families do not have the same resources to enact such strategies, and instead, those with existing advantage can 'consolidate and increase' their position in relation to others. Researchers have noted that students from independent schools are over-represented in enterprise competitions (Huddleston *et al.*, 2012; Athayde, 2012), and a similar picture emerges when looking at the state sector, with grammar school pupils outnumbering alumni of the non-selective sector (Mann & Kashfepakdel, 2014). Essentially, entrepreneurship education competitions may enable confident, socially and culturally advantaged young people to gain

additional social and educational capital which benefits them further at a later time and in-effect, creates greater disadvantage for their worse equipped peers.

Limitations

Our study is limited in its scope in that we use secondary sources and existing research to surface and challenge theory. But we believe it points to the usefulness of RE as a theoretically driven approach which is committed to exploring, critiquing and evaluating programmes to improve outcomes for participants.

Conclusions

An aim of Realist Evaluation is to provide a deeper and fuller account of reality, in order that practitioners and policy makers have better explanations on which they might base their policy decisions and practice. An underpinning principle of the paradigm is that complex, socially contingent interventions will *always* have different effects on different participants in different circumstances. As well as supporting a critical evaluation of competitions, the theory driven 'way of thinking' that characterises Realist Evaluation is especially useful for those designing, delivering, evaluating or researching complex social programmes. In this article, the identification of unintended outcomes from competitions and competitive learning processes underscores that the positive benefits declared in policy and guidance are far from assured. We have gone on to further develop this strand of thinking and identify and communicate crucial factors that appear particularly significant in influencing outcome patterns (Brentnall, Diego, Culkin, 2018, in print). An issue which emerged from this research as important is that of social context. We are reminded of mainstream education researcher Diane Reay, who asserts that the iniquitous effects of social class in schooling is a 'monster that grows in proportion to its neglect,' (Reay, 2006). Social context is often stripped out of entrepreneurship education, rendered invisible in research and absent in the policy picture where one-size-fits-all enterprise policy initiatives are wielded blindly (Athayde, 2012). This sentiment might prompt entrepreneurship education researchers to reflect that the wider social and economic context of education is inescapable for children and young people in schools, so is crucial for ethical research and practice which might want to challenge (or at the very least, not reproduce) disadvantage.

This novel application of RE to entrepreneurship education competitions has revealed the extent to which competitions and competitive pedagogies are handed down as a method which delivers significant short and long-term benefits. The taken-for-granted position presents competitions as an effective model for developing skills, and motivating, inspiring and rewarding students, but applying a realist logic of enquiry reveals an alternative scenario. It illustrates that competitions can diminish competency and interest and alienate young people from entrepreneurship before anyone can reasonably guess what their futures might hold. Of most concern is that competitions and competitive pedagogies are promoted in school focussed policy and guidance as an effective approach for *all* students, of *all* ages, in *all* contexts; as a result, young people will increasingly be conscripted into such activity through compulsory curricula or extra-curriculum activities. We hope that the act of organised scepticism undertaken here enables practitioners, researchers and policy makers to look beyond the intuitive appeal of competitions and competitive pedagogies and scrutinise and test *theory* which might add a sense of caution to the current uncritical recommendations and widespread application of such interventions. Whilst competitions in entrepreneurship education are presented as engaging and effective interventions, our cross examination demonstrates that the declared benefits and positive outcomes are by no means guaranteed.

Appendix 1 – European policy and guidance reports on entrepreneurship education in schools, colleges and VET (non-HE settings), 2006 – 2016.

Year	Title	Source
2006	The Oslo Agenda for Entrepreneurship Education in Europe	European Commission.
2009	Entrepreneurship in Vocational Education and Training. Final report of the Expert Group.	European Commission for Enterprise and Industry.
2010	Towards Greater Cooperation and Coherence in Entrepreneurship Education: Report and Evaluation of the Pilot Action High Level Reflection Panels on Entrepreneurship Education initiated by DG Enterprise and Industry and DG Education and Culture.	European Commission.
2011a	Guidance supporting Europe’s aspiring entrepreneurs. Policy and practice to harness future potential.	CEDEFOP – European Centre for the Development of Vocational Training.
2011	– Entrepreneurship Education: Enabling Teachers as a Critical Success Factor. A report on Teacher Education and Training to prepare Teachers for the challenge of entrepreneurship education.	European Commission.
2012a	Entrepreneurship Education at School in Europe. National Strategies, Curricula and Learning Outcomes.	European Commission.
2012b	Building Entrepreneurial Mindsets and Skills in the EU. A Smart Guide on promoting and facilitating entrepreneurship education for young people with the help of EU structural funds.	European Commission.
2013	Entrepreneurship Education: A Guide for Educators.	European Commission.
2015	Entrepreneurship Education: A road to Success. 13 Case Studies Prepared for the study ‘Compilation of evidence on the impact of entrepreneurship education strategies and measures.’	European Commission.
2015	Entrepreneurship Competence: An Overview of Existing Concepts, Policies and Initiatives.	European Commission, Joint Research Centre.
2016	Entrepreneurship Education at School in Europe. Eurydice Report.	European Commission, EACEA/Eurydice.

All the reports are publicly available on the following websites.

https://ec.europa.eu/growth/smes/promoting-entrepreneurship/support/education_en

https://ec.europa.eu/growth/smes/promoting-entrepreneurship/support/education/commission-actions_en

https://ec.europa.eu/growth/smes/promoting-entrepreneurship/support/education/projects-studies_en

http://ec.europa.eu/education/policy/strategic-framework/entrepreneurship_en.htm

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Year	Document	Context in which term is used	Direct quotations	Approximate labels
2006	Oslo Agenda for Entrepreneurship	Competitions and awards are recommended as a 'communications activity' which potentially could be applied to any of the recommendations/activities throughout the document.	F2 Celebrate entrepreneurship education activities and programmes that work well, by organising awards and competitions." (p4).	Part of an EE strategy. Dissemination Activity.
2012	Entrepreneurship Education at School in Europe (EC), National Strategies, Curricular and Learning Outcomes.	In the section 'National strategies, current initiatives', competition is included in the description of current activities in different member states.	Czech Republic – "...the teachers offer students professional help. They help students to discover and develop their abilities through school or national competitions and include activities in instruction that familiarise students with career opportunities." (p41).	Develops skills.
2013	Entrepreneurship Education: A Guide for Educators (EC)	In the chapter 'Examples of practice in Initial Teacher Education', within the Entrepreneurial or innovative teaching methods and pedagogies section, competition and its benefits are included within case studies.	"Competition engages the community and motivates teachers. JA-YE sees competition as crucial to engaging with the local community and media. Judges of these competitions are typically from the business community, politicians and local / national education authority, which help to get their support behind the project. Several awards are given out to mini-companies; teachers and schools are also awarded, and this kind of recognition often creates positive publicity both for the activities but also for the schools and the teachers" (p.83).	Engages teacher participation. Dissemination Activity. Private sector engagement. Rewards students. Rewards teachers.
2015	Entrepreneurship Competence: An Overview of Existing Concepts, Policies and Initiatives (EC, JRC).	The report aims to define the state of play in entrepreneurship education, combining insights from a literature review, an inventory of selected initiatives and in-depth case studies.	JEP Programme (Ireland) "Besides, using a competitive environment as the key pedagogical approach proved to be inadequate at primary education level creating unhappiness among students and teachers." (p126).	Teaching method.
2016	Entrepreneurship Education at School in Europe (EC), National Strategies, Learning Outcomes and Curricula.	Included in member state examples of 'National Strategies, curricula and learning outcomes'	Lithuania – Innovation Camps and Business Contests: held for students aiming at promoting students' entrepreneurship, creative ideas, teamwork, solving of real problems and encouraging students in achieving their goals. (p57).	Dissemination activity. Develops skills.

