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Module 2:

Go Deeper 2.2 Planning an entrepreneurial project

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Planning an entrepreneurial project

The 4E model takes students through each stage of a 'typical' project. And at each stage there are opportunities for students to demonstrate competences.
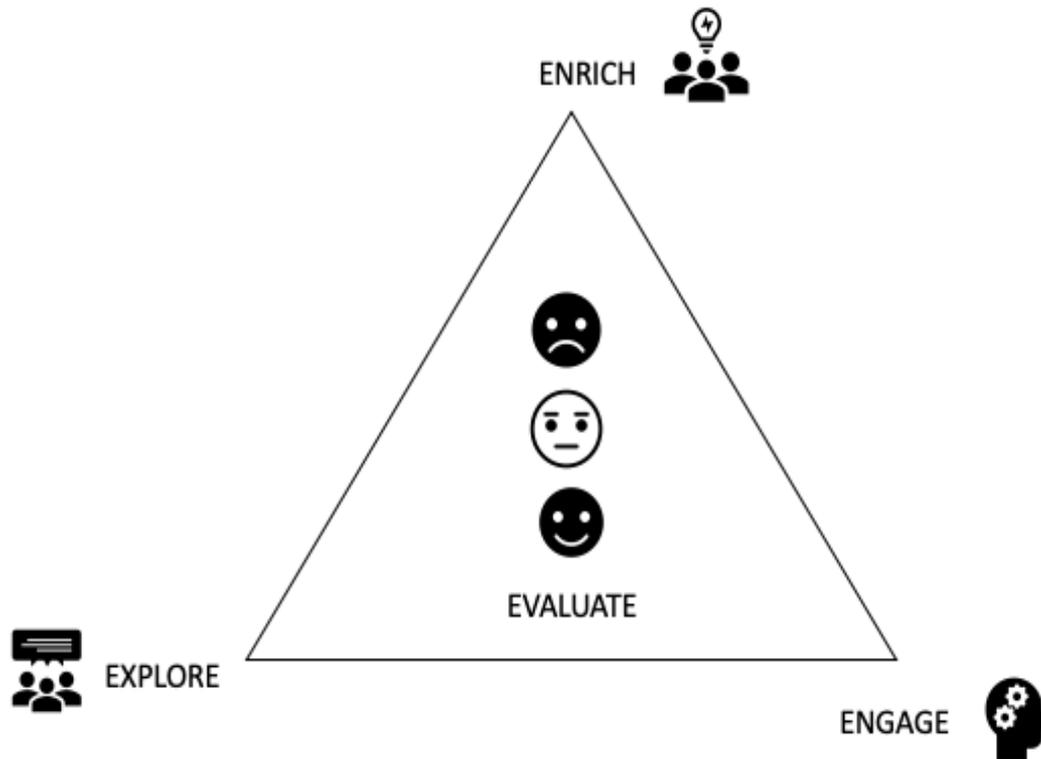
Figure 2.2.1 The 4E Model for planning entrepreneurial learning

Stage 1: Explore - What is the problem?

In the real entrepreneurial world, most projects begin with trying to conceptualize the problem. We often assume that everyone understands what the word 'problem' means. When someone yells 'What is your problem?' this is not usually a positive cry. In the entrepreneurial world, however, problems are welcomed as they generate potential business.

Sometimes, the challenge is to identify exactly what the main problem is, as there may be several nested together.

This stage is also about exploring possible solutions. The problem can sometimes be flipped to provide the solution. Rod Judkins cites the example of a scuba diving company facing bankruptcy because sharks had infested the area. He suggested that the owners open the world's first extreme diving school.[1]

In the exploring stage, the role of the teacher is to capture the interest of students.

As educators, our instinct is to believe that if we have something important to share, students will listen. Unfortunately, this instinct is wrong. In general life, people will not pay attention even to information that may potentially save their lives. For example, the next time you take a flight look around and see how many passengers listen to the pre-flight safety announcements. This is why many airlines now seek to convey this essential information in creative ways, from animated cartoons to stand-up comedy. These new announcements attract more attention because they activate people's positive emotions, which is a basic principle of gaining attention.[2]

What this means then for educators is that to capture interest there is a need to think imaginatively about the first few minutes of a lesson. Skilled teachers use many different 'hooks' to engage students' attention at the outset. See Box 2.2.1 below.

