The policy and practice of learning entrepreneurial skills and future

'qualities of mind'

Gerald Lidstone

Goldsmiths University of London

The groundbreaking work of Sir Ken Robinson in *All Our Futures*[i] made significant reference to the work of Howard Gardner with his classification of diverse intelligences. *All our Futures* is just over ten years old however it is only now beginning to have significant impact, it is essentially concerned with creative education – both learning and teaching creatively but also, crucially, recognising how to develop creative talent in students of all ages. On one level this has provoked a necessary debate (in a number of countries) on curriculum content and teaching methodology; on one side there is still an emphasis focusing on traditional mathematical and literacy skills on the other on creative abilities developed around the Gardner intelligences: linguistic, mathematical, spatial, kinaesthetic, musical, interpersonal and intrapersonal. Robinson, with considerable evidence, argued to put creative subjects at the heart of the curriculum; this was based on the demonstrable results that both mathematical and literacy skills improved but, more importantly, current syllabuses were not educating students for the post industrial economy[ii]. It is now necessary to move on from this debate (although many countries have yet to fully understand or adopt the principals) to consider how the space in which creativity[iii] can flourish and be respected in all educational disciplines, can itself be created.

This is essentially the teaching of entrepreneurial thinking 'entrepreneurship education is a process which develops individuals' *mindsets, behaviours, skills and capabilities and can be applied to create value"*[iv] in a range of contexts and environments (please note that this should not be confused with 'enterprise' - business thinking).

To return to Gardner, he now suggests five overarching qualities of mind for the 21st century. An expertise in a discipline[v], an ability to synthesize information and communicate it, a creative mind, an engagement with and a respect for diversity and finally to be able to act ethically. If these qualities or capacities (which sound very reasonable) are to be learnt effectively then they will need to be developed through a cultural lens[vi]. The 'culture' referred to is increasingly global in nature, as it is often engaged with through digital means. The digital expert Jaron Lanier points out a key concern with culture in this form

> The difference between real culture and fake culture is whether you internalise the thing before you mash[vii] it. Does it become part of you? Is there some way your meaning, your spirit, your understanding has touched this thing? Or is it just a touch of novelty for a moment to get some attention? Culture involves some work, some risk, some exploration, some surprise[viii]

Starting with higher education it might be useful to review some recent views on how students engage with learning, as that is where there is now considerable interest in entrepreneurial attitudes as part of the learning process. Governments are keen to develop the perceived economic potential of creative industries, innovation and creative thinking and hence support this with grants and increased investment – although in many cases this is only made available for STEM[ix] subjects as it is thought that these are the areas where creativity and innovation will supply new products – there are enlightened exceptions.   Higher education is seen as the level where this potential can be nurtured and/or 'harvested' . Most universities have business 'start up' support either physical or mentored to develop student [and staff] ideas to bring them 'to market'. There has been some success with this type of initiative but it has not really reached its potential as it has tended to concentrate on the economic outcomes.

There are two key problems with this approach. Firstly it is far too late to start to develop this type of thinking in students at HE level as in most cases they have spent the last ten years of their education in an environment that does not reward

creativity or innovation – there are of course exceptions. Secondly, by concentrating on the economic they are missing major elements in the creation of value.

A working definition for entrepreneurial thinking as an overarching idea for all disciplines would be that '*entrepreneurship is the creation of value, this value could be social, aesthetic or financial, and that when entrepreneurial activity is strong the three strands are interwoven*'[x].

Howard Gardner, in the preface to the paperback edition of *5 Minds for the Future*[xi], has a section on 'new thoughts' updated from the first publication in 2005. He acknowledges that the positive view and emphasis on STEM subjects needs to be reconsidered as the risks 'of meltdowns in health, climate ,resources and economy are more evident'. He suggests that there is no way to stop globalisation [something he had championed in 2005] but that there needed to be a balance to 'make sure that the other fields of human knowledge and practice are not ignored.' His concern is that the demand for humanities topics once part of a 'liberal education' are not seen as viable by both students and parents as they are not considered to lead to careers that make money- create individual wealth. Educational policy makers and governments have generally been short sighted enough to go along with this market led [and created] approach. Without humanities education being central to a rounded education through the disciplines of art , literature , history, music, sociology, philosophy etc many of the key tools of 'thinking' are not being used.