Table 2 – Selected examples from data extraction form – terms of search: competition, contest, award, prize in (non-HE) European policy and guidance 2006 – 2016.

Approximate label	EC 2006	EC 2009	EC 2010	CEDEFOP 2011	EC 2011	2012a	2012b	2013	2015	EC JRC 2015	EC 2016	No./11 reports
1 Part of an EE strategy	*	*	*	*	*	*	*	*	*	*	*	11/11
2 Good practice model for delivery		*	*	*	*	*	*	*	*	*	*	10/11
3 Teaching method		*	*	*	*		*		*	*	*	8/11
4 Dissemination activity	*	*	*	*			*		*		*	7/11
5 Private sector engagement		*		*	*			*		*	*	6/11
6 Engages teacher participation		*						*	*		*	4/11
7 Incentivises student participation			*	*		*						3/11
8 Assessment method				*		*				*		3/11
9 Facilitates cash prize/finance		*		*								2/11

Table 3 – Characterisation of competitions in European policy and guidance 2006 – 2010.

Approximate label	EC 2006	EC 2009	EC 2010	CEDEFOP 2011	EC 2011	2012a	2012b	2013	2015	EC JRC 2015	EC 2016	No./11 reports
A. Develops skills		*	*	*		*			*	*	*	7/11
B. Motivates students		*		*					*		*	4/11
C. Rewards teachers		*	*					*	*			4/11
D. Students learn from/are inspired by peers			*	*			*					3/11
E. Rewards students		*						*	*			3/11
F. Better start up rates		*							*			2/11
G. Increased entrepreneurial intention									*			1/11
H. Better employability									*			1/11
I. Higher earnings									*			1/11
J. Economic growth									*			1/11

Table 4 – The benefits of competitions in European policy and guidance 2006 – 2010 (short and intermediate outcomes expected for students *in bold* were the subject of our realist cross-examination).

Supplementary material – Brentnall, Diego, Culkin – Data extraction form. Terms of search: competition, contest, award, prize in (non-HE) European policy and guidance 2006 – 2016.

Year	Policy document	Context of competition within document	Examples of relevant quote/s.	Approximate label
2006	Oslo Agenda for Entrepreneurship	Competitions and awards are recommended as a 'communications activity', which potentially could be applied to any of the recommendations/activities throughout the rest of the document.	"F2 Celebrate entrepreneurship education activities and programmes that work well, by organising awards and competitions." (p4).	1, 4
2009	Best Procedure Project. Entrepreneurship in Vocational Education and Training. Final Report of the Expert Group (EC)	<p>The organisation of contests is identified as a 'good practice indicator' in terms of key features for the effectiveness and success in teaching entrepreneurship.</p> <p>Competition/contests are mentioned explicitly within four of the eight case studies in the 'examples of good practice' chapter, including:</p> <p>An 'example of good practice' from Belgium, relating to a 'virtual knowledge centre' which provides and disseminates 'good practice' materials to teachers, training organisations and other partners.</p> <p>An 'example of good practice' as proposed by members of the expert group. A case study is provided by the Ministry of Economy and Energy and Junior Achievement (Bulgaria) which highlights the use of competitions.</p> <p>An 'example of good practice' from Norway tax administration and JA-YE, describing an 'award for the</p>	<p>"Students are exposed to real-life work situations and encouraged to take part in extracurricular activities. External events, activities and contests are organised." (p.30)</p> <p>"This broad initiative...(includes)... a large database on materials (documents on policy and research reports; models, methods and course materials; and screening instruments for entrepreneurial competences), initiatives, information, events and contests." (p33).</p> <p>"Students, schools, and the local community cooperate to organise and promote events such as trade fairs, competitions, and joint projects." (p 35).</p> <p>"Findings from a number of studies have shown that entrepreneurship education like the mini-company method contributes to a more entrepreneurial culture, and students who have had entrepreneurship education are at least twice as likely to become entrepreneurs in later life. In addition, the students score higher on questions about self-confidence, cooperation skills and motivation in school." (p 37).</p> <p>"...competitions with cash prizes to help students develop their ideas are held each term' (p38).</p> <p>"Every teacher is now required to know the world of enterprise, and needs to prove this knowledge before being recruited. During the preparation for the teachers'</p>	<p>2.</p> <p>2.</p> <p>1, 3, 2.</p> <p>1, 2, A, F, B.</p> <p>9.</p> <p>1, 6, C.</p>