1 Judkins, R. (2015) The Art of Creative Thinking, Hodder & Stoughton.
2 Sharot, T. (2018) The Influential Mind, Abacus.

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1. Local news stories
2. A topical question or issue
3. An ethical dilemma
4. A passing observation on an aspect of the school environment
5. A burning issue in the community
6. An artefact such as a broken toy - Charles Lazarus, founder of Toys R Us, was inspired by a broken doll
7. A challenge e.g. 'If you could change one thing about this classroom what would it be and why?'
8. Extract from a complaint letter in the newspaper about a service that needs improving
9. A puzzle
10. An object (natural or manufactured)
11. An item of clothing
12. Household utensils
13. A liquid
14. Video or audio
15. A sound, piece of music or jingle
16. An advertising slogan
17. A paintings or other artwork
18. A recycled material
19. An upcycled material
20. A short story or poem
21. A riddle or joke
22. Newspaper headlines
23. An open question e.g. 'I wonder how this works?'
24. An animation or cartoon
25. A scenario - 'What would you do if you were me?'

Box 2.2.1 Possible hooks to engage students in entrepreneurial learning opportunities

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You also need to draw upon the students' interests and, where possible, relate these to the product or service that needs to be improved. Many new ideas spring from minor changes to existing ones. And so, students need to be prompted to look afresh at their surroundings.

Whatever the hook, it has to have relevance in acting as a trigger-point for entrepreneurial problem-solving. Once students are 'hooked in', you might encourage them to formulate a problem statement i.e. 'The problem we are trying to solve is…' or 'The issue we are exploring is…' Thoughtful planning should align to this to learning goals, objectives or intended outcomes. In other words, the problem is the context within which students should be able to demonstrate knowledge, understanding and skills (entrepreneurial competences).

Stage 2: Enrich - What are our options?

The second stage involves students working in groups to discuss how they might add value.

The enriching stage is very much about encouraging students to spot opportunities. Edward de Bono (1970) coined the phrase 'lateral thinking' to describe the process of exploring ways of looking at things (Figure 2.2.1). Rather than seeking out the best possible answer, which is akin to vertical thinking, de Bono suggested exploring as many different approaches as possible. In the natural search for alternatives, we stop at the most promising approach. In lateral thinking, any promising approach is acknowledged but the search continues and includes ideas which may on the surface be considered unreasonable. [3] For de Bono, what matters is loosening up the thinking process so that it is less rigid and