A considerable amount of work has been done in relation to understanding student engagement with their learning in Higher Education in the last twenty years the focus now is on how it relates directly to developing students with an independent and critical learning mindset. The Art and Design Media Centre [UK] has recently published a feature by Christy Hardy and Colin Bryson that brings some of this work together. As evidenced by Hardy and Bryson[xii] there has been a greater emphasis on understanding the nature of the type of engagement in the USA and Australia, the UK along no doubt with a number of others is to a large extent still at the stage of understanding that engagement as having a 'student voice' feeding into education planning and practice from the level of individual courses within a programme of

study, to policy within a university[xiii] and at national level via student surveys.[xiv] However as they point out (Hardy & Bryson) this is to miss the point, this is in many ways just a further mechanism of 'evaluation' or quality assurance ' giving students representation and a collective voice' rather than the paradigm shift implied by their title. They recommend a shift in thinking [primarily in the UK] to understand that students need to be in a context in which they undertake ongoing serious reflection on their learning to move from the notion of 'voice and customer satisfaction' to 'a concept which encompasses the perceptions , expectations and experiences of being a student in higher education'[xv]. They suggest that even in those countries where there has been advanced work on student engagement they tended to use too narrow an understanding of the nature of engagement, defining it as 'active behaviours' rather than their approach, which encompasses 'the sense of being and becoming and also *feeling* - with the social and cultural as important as the academic'.[xvi] Starting by defining the theoretical work behind studying and measuring engagement, Hardy and Bryson narrow down the key motivation to understanding that 'engagement is positively related to objective and subjective measures of gains in general abilities and critical thinking'. It is this latter quality or ability, the 'critical thinking', that will be returned to later in this paper. One USA definition of engagement 'is the quality of effort students themselves devote to educational purposeful activities that contribute directly to desired outcomes'[xvii]. Hardy and Bryson examine the two systems used in the USA and Australia for recording and benchmarking engagement .

The USA uses five and Australia seven categories. The USA National Survey of Student Engagement[xviii] benchmarks – Level of academic challenge, the degree of challenge through expectations on learning and assessment that encourages engagement: 'coursework that emphasises analysis, synthesis…applying theories and concepts to practical problems and new situations' (Hardy Bryson2009). This concern with synthesis and application of thinking directly relates to Gardner's second of the 5 *Minds* as synthesisers. In the preface to the paperback edition he also updates the reference to synthesis, having initially thought of it as an academic performance skill – 'somewhere between disciplinary mastery and creating'[xix] he now recognises the importance of syntheses that go beyond the mechanical and provides a sense of meaning, significance and connectedness, recognising that this

is something that 'many seek'. However he also adds that solutions that emerge from putting together disparate information also need to be communicated to others if they are to have impact. This in turn relates to the third USA benchmark – *Active and collaborative learning*, 'student's efforts to actively construct their knowledge' including joint project work, making presentations, discussing ideas outside those directly presented in courses and potentially teaching other students. All of these require good communication skills and ability. The fourth Mind from Gardner, that of the respect for diversity, again relates directly to another of the USA benchmarks , that of *Enriching educational experiences* – engaging with students from a diversity of backgrounds including cultural, political and religious . Also working in communities, learning a foreign language, or studying abroad. This idea of diversity has a number of levels, to a certain degree it has become a political mantra in the sense that engagement with diversity and 'the other' leads to political and social harmony. However, in more entrepreneurial terms, diversity developed from the diverse approaches to thinking/ problem solving is seen to be more effective than a mono cultural approach. A further skill associated with both the Gardner 'respect for diversity' and the USA benchmark is the ability to understand a problem or a context from another perspective. The reference to learning another language[xx] is of crucial importance as beyond the learnt skill the effect 'through language' is to encounter another system of thought. This ability to approach a problem from another perspective may well contribute to a greater understanding of 'difference and the other', however it is in itself a powerful thinking tool.

This has been argued in another context.