		<p>best financial statement.’ The case study concludes with unreferenced assertions about the impacts of mini-company and entrepreneurship education.</p> <p>An example of good practice from the UK, describing Make your Mark clubs, extra-curricular activities where students run live enterprise projects and ‘make ideas happen.’</p> <p>Included in Chapter ‘How to move forward, a strategy for Entrepreneurship Education: Support for schools and teachers’ - a good practice case study describes teachers undertaking internships in enterprise and industry as part of their recruitment and training process.</p> <p>Included in Chapter ‘How to move forward, a strategy for Entrepreneurship Education: Support for schools and teachers’ - a good practice case study describes a national competition for students in France.</p>	<p>competition, every future teacher must do an internship of at least three weeks in a company.’ (p40).</p> <p>“...offering awards to teachers who are particularly committed to entrepreneurship education would also contribute to keeping their motivation high.” (p40).</p> <p>“In France, the national competition ‘young initiative’ organised by the Ministry of Education rewards the best enterprise projects every year. This award aims to encourage students’ creativity and enterprising spirit by selecting the best projects on setting up a business (virtual or real) developed in vocational, technical and general secondary schools, or apprenticeship schools, in any field of study. 6” (p41).</p> <p>“Dedicated non-profit organisations or NGOs with experience in delivering entrepreneurship programmes and activities to schools also play an important role, and one which should be better recognised. These organisations contribute to programme development, teacher training, effective involvement of the private sector, and the organisation of extra-curricular activities such as competitions and other events.... In some cases, it may be more cost-effective for education ministries to certify and endorse a partner than to invest in setting up programmes themselves.”</p> <p>“Promote campaigns to raise awareness among the general public about the importance of entrepreneurship, and in particular competitions and European awards for entrepreneurship programmes, courses and activities in vocational education. Set up or</p> <p>44 support European awards (best school, best teacher, best student, best company), and/or introduce an Education category in the European Enterprise Awards. Encourage the involvement of private sponsors.” (p44).</p>	<p>1, E.</p> <p>1, 2.</p> <p>1, 4.</p> <p>1, 5.</p>
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2010	Towards Greater Cooperation and Coherence in Entrepreneurship Education (EC). Report and Evaluation of the Pilot Action High Level Reflection Panels on Entrepreneurship Education initiated by DG Enterprise and Industry and DG Education and Culture	<p>Included in reflection on how entrepreneurship education has tended not to be treated systematically in the curriculum, but instead, is typically an extra-curricular activity, added at the margins of mainstream education, reliant on the enthusiasm of individual teachers and schools.</p> <p>Included within a section on good practice descriptions of how national governments are developing strategic approaches to entrepreneurship education. Focused on Swedish government programme to integrate entrepreneurship throughout the education system, and its work with partners to do this. Highlights the 'inspiration, knowledge and valuable networks' young people gain.</p> <p>Included within a section on 'Content, Tools, Methods and Resources for Teaching' which described how, as well as providing teacher training, it is also critical to make available effective teaching resources and support.</p> <p>Included in a section on 'Developing effective practice' the role of awards to recognize and celebrate effective teachers to highlighted.</p> <p>Included in a section on 'clusters, partners and wider linkages', a business plan competition is described from Germany - the Baden-Württemberg Schools Entrepreneurship Programme – in particular as a 'structure' which can be replicated across wide areas.</p>	<p>“(iii) it tends not to be assessed as part of the mainstream curriculum: teachers and schools instead rely on in-house prizes and awards, or take part in competitions run by well-known organisations such as Junior Achievement-Young Enterprise “(p.15)</p> <p>“The Swedish Government also contributes to different organizations such as the Swedish organization Ung Företagsamhet, which is part of Junior Achievement Young Enterprise Europe. This organization aims at giving more than 10 percent of high school students (15,000) the possibility to start and develop their own business during a school year. Another example is Emax Nordic, which creates a common meeting place for up to 200 young entrepreneurs between the ages of 18 and 25 and organises competitions and prizes.”</p> <p>“In Austria, the Impulse Centre of Entrepreneurship Education (EESI) inter alia provides approved entrepreneurship education textbooks, has created a software tool to measure personality traits and attitudes towards entrepreneurship as a teaching resource for upper secondary schools, and organises business plan competitions, as well as organising an annual entrepreneurship symposium with expert lecturers and workshops.</p> <p>“Effective practice – and effective teachers – need to be recognised and given a high profile, e.g. through national awards, in order to raise the visibility of entrepreneurship education.” (p57).</p> <p>“[the] programme aims to foster an entrepreneurial spirit through a varied package of measures, including school-firms and mini-enterprises, and spanning both national and regional levels. A business start-up competition for students at national, regional and local level (e.g. the 'Nordschwarzwald-cup') is an important component of the programme and is based on a computer-based start-up game. During the competition a virtual firm is run over a simulated period of 16 years, from start-up until it is listed on</p>	<p>2.</p> <p>1, D, 2.</p> <p>2, 3.</p> <p>C.</p> <p>1, A.</p>

		<p>A suggestion for a European Centre for Entrepreneurship Education is made, which would, amongst other things, recognize good practice through awards.</p> <p>Examples of suggestions made by stakeholder participants in group/meetings, included extended current awards to include international dimensions.</p>	<p>the stock exchange. Teams are composed of players from different types of schools. In addition, a range of support is provided to help schools take advantage of the benefits of using the mini-enterprise approach..." (p77).</p> <p>an observatory of policy and practice to gather, disseminate and recognise good practices (e.g. through awards), and to monitor progress across the EU and globally (p88).</p> <p>Development of awards as incentives ("Excellence awards": e.g. "Most international young enterprise award") (p 133).</p>	<p>4.</p> <p>7.</p>
2011	<p>Research Paper No 14. Guidance supporting Europe's aspiring entrepreneurs. (CEDEFOP)</p>	<p>61 references to 'competition' in the report, including featuring in the introduction, a specific element in different chapters and featuring explicitly and implicitly in case study 'examples of good practice.'</p> <p>Included within the overall introduction and the 'Role of guidance within IVET', where the importance of entrepreneurship/business start-up is highlighted as a viable career route for VET students. Given this, students need to experience entrepreneurial learning and educators need guidance on how and what to deliver.</p> <p>Included in the section 'Guidance building entrepreneurial skills' competitions are handed down as a recommended/usual practice, their value includes motivating students, developing initiative/skills and confidence and helping young people pursue entrepreneurial ideas and ambitions.</p>	<p>"Learning opportunities for VET students are delivered in formal and non-formal settings and include simulations, competitions and mini-enterprises." (p.12)</p> <p>"Business planning/ideas competitions are often used alongside both innovation camps and mini-company programmes to motivate young people taking part in these programmes" (p.14)</p> <p>"Business planning/ideas competitions and awards are an established feature of European HEIs. They help young people pursue their entrepreneurial ideas and</p>	<p>1, 2.</p> <p>A, B.</p> <p>4, 1, A.</p>