3 De Bono, E. (1970) Lateral Thinking, Penguin.

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more fluid. Even if the search proves a waste of time, de Bono argues, it develops the habit of looking for alternatives rather than blindly accepting the most obvious approach. He accepts, however, that putting a quota or fixed number (say a minimum of 3) on the searches make practical sense. Anna Craft's notion of 'possibility thinking' is also relevant here, by imagining different worlds using 'What if…?' scenarios.
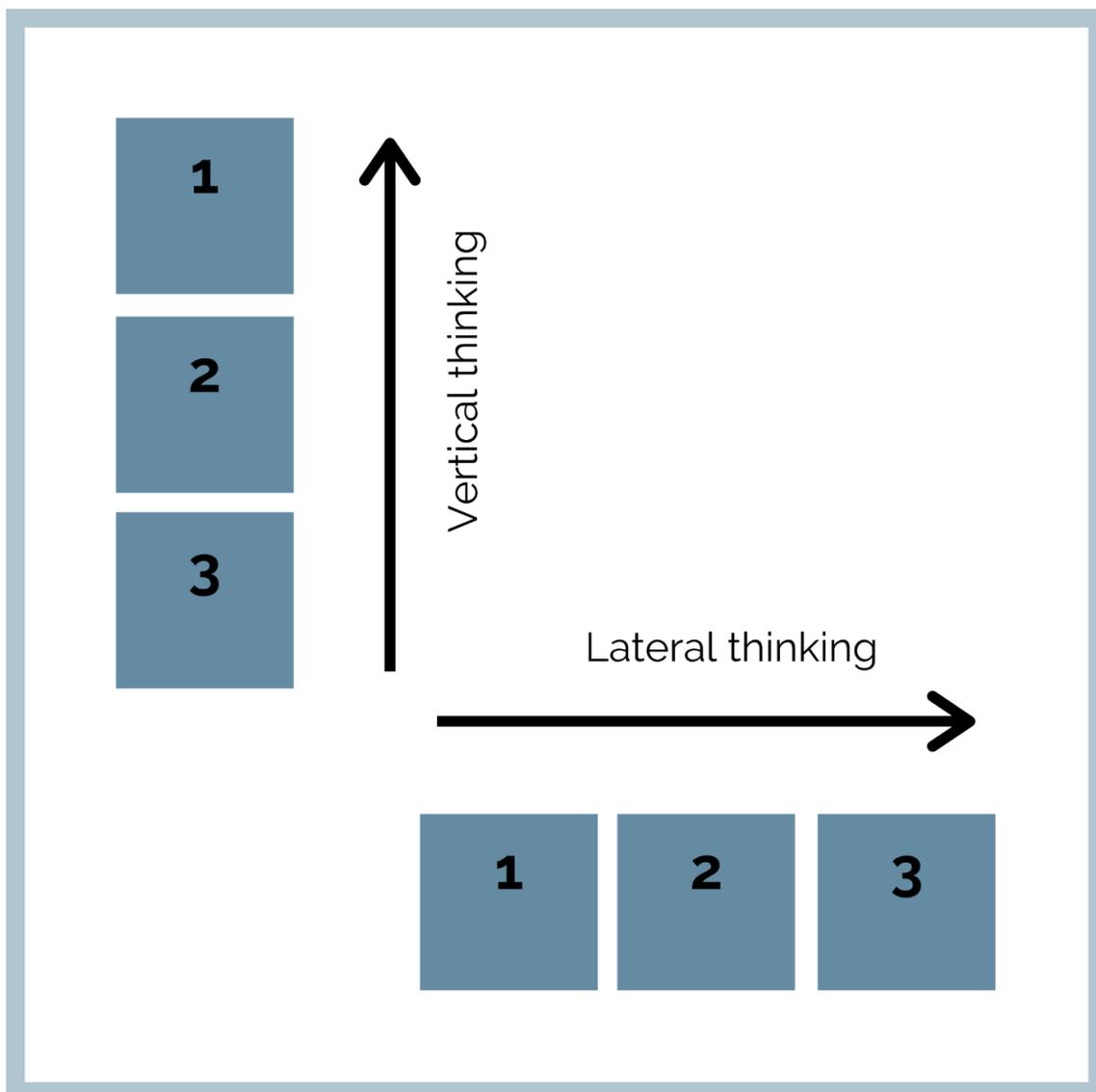

Figure 2.2.2 Vertical and lateral thinking (after De Bono, 1970).

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The bottom line is that nothing is perfect in this world which opens up opportunities for entrepreneurs. Everything can be improved. As Rod Judkins suggests 'If something doesn't need improving, improve it'. The improvement might relate to how things are done i.e. the method, rather than the content itself.[4]

Bob Eberle's SCAMPER technique is one of the most useful in supporting students so that they can focus on aspects of something that might need to be improved. SCAMPER is based on the idea that things that are new are actually modifications of what currently exists by applying one or more of the following:

(S) substitute

(C) combine

(A) adapt

(M) modify

(P) put to another use

(E) eliminate

(R) reverse

Take combination, as an example. Entrepreneurial thinking involves forming new combinations. Steve Jobs once described creativity as 'just connecting things'.[5] When he launched the new iPhone in 2007 it was dubbed the 'Jesus phone' by bloggers because of its miraculous features. In fact, most of the components were

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4 Judkins, R. (2015) The Art of Creative Thinking, Sceptre.
5 Cited by Brandt, A. and Eagleman, D. (2017) The Runaway Species, Canongate, p.37.

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already in place in the early 1990s - the iPhone combined these into an affordable (for some) single unit.

The process of making these connections can be taught to students. Suppose you worked in the book publication business and you wanted to explore new markets. You might begin by listing your variables and the key components underneath each one (Box 2.2.2):

Products	Markets	Technology	Functions	Services
Reference	Libraries	Print	Information	Book clubs
CD_ROMs	Industry	Modular	Training	Website
Textbooks	Universities	Audio	Education	Workshops
E-books	Online sales	Internet	Resources	

Box 2.2.2 Key word index

By producing a key-word index, it is then possible to explore new combinations e.g. reference books—universities—intranet—information.