Working across cultures can in itself develop new thinking skills. In his book, *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies* Scott E. Page[xxi] tries to move the arguments about diversity in groups away from rather dated notions of difference based around race, culture and class and on to understanding how different individuals think . Their background will play some part in this but what he emphasises is the ability of groups of divergent thinkers to be able to create more sophisticated and relevant solutions to problems than 'clever' 'individuals'.' He demonstrates through a great range of examples how 'groups that display a range of

perspectives outperform groups of like-minded experts. Diversity yields superior outcomes'. There is no reason why this should not work across the cultures…..however we would have to agree to teach communication and problem solving rather than just country specific versions of traditional competencies. [xxii]

This USA benchmark categories of *Enriching educational experiences* and *Active and collaborative learning* are clearly related, as certain societies become more diverse particularly in cities and education becomes more global there is likely to be more learning contexts where individuals from diverse backgrounds are going to engage with each other. Although it should be noted that this is only likely to apply to those, mainly in cities, where a diversity of cultures exist in any numbers in close proximity. It is often assumed that this is the norm as it is frequently where the most creative education and creative thinking occurs. Although on a global scale this is far from the norm, most cultures/ countries are still effectively monocultures. It is interestingly only in contexts of high immigration or with an educational elite [who are able to travel] that this diversity in an educational context exists.

Neither of these categories in the NSSE [and the equivalent Australian ones] explicitly consider another form of diversity. In the 5 minds Gardner puts it very simply that 'we must respect those who differ from us as well as those with whom we have similarities'[xxiii]. This simplicity implies other forms of difference than those expressed above, with particular reference to his earlier work on diverse intelligences. See p1. If these differences are overlaid onto the other differences - cultural, political and religious - outlined above, what appeared to be simple might in reality be very complex. However entrepreneurial thinking provides a way to negotiate and understand complexity.

It is also important to pick up on the word 'respect' used by Gardner[xxiv] as it implies an engagement leading to an understanding of the 'other' that goes beyond just acknowledgement of difference - implying some form of dialogue. However dialogue in itself does not imply advance or change [unless there was none before] it is the quality of dialogue that counts and the effective change brought about to those engaged in it, rather than just the activity.

He provides a short answer in the preface as to how the 5 Minds relates to the earlier work on intelligences in that 'the disciplined and creating minds can draw on any and all intelligences , depending on the area of work. Thus whether disciplined or creative, a poet depends on linguistic intelligence, or an architect spatial intelligence…'[xxv]

It should also be noted that to develop the networks of communication that can utilise a diversity of thinking the last two of the intelligences come into their own – *interpersonal* and *intrapersonal* often more difficult to define than the others, they become essential to developing the potential of diverse input into problem solving. Creating networks whether in the classroom or on a greater scale will become an essential part of learning. It will matter who you know, not in the nepotistic sense of advancement but who can help you solve problems – your thinking network.

The last two benchmark categories for the USA system are concerned with a *Supportive campus environment* which includes a key concern of 'legitimation within the community' a sense of inclusion and the quality of student-student and student-staff relationships in relation to learning. This latter relationship is broadened out to be the last category which is *Student-Faculty interaction.* The mechanisms of discussing ideas, receiving feedback and assessment and considering career plans*.* To a large extent these latter two categories have less relevance to Gardner's 5 Minds.

The seven Australian categories for engagement, although with different titles and overlap cover roughly the same territory. However there are two additional areas of emphasised engagement . The US model includes online engagement in *Enriching the educational experience,* the Australian model gives this area its own category *, Online Engagement Scale* where not just the use of the web and software is fore-grounded but also the idea of building an online learning community – to some degree self initiated*.* This IT engagement maybe very important in future learning – not just in knowledge research [which is what it is commonly used for at present] but in both synthesis and problem solving. Global connectedness [albeit at present for a minority – but an influential one] is expanding swiftly[xxvi]. The impact for

entrepreneurial thinking will be immense, as rather than just knowledge acquisition the greater value of the international connection will be in being able to use a network of diverse thinkers to solve problems.

The second additional Australian area is *Transition Engagement Scale* – this really applies to the experience of starting learning at a university, concerned with orientation expectations and student identity. In this form it appears fairly functional. However as with IT engagement it could be crucial depending on the secondary education experience.