		<p>Included in the section 'Guidance building entrepreneurial skills' competitions are identified as an effective promotional and awareness raising tool.</p> <p>Included in the section 'Entrepreneurship Education in Europe' which looks at the role of the private sector and external/third sector organisations, competition is identified as a usual/good practice method.</p> <p>Competition is part of a pedagogical tool kit handed to educators – its value in students taking an active role based on real life situations or simulations.</p> <p>Included within the section 'Entrepreneurship in IVET', competition is identified as a 'must' within guidance to educators.</p> <p>Included within 'CHAPTER 3 Guidance in the entrepreneurship agenda of IVET institutions' competition is a feature of recommended activities, case studies and methods, for example, within the section, 'Familiarising students with entrepreneurial principles and thinking'. It also has its own element within the section '3.3. Enterprise familiarisation activities' which show '... how and why businesses operate, and about</p>	<p>ambitions. They also act as an effective promotional tool as they provide a means of raising awareness of entrepreneurialism: award ceremonies are normally associated with high profile events or prizes." (p16)</p> <p>"This also means that third sector organisations, such as Ja-Ye (12), Europen (13) and Jade (14), have become important partners for schools, training institutions and authorities by providing significant expertise and alternative methods to teaching entrepreneurship, mainly through mini and virtual companies, business competitions and other awareness-raising activities." (p.54)</p> <p>Entrepreneurial learning pedagogy is typically characterised by interactive and experiential methods, which require students to take an active role in the learning process, which is based on real-life situations and simulations. These include: group learning and assignments; interactive methods with businesses and entrepreneurs, including visits to companies; practical, hands-on learning (trial and error); developing creativity; problem-solving; business simulations and games; student run businesses; and business competitions.</p> <p>"Entrepreneurship learning in IVET is delivered in both formal and non-formal settings (European Commission, 2006a). Overall it is recognised that for successful delivery, it must include some real life 'immersion' into the project, and a variety of techniques have commonly been used. These include simulations, student competitions and mini-enterprises," (p.57)</p> <p>3.3.2. Business competitions VET students have more opportunities to participate in business orientated competitions today than ever before. Competitions have become an important element of the entrepreneurship learning agenda and many of them are linked to other entrepreneurial activities, such as mini-companies. Competitions are organised by individual schools, local, regional and national authorities, international organisations (e.g. Ja-Ye) and media (e.g. newspapers)." (p. 76).</p>	<p>5, 3, 2.</p> <p>3, 2.</p> <p>3, 2.</p> <p>A, 1, 2.</p>
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		<p>entrepreneurial practices and environments, by undertaking activities set in enterprise contexts. Three different types have been identified as part of this research: innovation camps, business competitions and other approaches.’</p> <p>The guidance makes a link between ‘business competitions’ and the delivery of mini-company programmes – the competition adds value and is an ‘incentive’ for students to take part.</p> <p>In section ‘3.6.4. Guidance building entrepreneurial foundations and skills’ a link is made between the delivery of innovation camps/mini-companies and the business plan/idea competitions.</p> <p>The value of competitions to motivate young people, as well as ‘raise the profile’ of activities and therefore increase ‘the commitment of the private sector’ is highlighted.</p>	<p>“Entrepreneurship oriented competitions have a number of benefits for participants. They can develop or improve entrepreneurial/business skills but can also form other skills such as team-working and communication. Depending on how the competition is run, participants may be able to learn from existing businesses/entrepreneurs and there is the chance to win a (generally monetary) prize. Another value lies in the fact that students have the chance to teach one another; some of the most valuable learning may come informally and tacitly, as younger or less experienced students learn by observing and imitating those whose techniques and skills are greater”(Volkman et al., 2009).[...] Business competitions can also be used as an incentive for VET students taking part in virtual mini-company programmes. For example, in Bulgaria, the national competition Virtual enterprise is a competition promoted by Junior Achievement and the Ministry of Education, Youth, and Science which gives students aged between 15 and 19 the opportunity to test their business skills (p. 77)</p> <p>“All students – regardless of whether they win or not in the competition – should receive formal feedback from the judges: what worked, what did not, what needs to be improved (Volkman et al., 2009). This ensures that all participants gain from the experience.” (p.78)</p> <p>“Innovation camps and a range of different mini-company approaches go much deeper into familiarising students with the enterprise concept; they allow students to experience how companies are actually launched and operated. It is increasingly common to organise business plan/idea competitions alongside both innovation camps and mini-company programmes.” (p91).</p> <p>Competitions provide an important goal (motivation) for young people taking part in the programmes, but they also raise the profile of the activities, increasing media interest. This, in turn, increases the commitment of the private sector.” (p91).</p> <p>Business plan/idea competitions and awards have become an established feature in European HE. They give potential young entrepreneurs an arena to compete in, where business professionals and experienced entrepreneurs can evaluate their business</p>	<p>A, 9, D, 7.</p> <p>2.</p> <p>A, 2.</p> <p>B, 4, 5.</p> <p>1, 2, 8, 9, 7, B.</p>
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		In the chapter 'Embedding guidance in entrepreneurship education business competitions have their own section: '4.3. Encouraging entrepreneurial activity in students' – '4.3.1. Business plan/idea competitions and awards.' The focus is HE.	ideas/plans and provide a critique (Volkman et al., 2009). Competitions, which typically have a monetary (or other) prize, incentivise and drive young people into 'performing to the best of their ability' and pursuing their entrepreneurial ideas." (p108).	
2011	Entrepreneurship Education: Enabling Teachers as a Critical Success Factor. Final Report (EC)	<p>Competition featured in a good practice case study about how to best engage with employers.</p> <p>In the section on 'Developing entrepreneurial school strategies', competition is included as a promotions tool.</p> <p>'Entrepreneurship Education' is referred to generically throughout the document, with more emphasis put upon the strategies required to progress teacher training in the field (rather than the specific content or activities), though two examples including competitions feature.</p>	<p>"Employers offer mentoring, placements, competitions, support for micro-ventures, interviews and a number of other opportunities through which participants gain generic as well as sector-specific skills." (p43)</p> <p>"Developing entrepreneurial school strategies [...] Competitions can be organised locally, with financial support from local authorities, to recognise the best strategy implementation by schools." (p.48)</p> <p>"Manchester Academy uses employer engagement as a key driver in raising attainment and aspirations. Employers offer mentoring, placements, competitions, support for micro-ventures and a number of other opportunities through which participants gain generic as well as sector-specific skills." (p 43).</p> <p>"The JA-YE organisation network (based in Brussels) collaborates with national education authorities through its local offices to organise training for primary, secondary as well as tertiary teachers. The training is focused on enabling teachers to use a 'learning by doing' methodology and JA-YE teaching materials." (p45).</p>	<p>5.</p> <p>1, 4.</p> <p>2, A.</p> <p>1, 3.</p>
2012	Entrepreneurship Education at School in Europe (EC), National Strategies, Curricular and Learning Outcomes.	Eurydice Report on the Entrepreneurship Education, national strategies, curricular and learning outcomes. The document analyses the state of entrepreneurship education in terms of the policies and practices of member states and puts forward examples of good practice.	"The organisation of entrepreneurship competitions can be seen as an incentive to students to engage in entrepreneurial projects. Furthermore, the certification of entrepreneurial skills adds value for students who choose to invest in their skills	&, A.