Something similar to SCAMPER is advocated by Brandt, a neuroscientist, and Eagleman, an acclaimed composer. They suggest that all innovations can be traced to the 3 Bs: **blend, bend, or break**. These are said to mirror the way our brains work.

During the enrich stage, students need time to discuss their ideas. In the history of good ideas, flashes of inspiration or Eureka! moments are very rare. Rather, ideas often developed in a long, zig-zag manner as successful creators held continual

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dialogue with their work. They wrestled with their ideas - dissecting, combining, adding, removing, turning them upside down and shaking the about. [6]

Good ideas take time to develop. A historical review of 14 of the most significant innovations in society found that the average time was 39 years from conception to adoption by the general public. The motor car has the longest lifespan of 70 years while lithium batteries, cash machines and mobile phones the shortest duration (but still twenty or so more years).[7] While students' ideas are likely to be more modest ones, nonetheless when planning for such discussions it is important that teachers give students time and space to share ideas, make changes and undertake necessary research.

Stage 3: Enact - How do we turn our idea into action?

The stage involves students selecting which of their ideas they think have the greatest or richest potential and then working this into the best shape through establishing a clear vision and plan. Students can be invited to draw up a story planning board to show the sequence of their idea, from conception to mass adoption and the steps involved along the way. In so doing, students can discuss possible challenges, costs, and limitations, as well as intended outcomes. In the entrepreneurial world, it is not uncommon for entrepreneurs to switch from a first idea because it doesn't work for some reason; perhaps it is not scalable or feedback on some element or another is too negative.

Unused ideas should be stored because they may later prove valuable, for example as trigger points for other projects. It is worth reminding students of the

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6 Sawyer, K. (2013) Zig Zag: The Surprising Path to Greater Creativity, Jossey Bass.
7 Hanna, R. Et al (2015) UKERC Technology and Policy Assessment Innovation timelines from invention to maturity, UKERC.

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many ideas which had been initially rejected and yet subsequently turned into very successful services or products. This is important particularly for the self-esteem of students, whose ideas are not supported at this stage.

Once ideas have been discussed there is a need to converge on those that are worth pursuing for their potential value. It is also important for students to think about why ideas spread. Social influence or word of mouth is particularly important in the speed by which ideas 'go viral'. Doctors are more likely to prescribe a new drug if they know other doctors have prescribed it. A five-star review on amazon.com leads to approximately twenty more books sold than a one-star review. People are more likely to quit smoking or lose weight if friends do so.