In many cultures, as mentioned before, secondary education success is based on assessment that highlights repetition of knowledge and 'thinking' that within a narrow field leads to the 'right' answer. As suggested above after ten years of this approach the transition into HE where the expectations are different is going to be problematic. Robinson highlighted the need across all of the 'intelligences' for creative thinking, to come to this for the first time at HE is clearly too late.

To return to the original proposition in relation to entrepreneurship education and gain reinforce that this does not only mean business/commerce[xxvii]. In a recent UK study 30% of graduates associated enterprise with business, but many also associated it with Innovation, Creativity, Personal Enterprise and Initiative and understood that it was a set of abilities that could be applied in a range of contexts in education as well as externally in public, community and voluntary sectors in addition to the obvious corporate sector. If you Google entrepreneur qualities you get 54,000 hits or more, however they are mostly in essence the same six. *Dreamer:* A big idea of how something can be better and different. Innovator: Demonstrate how the idea applied outperforms current practice. *Passionate*: Expressive so the idea creates energy and resonance with others. *Risk taker*: Pursues the dream without all the resources lined up at the start and distributes the risk over a network of capabilities. *Dogged Committer:* Stays with executing the innovation through the peaks and valleys to make it work .*Continuous Learner*: Constantly exploring and evolving to do best practice[xxviii]. All of these relate directly to the positive aspects of learner engagement with the USA and Australian models, particularly the last , if this quality is allowed to guide a students' progress then education systems would be more effective. As Robinson indicates throughout *All our Futures* this is not a quality to be taught but exists inherently in children – the focus is on not destroying it with a poor

quality education system that does not acknowledge it and does not provide the mechanisms to develop it. In this it parallels mechanisms to develop creativity – not taught but given the support to let it develop through a system that rewards it.

The other of these attributes that is often overlooked is the first, that of the Dreamer. Gardner addresses this as part of his second quality, that of the *Synthesising Mind,* that is human rather than a machine function as the dreamer is able to move beyond the current moment and consider *the largest questions[xxix]* – 'and when these questions and [candidate answers] are new ones then synthesising blends into creation'[xxx].

It is not suggested that the qualities of entrepreneurial education are taught as subjects themselves, although some can be, such as *risk taking,* but that they are taken as qualities that are built into all areas of teaching. However to have any currency they need to be the focus for reward as marking and evaluating student progress will always be necessary[xxxi]. We would need to re-examine the nature of the idea of failure and conversely success if we are to encourage creativity of thought and action.

The last quality of mind that Gardner recommends is that of *acting ethically* – 'to think beyond our own self interest and to do what is right under the circumstances'[xxxii]. Originally written before the collapse of much world banking/economies and with an increasing concern for the environment and world conflicts, if we wish to engage with those in education, this is an essential quality to develop. It might sound idealistic to a particular generation of educators but is seen as essential in the broadening of the nature of education rather than one reduced to narrow functionalism. In direct entrepreneurial education at universities there is growing demand for programmes in social entrepreneurship.

The nature of entrepreneurial education is one were from a very early age the motivation for learning is encouraged to a high degree and children and subsequently students are fully engaged with their own development .

One of the key features of entrepreneurial education is that the 'education' is no longer 'delivered' only by teachers. To achieve the attributes and qualities listed

above it will be necessary for schools and universities to acknowledge their need for partners from a great number of sectors , culture, museums, media companies, state providers – health, local government and corporate companies etc, not on an occasional basis but embedded into the learning. However this is an additional route on the roadmap outlined above but also an essential corollary to the approach advocated. Considerable work has been done on this by a range of organisations worldwide but most concentrate on HE. For example the National Endowment for Science Technology and the Arts [NESTA] in the UK (see appendix 1). However by then it is too late, creative talent will have been lost or feel disenfranchised from education. To return to the 'road-map', it is never too early to develop the *5 Minds for the Future* [or a similar overarching approach] or developing a sense of ownership with students of their learning, implied by the entrepreneurial approach.

[i] Robinson, Ken et al (1999) *All our Futures.* National Advisory Committee on Creative and Cultural Education NACCCE. London DfEE Publications, Korean Arts and Culture Education Service, KACES has translated the Ken Robinson book Out of Our Minds into Korean and the ideas therein are being disseminated.