		<p>In chapter 4 'Ongoing initiatives and current reforms', competition is highlighted as a method for incentivising students.</p> <p>A business plan competition and entrepreneurship competition are put forward as example of good practice.</p> <p>Included in conclusions about the range of practice and activities typical across European countries.</p> <p>In the section 'National strategies, current initiatives', competition is included in the description of current activities in different member states.</p>	<p>development. The competitions also highlight the importance of developing entrepreneurial skills in education from an early age. However, the wider impact of the competitions on the development of entrepreneurship skills is restricted as access to them is often limited" (p. 25)</p> <p>"The University of Cyprus in collaboration with the Ministry of Education and Culture conducts an annual entrepreneurship competition for students in the second and third year of upper secondary education." (p 26)</p> <p>"In Romania, the Business Plan Competition, aimed at all registered training firms, was introduced in the school year 2008/09 as a joint initiative of the Ministry of Education, Research, Youth and Sports, the National Centre for the Development of Vocational and Technical Education, KulturKontakt Austria and other social partners." (p26)</p> <p>"The ongoing initiatives related to entrepreneurship education in a dozen countries show a range of activities, including closer cooperation between education and business, financial initiatives to fund pilot projects promoting entrepreneurship, the organisation of entrepreneurial competitions, the certification of entrepreneurial skills, the setting up and running of student training firms and last, but not least, teacher training and support." (p30).</p> <p>Austria - Jugend Innovativ (Innovative Youth) (EU best practice) is a competition supporting project work in 5 topical areas: business, design, engineering, science and climate protection. The target group is mainly upper secondary students in regular classes. www.jugendinnovativ.at (only DE). Austria. (p32).</p> <p>Belgium - COOS: A competition, with the prize of a Trophy for the 'School team with the best entrepreneurial skills' and Plan(k)gas: A business plan competition for ISCED 3 (1st-2nd year) in Flanders. (p34).</p> <p>Cyprus - The University of Cyprus in collaboration with the Ministry of Education and Culture conducts an annual competition on entrepreneurship for students of ISCED 3 (2nd and 3rd year). (p39).</p> <p>Czech Republic – "...the teachers offer students professional help. They help students to discover and develop their abilities through school or national competitions and include activities in instruction that familiarise students with career opportunities." (p41).</p>	<p>2.</p> <p>1, 2.</p> <p>1, 2.</p> <p>1, 2.</p> <p>1, 2.</p> <p>2.</p> <p>2.</p> <p>A.</p>
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		<p>Identified as an element which will develop skills and specific entrepreneurial learning objectives.</p> <p>Identified as a typical activity/method 'business contests', and promotion tool.</p> <p>Identified as a vehicle within national strategy in relation to promoting entrepreneurship with youngsters.</p> <p>Preparation for a 'National Contest' is identified in 'national initiatives, current strategies.'</p> <p>Identified within a learning outcome 'ISCED 1: Environmental education, social and natural sciences and home economics and technology'.</p>	<p>"...gain specific (self-restraint as well as communicative) skills for handling various social situations (situations which are complicated in terms of communication; competition; cooperation; help, etc.) (p41).</p> <p>Latvia – "A national business plan contest for ISCED 3 students is also part of the programme." (p53)</p> <p>Lithuania – "Innovation Camps and Business Contests: Held for students aiming at promoting student entrepreneurship, creative ideas, teamwork, solving of real problems and encouraging students in achieving their goals." (p57).</p> <p>Portugal - "There are a number of schools (mainly at ISCED 3) that develop entrepreneurship education as evidenced by an external evaluation commissioned by the Ministry in 2010. Complementarily, some municipalities developed local strategies to promote entrepreneurship with youngsters (campaigns in schools, contests, workshops, business advisers, etc.). (p66).</p> <p>"The Ministry is preparing a National Contest of Entrepreneurship, for ISCED 3, coupled with awareness campaigns and on-line support for teachers (webinars, entrepreneurship education hotline and workshops in teacher training universities)." (p66).</p> <p>Romania – "The Business Plan Competition, addressed to all registered training firms, was introduced in the school year 2008/09 as a joint initiative of the Ministry of Education, Research, Youth and Sports, the National Centre for the Development of Vocational and Technical Education, KulturKontakt Austria and other social partners." (p67).</p> <p>Slovenia - "Pupils understand the meaning of cooperation, learn about different ways of cooperation, competition and solving conflicts." (p72).</p>	<p>1, 2.</p> <p>1, 2, A.</p> <p>2, 4.</p> <p>1, 2.</p> <p>1, 2.</p> <p>A.</p>
2012	Building Entrepreneurial Mindsets and skills in the EU (EC)	<p>Within Chapter 2: The State of Play - Entrepreneurship Education an Uneven Landscape, competition is identified within 'Key features of current practice section.</p> <p>Within Chapter 4: Developing effective policy and practice: Good practices to support progression.</p>	<p>"(iii) it tends not to be assessed as part of the mainstream curriculum: teachers and schools instead rely on in-house prizes and awards, or take part in competitions run by well-known organisations such as Junior Achievement-Young Enterprise (JA-YE), outside of mainstream qualifications." (p. 18).</p> <p>"Another example is Emax Nordic, which creates a common meeting place for up to 200 young entrepreneurs between the ages of 18 and 25 and organises competitions and prizes." (p42).</p>	<p>2.</p> <p>2, D.</p>

		<p>Within the same chapter, in a section on: 'Content, Tools, Methods and Resources for Teaching', competitions are positioned as part of resources and methods which teachers can use or adapt.</p> <p>In the same chapter, included as part of an example of good practice from Germany.</p> <p>Included in a section A 'menu of actions': The Oslo Agenda for Entrepreneurship Education (the section reproduces the whole of the agenda) and which stakeholders are relevant.</p> <p>Included within different case studies in a chapter of 'Good practice examples' from different member states.</p>	<p>"In Austria, the Impulse Centre of Entrepreneurship Education (EESI) inter alia provides approved entrepreneurship education textbooks, has created a software tool to measure personality traits and attitudes towards entrepreneurship as a teaching resource for upper secondary schools, and organises business plan competitions, as well as organising an annual entrepreneurship symposium with expert lecturers and workshops" (p47).</p> <p>"During the [business start-up] competition a virtual firm is run over a simulated period of 16 years, from start-up until it is listed on the stock exchange. Teams are composed of players from different types of schools. In addition, a range of support is provided to help schools take advantage of the benefits of using the mini-enterprise approach." (p59).</p> <p>F2 Celebrate entrepreneurship education activities and programmes that work well, by organising awards and competitions.</p> <p>Bulgaria – "The first fair for enterprise education projects took place in 1997, but after a thorough analysis it was decided to move up from an annual domestic event to an international forum on enterprise education where pupils can compete with each other to measure their performance."</p> <p>Estonia – Junior Achievement – "Throughout the school year different courses, fairs and competitions are organised for the registered student companies."</p>	<p>2, 3.</p> <p>2, 3.</p> <p>4.</p> <p>2, 8.</p> <p>2.</p>
2013	<p>Entrepreneurship Education: A Guide for Educators (EC)</p> <p>file:///C:/Users/Catherine/Downloads/Guide Entrepreneurship%20Education 2014 EN.pdf</p>	<p>IN the chapter 'Examples of practice in Initial Teacher Education', within the Entrepreneurial or innovative teaching methods and pedagogies section, competition and its benefits are included within case studies.</p>	<p>NCDIEL also provides additional teaching material and are responsible, together with Bureau for Development of Education (BDE), for the organisation of the National Business Plan Competition among secondary schools. The competition is under the auspices of the prime minister. (p46).</p> <p>'Sector-drop weeks' are arranged to make students familiar with different industry sectors and their professions. The school also runs quizzes and competitions to make students aware of different sectors" (p56).</p>	<p>3, 2, 1.</p> <p>2.</p>