Berger (2014) points out that things do not have to interesting or novel (contrary to what we might think) to be go viral. She distinguishes between immediate and ongoing word of mouth (products and services which continue to be talked about over weeks and months). For most products or ideas, it is ongoing word of mouth that matters. For example, an anti-bullying campaign needs to be sustained until bullying is eradicated.
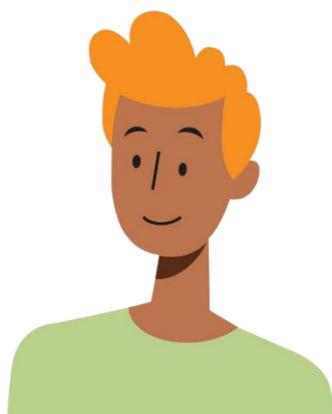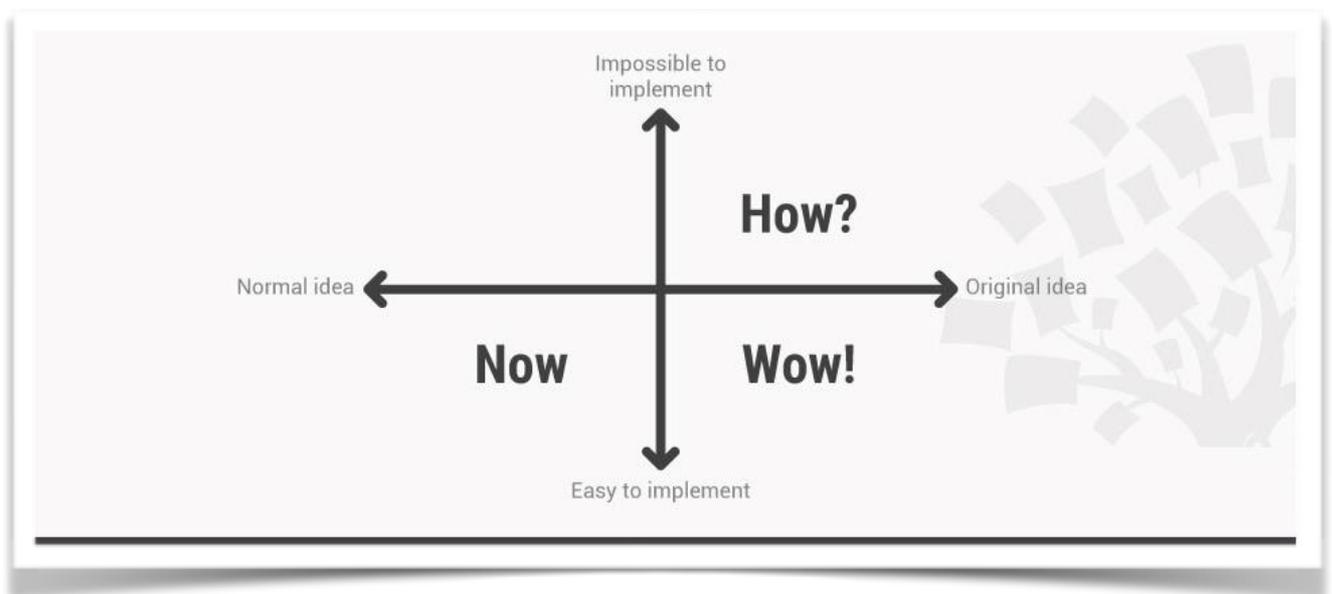
The Four Categories Method (Figure 2.2.3) is used to divide ideas into their relative abstractness, ranging from the most rational choice to the most appealing ('delightful'), the darling and the long shot.

Figure 2.2.3 Four Categories Method[8]

The Now How Wow method is used to judge the viability of an idea (Figure 2.2.4). Students place coloured dot stickers, each representing one of the categories, on the grid to represent where they think ideas should be pitched on the scale.

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8 Source: https://www.interaction-design.org/literature/article/how-to-select-the-best-idea-by-the-end-of-an-ideation-session

Figure 2.2.4 Now How Wow method[9]

> ## Actvity - Design thinking
>
> Visit the <u>Interaction Design Foundation</u> website and read about their design thinking suggestions on how to select the best idea by the end of an ideation session.
>
> You can also download more detailed guidance and free templates such as the Four Categories Method and the Now Wow How matrix.
>
> When do you think these guides could be useful for you in your planning?

Stage 4 - Evaluate - Have we created something of value?

Evaluation is simply about weighing up the worth of something. Evaluation (or **Evalue**) should run through the entrepreneurial learning experience rather than be seen as a separate stage and confined only to the end of the process. The main focus is on getting students to reflect upon how their idea might make a difference to the end users and what evidence might support this line of thinking. The students should be encouraged to research and revise their idea, depending upon what the evidence reveals. They should be taught how to collect and interpret evidence, for example through surveys, questionnaires, interviews, observations and use of technologies.

Simple criteria forms can be drawn up and students encouraged to present and defend their ideas to a panel. Students can consider who might be well placed to

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9 https://www.interaction-design.org/literature/article/how-to-select-the-best-idea-by-the-end-of-an-ideation-session

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offer feedback and what form this should take e.g. short survey, interview, and whether to set up 'control' groups. And then students should return to their plans to make necessary changes following feedback.

It is important that students understand that evaluation is often a relative business and a matter of personal value and subjectivity. While students can be taught how to judge the merit of something, using simple checklists showing objective evaluation criteria, emotions play an important part in determining the value or worth of something.

Students can use or devise their own checklists to evaluate their ideas.

They can be introduced to success criteria which can take both subjective and objective forms.