[ii] Of course many economies are not post industrial but are eager to develop that part of their economy that is ideas and innovation based.

[iii] It is understood that there is currency in the idea that Creativity might not be taught, but that the space/context in which it can be developed can be created

[iv] Developing Entrepreneurial Graduates, Putting Entrepreneurship at the centre of higher education Durham University 2009

[v] This is sometimes read as a *disciplined mind*, which is not the same thing, however there is a connection.

[vi] Gardner, Howard. 5 Minds For The Future. Harvard Business Press 2008 USA. ISBN 978-1-4221-4535-7 Note: many of the references made from this source are from the preface where simple and clear definitions are given – the subject of the chapters being more complex and only relevant for a greater depth of engagement than this paper will deal with.

[vii] A Mash (up) is a term in web development and other creative forms referring to an application or web page that puts together data or a function from different sources to create a new page or function. It is derived from a Caribbean term for a crash, or a forceful action.

[viii] Jaron Lanier, author of 'You Are Not A Gadget' interviewed in the Observer Newspaper London 21/02/2010

[ix] Indicated in the UK as Strategically important subjects: science, technology, engineering and mathematics (STEM) – the Strategy referred to is essentially economic.

[x] Definition used by the Institute of Creative and Cultural Entrepreneurship Goldsmiths, University of London UK.

[xi] Gardner, Howard. 5 Minds For The Future. Preface XVii .Harvard business press 2008 USA. ISBN 978-1-4221-4535-7

[xii] Hardy and Bryson 2009 cited from Networks. Art and design media subject centre (ADM-HEA) Higher Education Academy Brighton UK issue 9 spring 2010 ISSN 1756-963X

[xiii] Generally HE Quality Assurance, in the USA, Australia and the UK engagement has become part of the enhancement agenda.

[xiv] UK National Student Survey

[xv] Hardy and Bryson 2009 cited from Networks. Art and design media subject centre (ADM-HEA) Higher Education Academy Brighton UK issue 9 spring 2010 ISSN 1756-963X

[xvi] Ibid. Note that Hardy and Bryson acknowledge that there are different voices in the USA and Australia to the views that they work with but reinforce that they are working with the 'dominant paradigms.

xvii Hardy and Bryson cite Kue et al 2008 in the formulation of this

xviii Administered by Indiana University Centre for Postsecondary Research. In its ninth year it has surveyed 1300 colleges in the USA and Canada.

xix Preface to the Paperback Edition Gardner, Howard. 5 Minds for the future. Preface XIX .Harvard business press 2008 USA. ISBN 978-1-4221-4535-7

xx In the USA benchmarking system

xxi Scott E. Page. *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*. Princeton University Press 2007 New Jersey USA.

xxii Gerald Lidstone *Yes, no, maybe* : Migration and Intercultural Dialogue - Migracia a medzikulturny dialog, Publishinghouse Michal Vasko 2008 p 125 – 138

xxiii Gardner, Howard. 5 Minds for the future. Preface XIV .Harvard business press 2008 USA.
ISBN 978-1-4221-4535-7

xxiv Gardner, Howard. 5 Minds for the future. Harvard Business Press 2008 USA. ISBN 978-1-4221-4535-7

xxv Gardner, Howard. 5 Minds for the future Harvard Business Press 2008 USA Preface Paperback edition p XV

xxvi Korea clearly leading here with WI FI and high computer literacy and connectivity is nationwide.

xxvii The Importance of Entrepreneurial Attributes in the Student Experience: A baseline Study at Durham University 2009

xxviii Taken from the -Entrepreneurship Forum of New England 2009

xxix Gardner, Howard. 5 Minds for the future. Preface XiX .Harvard business press 2008 USA.
ISBN 978-1-4221-4535-7

xxx Gardner also suggests that this higher activity of synthesis can be attributed to another form of intelligence not in his original group – that of 'existential intelligence'

xxxi This could easily be argued against but in the foreseeable future it is likely to remain.

xxxii Gardner, Howard. 5 Minds for the future Harvard Business Press 2008 USA Preface Paperback edition pXiV