			<p>“Competition engages the community and motivates teachers. JA-YE sees competition as crucial to engaging with the local community and media. Judges of these competitions are typically from the business community, politicians and local / national education authority, which help to get their support behind the project. Several awards are given out to mini-companies; teachers and schools are also awarded, and this kind of recognition often creates positive publicity both for the activities but also for the schools and the teachers” (p.83)</p>	6, 4, 5, E, C.
2015	<p>Entrepreneurship Education: A Road to Success (EC) file:///C:/Users/Catherine/Downloads/Case%20studies-EE-a%20road%20to%20success-final.pdf</p>	<p>A report compiling 13 case studies to demonstrate the impact of entrepreneurship education.</p> <p>Case study 2 lists reports on the review and evaluation of JA-YE and member organisation activities, listing a wide range of benefits which are demonstrated.</p> <p>In case study 4, The Entrepreneurship Education Project (EEP), competition is identified as a supporting activity.</p> <p>Included in case study 6, UPI, a project developing innovation and entrepreneurship clubs in primary schools.</p> <p>In case study 9, EE Courses in 27 VET schools, Company Programme is highlighted as one of the activities which students do through Young Enterprise Switzerland.</p>	<p>“The most widely known programme run by JA-YE member organisations...is the Company Programme. It consists of five steps (including)... 5) Competing and closing, reporting and participating in competitions. (p23).</p> <p>“The studies analysed in this report provide abundant information on immediate results (e.g. learning outcomes, increased engagement, intention to start businesses) and intermediate outcomes (e.g., enhanced employability, better earnings, higher rate of startup). Some studies also provide evidence of global impact, namely on economic growth.... (p 22 – 45 provides details/impact under all these headings).</p> <p>“...,the project includes a number of supporting activities...one of these is a partnership with USABE, and the two parties have created ‘Launch’ a national student business model competition.” (p71).</p> <p>“A UPI course project from (one) primary school resulted in placing an application to the Bauhaus competition for best business plan. As a result, the project was awarded financing which contributed to the re-arrangement of the school foyer into a reading corner.” (p92).</p> <p>“Students are required to present a business plan and business reports throughout the year. They also take part in a national competition and successful companies can attend an international fair trade. The project ends with complete liquidation of the mini-enterprise.” (p117).</p>	<p>2.</p> <p>A, B, G, H, I, F, J.</p> <p>2.</p> <p>9.</p> <p>2.</p> <p>4.</p>

		<p>In another example (in case study 9), students who get seed funding to develop a business opportunity.</p> <p>In case study 11, Impact of Entrepreneurship Education in Denmark, demonstrated replication of the JA-YE Company Programme.</p> <p>In case study 13, Entrepreneurial Impact, The Role of the MIT, work was undertaken to understand the impact of university activities (including competitions) on businesses and start-ups.</p>	<p>"A yearly competition offers the most successful projects an opportunity to be promoted in the media." (p119).</p> <p>"...participants are required to come up with an idea as well as put it into practice. This includes creating a project plan. The programme ends with students participating in national competitions with a financial prize." (p158).</p> <p>'...the survey questionnaire provided information to compile the profile of companies and map their presence in various industries. The role of the MIT was examined regarding...specific groups or activities held at the institution (such as entrepreneurship competitions, entrepreneurship relevant centres and forums, networks of entrepreneurs, etc.). (p180).</p>	<p>1, 2.</p> <p>J.</p>
2015	<p>Entrepreneurship Competence: An Overview of Existing Concepts, Policies and Initiatives Komarkova et al. Joint Research Centre Science and Policy Reports, European Commission.</p>	<p>The report aims to define the state of play in entrepreneurship education, combining insights from a literature review, an inventory of selected initiatives and in-depth case studies.</p> <p>Competition is highlighted as a standard model for delivery in the three-stage theoretical foundation - TRIO – developed by Josef Aff and Johannes Lindner (2005).</p> <p>Identified in a summary describing 'common pedagogical approaches'.</p> <p>First negative comments to be made about competition in any document.</p>	<p>"Level 1 – Entrepreneurial Core Education is concerned with establishing a basic understanding of entrepreneurial learning and become familiarized with developing ideas and putting them into practice e.g. through business plan competitions in order to gain a taste of entrepreneurial activity." (p 53).</p> <p>"However, competitive learning has been found to be a complementary learning experience. The extent to which competitions shape entrepreneurial learning varies from initiative to initiative. In secondary and primary education, competitive elements are being increasingly introduced to give learners the opportunity to validate their ideas and experience the entrepreneurial/start-up environment. However, the owners of the Junior Entrepreneur Programme in Ireland (Case Study 6) pointed out that competitive learning in primary schools should be used with caution, since it may create an unpleasant environment for learners and teachers alike. The potentially negative effects of competitive elements should, therefore, be taken into account when setting up teaching and learning methods, particularly at lower education levels." (p59). "Initially, the JEP programme was based on a competition with one winner. During the pilot phase, the feedback showed this competitive environment had negative effects, creating unhappiness among teachers and pupils. As a result, this approach has been</p>	<p>1, 2.</p> <p>A, 3.</p>

		<p>Competition element removed as a result of negative effects in the pilot phase.</p> <p>Competition identified as typical activity for HE students.</p> <p>Competitions are identified as an assessment method.</p> <p>The report identifies the widespread use of competitions, across all phases of education.</p> <p>Report identifies that competitive pedagogy has been transferred to lower phases of education.</p> <p>Glossary includes a definition of competitive learning, which links its use to achieving 'better learning outcomes.'</p> <p>The OvEnt Inventory includes competitions within several of the case studies/activities/methods it includes....</p>	<p>changed to the current model, where the most important aspect is to engage the class in the process and complete all steps of the programme." (p60).</p> <p>Business ideas generation, competitions, careers guidance and development of social and career networks [Learning outside the curriculum examples]. QAA (2012). (p62).</p> <p>"From the OvEnt case studies, we learnt that project work and self-evaluation are the assessment methods used most widely, followed by presentations and pitches. Alongside peer evaluation, events and competitions...appear to be the most commonly used as complementary methods." (p67).</p> <p>"It is interesting to see that traditional start-up methods (pitches, competitions, events, business or idea plan), are to some extent and often in an adapted way – applied across all levels of education. For instance, a primary school level initiative uses less business like terminology when asking children to describe and present their 'big idea' to the 'Dragon Panel'. There is no evidence to identify which assessment method is more appropriate for which competences. (p65).</p> <p>"Overall, action based learning, learning-by-doing and collaborative learning seem to be the most widely employed and commonly agreed upon. Competitive learning is complementing the learning experience and self-reflective methods seem to gain importance across education levels." (p74).</p> <p>"From the OvEnt study, we may also conclude that methods associated with start-up programmes – mentoring, networking and competitions – are largely transferred to lower levels of education." (p76).</p> <p>" Competitive Learning describes a learning form where competitive elements are used in order to achieve better learning outcomes, frequently resembling a real market economy situation. It is often used by means of business plan and business idea competitions." (p84).</p> <p>"The most common pedagogical approaches are learning-by-doing approaches combined with collaborative and to some extents also competitive teaching methods." (p89).</p>	<p>8.</p> <p>3, 8.</p> <p>3.</p> <p>1, 2, 3.</p> <p>2, 3.</p> <p>3.</p>
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		<p>The Youth Start Model identifies competition as part of its learning objectives and business model.</p> <p>Competition features in Youth Starts learning objectives and entrepreneurial competences frameworks.</p>	<p>"The ESP (Entrepreneurial Skills Pass) addresses a variety of entrepreneurship competences covering all components - knowledge, skills and attitudes - and employs wide range of teaching methods, in particular based on learning by doing and collaborative and competitive learning dynamics." (p101).</p> <p>"Moreover, teaching methods associated with Youth Start are based on hands-on learning (learning-by-doing), competitive learning - applied through business idea and business plan competitions" (p106).</p> <p>"The main summative assessment form is through the 'Next Generation' Business plan and business idea competitions where students are assed on the basis of the application form as well as on the pitch they present at a competitions final." (p106).</p> <p>Business Model: Public-private partnerships for new programmes and competitions. (p110).</p> <p>Youth Start learning objectives: "I am ready to take over a task and complete it successfully, also in competitive situations". (p111).</p> <p>YouthStart attitude: "competitive (being able to face a competition) (DI, A)" (p112.)</p> <p>Next Level Programme (DK) "As a project oriented programme to gain experience in a non-school environment, the primary teaching methods are learning-by-doing, collaborative learning supported by competitive learning, and the programme is based on effectuation perspective." (p120.)</p> <p>Next Level Programme (DK) "...students have the opportunity to participate in national competitions (though participation is not mandatory). (p120).</p> <p>Next Level Programme (DK) "The primary target group are lower secondary students with a very active role of teachers. Co-operation with business is not a focus of the programme; however, business has been involved marginally as a partner in the competitions and in the framework of the students' project courses." (p121).</p> <p>Next level (DK) "Assessment methods: Project work, Peer-Evaluation, Self-Evaluation; Competition application for those participating in competitions. (p122).</p>	<p>A, 3.</p> <p>3.</p> <p>8, 3, 2.</p> <p>5.</p> <p>A.</p> <p>A.</p> <p>3.</p> <p>1, 2.</p> <p>5.</p> <p>8.</p>
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			<p>Italy – SIMULIEMPRESA – “The didactic methodology draws on action based and practical based learning, in other terms learning by doing, collaborative learning complemented by competitions. (p144).</p> <p>Italy – SIMULIEMPRESA – The assessment methods consist of self-evaluation, project work and are complemented by validation components on the form of fairs and competitions. (p144)</p> <p>JEP Programme (Ireland) "Besides, using a competitive environment as the key pedagogical approach proved to be inadequate at primary education level creating unhappiness among students and teachers." (p126).</p> <p>OEMP Programme "A particularity is that all of OEMP’s teachers are entrepreneurs themselves. The main teaching methods are collaborative learning and self-reflection/self-evaluation supported by competitive learning, applied in some of the extra-curricular activities (e.g. Venture Lab)." (p132).</p>	<p>3.</p> <p>8.</p> <p>3.</p> <p>3.</p>
2016	<p>Entrepreneurship Education at School in Europe (EC), National Strategies, Learning Outcomes and Curricula. http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/135en.pdf</p>	<p>The report is a round-up of current national policy/programmes, curricula and learning outcomes for entrepreneurship education in member states.</p> <p>Included in Chapter 4: Current initiatives and ongoing reform, in the section ‘Current Initiatives’.</p> <p>Included in the section ‘Current initiatives’, in the good practice examples from member states.</p>	<p>“The organisation of entrepreneurship competitions can be seen as an incentive to students to engage in entrepreneurial competitions...The competitions also highlight the importance of developing entrepreneurial skills in education from an early age.” (p25).</p> <p>“Impact on the development of entrepreneurship skills is restricted as access to them is often limited.” (p26).</p> <p>“The University of Cyprus in collaboration with the Ministry of Education and Culture conducts an annual entrepreneurship competition for students in the second and third year of upper secondary education.” (p.26)</p> <p>In Romania, the Business Plan Competition, aimed at all registered training firms, was introduced in the school year 2008/09 as a joint initiative of the Ministry of Education,</p>	<p>1, 7, A.</p> <p>A.</p> <p>1, 2.</p> <p>1, 5.</p>

		<p>Included in the final summary of current initiatives, listed as a standard model for delivery.</p> <p>Included in member state examples of 'National Strategies, curricula and learning outcomes'</p>	<p>research, Youth and Sports, the National Centre for the Development of Vocational and Technical Education and other social partners. (p26).</p> <p>"The ongoing initiatives related to entrepreneurship education in a dozen countries show a range of activities, including closer cooperation between education and business, financial initiatives to fund pilot projects promoting entrepreneurship, the organisation of entrepreneurial competitions, the certification of entrepreneurial skills, the setting up and running of student straining firms and last, but not least, teacher training and support." (p30).</p> <p>Austria 'Innovative Youth' (EU Best Practice) is a competition supporting project work in five topical areas: business, design, engineering, science and climate protection. The target group is mainly upper secondary students in regular classes." (p32).</p> <p>Belgium – COOS – A competition, with the proze of a Trophy for the 'School Team with the best entrepreneurial skills.' (p34).</p> <p>Belgium - Plan (k) gas – A business plan competition for ISCED 3 (1st and 2nd year) in Flanders. (p34).</p> <p>Cyprus – The University of Cyprus, in collaboration with the Ministry of Education and Culture conducts an annual competition on entrepreneurship for students of ISCED 3 (2nd and 3rd Year). (p39).</p> <p>Czech Republic - "...teachers) help students to discover and develop their abilities through school or national competitions...." (p41).</p> <p>Czech Republic - "...gain specific (self-restraint as well as communicative) skills for handling various social situations (situations which are complicated in terms of communication; competition; cooperation; help, etc.) (p42).</p> <p>Latvia – A national business plan contest for ISCED 3 students is also part of the programme. (p53).</p> <p>Lithuania – Innovation Camps and Business Contests: held for students aiming at promoting students' entrepreneurship, creative ideas, teamwork, solving of real problems and encouraging students in achieving their goals. (p57).</p>	<p>1, 2, 5.</p> <p>2.</p> <p>2, E.</p> <p>2.</p> <p>1, 2.</p> <p>A.</p> <p>2, A.</p> <p>2, 1.</p> <p>A.</p>
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			<p>Portugal – “... some municipalities developed local strategies to promote entrepreneurship with youngsters (campaigns in schools, contests, workshops, business advisers, etc.). (p66).</p> <p>Portugal – The Ministry is preparing a National Contest of Entrepreneurship for ISCED 3, coupled with awareness campaigns and on-line support for teachers. (p66).</p> <p>Romania – The Business Plan Competition, addressed to all training firms, was introduced in the school year 2008/09 as a joint initiative of the Ministry of Education, research, Youth and Sports, the National Centre for the Development of Vocational and Technical Education and other social partners. (p67).</p> <p>Slovenia - Included within ISCED 1 learning outcome – ‘pupils understand the meaning of cooperation, learn about different ways of cooperation, competition and solving conflicts. (p72).</p>	<p>1, 4.</p> <p>1, 2.</p> <p>1, 5.</p> <p>A.</p>
2016	Entrepreneurship Education at school in Europe (EC).	<p>A report covering schools and education, and looking at context and definitions, strategic actions and funding, integrations into national curricula and teacher education and good practice case studies.</p> <p>Within a section ‘Strategies related to areas within education and training’, in the section ‘Youth Strategies.’</p> <p>Highlighted in member states’ strategies for developing entrepreneurship in education.</p>	<p>“The most detailed strategy is the Slovakian National Youth Strategy’.... actions are broad ranging from quantifiable, from mentoring schemes...to encouraging entrepreneurship competitions in the media.” (p43).</p> <p>Austria – ‘.... national funding covers different activities...including...the competition ‘Jugend Innovativ’, a competition for pupils’ and students’ innovative ideas in business, design, engineering and science and the thematic fields of ICT and climate protection.” (p58).</p> <p>“Micro-financing student initiatives are even rarer in European curricula; the only example found within normal curricula is in Austria, in general upper secondary education, where it operates as part of the project competition 'Innovative Youth' (Jugend Innovativ). It is also available in IVET but not as part of the curriculum; it operates through crowd funding platforms catering specifically for student projects.” (p77).</p>	<p>1, 2.</p> <p>2.</p> <p>1, 2.</p>

		<p>In a section on School Curriculum, the report notes that ‘practical and community challenges’ are ‘less common’, and ‘micro-financing’ student initiatives are ‘even rarer.’</p> <p>In the same section, a subsection describes how practical entrepreneurial experiences are developed as extra-curricular activities or in the framework of wider initiatives at regional, national or European level.</p> <p>A range of initiatives from member states are listed describing ‘practical entrepreneurial experiences’ which member states deliver.</p>	<p>“Another means through which pupils can get the chance to participate in a practical entrepreneurial experience are 'best ideas' or business competitions. They are already being run in many European countries, in a variety of ways.... “(p78).</p> <p>“...Of course, this is clearly an extra-curricular activity which is limited in scope and in terms of participation numbers, as it generally involves a pupil selection process. Another limitation is that rather than attracting the average pupil, there is bias to 'self-selection', meaning that the pupils with the most developed entrepreneurial skills are probably the ones who apply. Nevertheless, these competitions can be interesting in terms of the methods used and in motivating pupils (p.79)</p> <p>Austria – “... the objective of the idea competition ‘Next Generation’ is that students in vocational education work on their own ideas but they are put in contact with business coaches. At the 'Festivals of Ideas', students and teachers learn about other students’ ideas.” (p79).</p> <p>United Kingdom – “...there are a number of national initiatives which provide pupils with entrepreneurial activities. They include, amongst others: 'Tycoons in Schools' – a national enterprise challenge in schools. The competition allows students to start and run a business whilst at school or college, thereby allowing them to gain valuable hands-on experience of what is involved in running a business. Other examples are the 'Enterprise Challenge Programme', giving schools the opportunity to set up and manage a business: the 'Tenner Challenge’ is a business competition and micro-financing initiative for young people aged 11-19 who want to get a taste of what it’s like to be an entrepreneur. It gives them a chance to think of a new business idea and make it happen, using real money (GBP 10), thus to take calculated risks in the business field, make a profit – and use this to make a difference to the community; the 'Fiver Challenge' provides similar opportunities for primary school pupils (aged 5-11 years). Both programmes operate across all four part of the United Kingdom. (p79).</p> <p>Wales - 'Enterprise Troopers' is a national primary school competition to encourage enterprise in primary schools. (p79).</p> <p>Iceland - the 'Entrepreneurial Student’s Competition' (Nýsköpunarkeppni grunnskólanemenda) is for 10 to 12-year-olds and is run all year round. The main goal of the competition is to activate children’s creativity across the country. Each spring, a workshop takes place where all ideas that made it to the finals are produced with the assistance of an instructor. The workshop ends with a grand final celebration. (p79).</p>	<p>1, 2.</p> <p>B.</p> <p>A, 5.</p> <p>1, 2.</p> <p>1, 2.</p> <p>A.</p>
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		<p>Included under the heading of 'Teacher education and support'.</p>	<p>Romania - 15 regional centres have been established to disseminate the teaching materials and methodology developed within the 'Practice Enterprise' Project Central authorities support the activities of this regional network by organising competitions on entrepreneurial topics and monitoring how these activities can support the development of the entrepreneurial spirit. (p102).</p> <p>Belgium – “Teacher training institutes have autonomy in terms of what they include in ITE. VLAJO (linked to Junior Achievement) and UNIZO act as expertise centres on EE, conducting ad hoc teacher training and organising numerous extra-curricular activities and competitions. They are both partly funded by the government of Flanders.” (p135).</p> <p>Denmark – within a list of ‘concrete actions’ which form part of a national strategy: “6. implement an innovation competition for students in primary and secondary education;” (p142).</p> <p>Croatia – exists within the learning outcomes framework which is part of the national strategy: “develop a creative approach towards challenges, changes, stresses, conflicts, and competition. (p156).</p> <p>Lithuania – features in the national strategy as a way of acquiring entrepreneurial competencies: “Entrepreneurship education is a cross-curricula objective at all levels of education through the 'National Programme of Economics and Entrepreneurship' for basic education. This is based on the key competences including entrepreneurship, communication, learning to learn and citizenship. The programme provides possibilities for teaching and learning in different ways e.g. student companies and business competitions.” (p165).</p> <p>Poland – “Teachers are also encouraged to enrol in projects and competitions together with their students e.g. <i>Finansoaktywni</i> – an educational programme on financial education for teachers and students in lower secondary schools organised by the Ministry of Finance. (p181).</p> <p>Portugal - Initiative INOVA – Learning Enterprise – which aims to encourage young people to develop initiatives that contribute to the resolution of problems in the communities in which they live and can involve (regional/national) competitions. (p183).</p>	<p>1, A.</p> <p>3.</p> <p>1, 2.</p> <p>1, A.</p> <p>1, A, 3, 2.</p> <p>6, 3.</p> <p>2.</p>
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	<p>Included under the heading 'Teacher education and support.'</p> <p>Included under the heading 'Strategic Objective 3 – Entrepreneurship for the future: raise awareness through positive information on the achievements of entrepreneurs and the benefits they bring to society, and the possibilities of start-ups.</p> <p>Included in a section about the member state's national strategy.</p> <p>Included in a section about the state of play nationally.</p>	<p>Romania – “Within the follow-up project ‘Training the Teachers in VET’, 15 centres have been established to disseminate the teaching materials and methodology developed within the project. Central authorities support the activities of this regional network by organising competitions on entrepreneurial topics and monitoring how these activities can support the development of the entrepreneurial spirit.” (p187).</p> <p>Slovakia – “Encourage entrepreneurial competitions for young people in the media.” (p192).</p> <p>Sweden – ‘To develop a new concept of professional competitions in school-based vocational upper and secondary education. (p197).</p> <p>Iceland – “The only nationally funded activity is NKG, a competition in innovation for students aged 10-12. This is funded by the state and delivered by a private company that runs and oversees the competition.” (p214).</p>	<p>3, A.</p> <p>1, 4.</p> <p>1, 2.</p> <p>1, 2.</p>
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Code	Approximate Label (characterised as)	Code	Approximate Label (outcomes)
1	Part of an EE Strategy	A	Develops skills
2	Good practice model	B	Motivates students
3	Teaching method	C	Rewards teachers
4	Dissemination activity	D	Students are 'Inspired by Peers'
5	Engage private sector	E	Rewards students
6	Engage teachers	F	Better start up rates
7	Incentivises participation	G	Increased entrepreneurial intention
8	Assessment method	H	Better employability
9	Offer cash prize	I	Higher earnings
		J	Economic growth