Suppose you invite students to invent a new chair as part of a refurbishment of the school library. The objective criteria might include: 'Does it have four legs?' or 'Is it within budget?', but certain aesthetics, which come down to personal opinion, also matter (e.g. style). In making a final judgement on which chair to choose, inevitably a mix of objective criteria and subjective feelings come into play.

Table 2.2.1 includes examples of prompts at each stage of the model. Those chosen might be displayed on the classroom wall to remind students during the lesson.

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Stage	Prompts for teachers	Possible strategies	Links to other competences
Explore **Define the problem or issue**	What is the problem or issue? …with our thinking • What exactly is the problem or issue? • Why hasn't it been solved before? • What do we know about this? • What are the facts and figures that we know about X? • What similar products/services (competition) exist? • What have others done before? • What does research say about this product/service? …with our feelings • If we don't solve the problem, so what? Who will this affect? • How does this make them/us feel? • Do our feelings change if we…? • How might x feel about this? • Who does the problem affect most/least? …with our senses •What can you see, hear, feel, touch? •Have you ever noticed? •How does this work? •Can you put these things together? …with our imagination • Imagine if we did this? What would the perfect solution(s)?	• <u>Five W's technique</u> • KWL grids (What we Know, Want to Learn and what we have Learnt) • Problem statements • Mind maps • Thinking routines e.g. See, Think, Wonder • Reframing techniques e.g. resist the word 'but'…and insist on 'yes, and…' for as long as possible Whole-class introduction, group work, paired discussions	3.3 Teaching through real-world contexts 3.4 Encouraging self-awareness and self-confidence to support learning
Stage	**Prompts for teachers**	**Possible strategies**	**Links to other competences**
Enrich	What are our options? • How can we improve this? • What would you change? Why? • What is missing? • What if we turn this upside down or put in reverse?	• Group work and paired discussions • displaying group discussion rules and assigning roles • setting aside a 'working wall' to pin emerging ideas • the use of colour-coded sticky-notes (red for rejected,	3.2 Creating value for others

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| | | yellow for possible and green for 'good to go') to record students' ideas
• SCAMPER technique
• 3 Bs: blend, bend, or break
• clustering or making connections between different ideas suggested
• displaying the journalist technique: 5W's and 1H questions: Who? What? When? Where? Why? and How?
• question prompts about ethics and sustainability e.g. 'What impact will this have on others and the environment?' 'Is this the right thing to do?', 'Could this harm someone?' 'How do we safeguard this?'
• Other People's Views and Consider All Factors (de Bono techniques)
researching online to see whether similar ideas have already been mentioned and what could be learned from this | |

Stage	Prompts for teachers	Possible strategies	Links to other competences
Enact	How do we turn our idea into action? • What are our main goals? • What is our plan to achieve these? • What must we do first? second etc? (priorities) • What is out timescale? • What happens if something goes wrong? • What are our contingency plans? • Who will do what? (roles and responsibilities for each group member) • By when? • What resources will we need? • How much might these costs? • How can we keep on track? • What are our ground rules for working well together? • How do we ensure that at each stage of our idea everyone is doing their fair share? (quality assurance arrangements)	• Group work and paired discussions • displaying group discussion rules and assigning roles Storyboards	2.1 Setting entrepreneurial goals that are ethical and sustainable 3.5 Promoting productive working with others

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Stage		Prompts for teachers	Possible strategies	Links to other competences
		What do we need to think about in presenting and communicating our idea? What form should this take? report? PowerPoint presentation? Audio file? app?		17
Evaluate		Have we created something of value? • Is the problem worth solving or issue worth exploring further? • What is the best idea to take forward? How do we decide this? • Have we achieved our goals? • What valuation (score, grade) would we give for (a) our teamwork (b) our idea? • How can we get feedback? From whom? • What happens if this doesn't work out? • How much has this cost us (time, money, effort)? • Was it worth the time and efforts? • Did everyone do their fair share of the work? • What have we learned through this? • What would we do differently next time? Why? • Have we added value? • In what ways? How do we know?	• SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) • PMI technique (Plus, Minus, Interesting) • Two Stars and a Wish (two strengths and one wish for next time - for younger students) • Internal or external panel of judges • Checklists and rubrics with criteria • Feedback from potential customers/users • Surveys and questionnaires • Four categories Method • Now How Wow strategy Stories of 'brilliant failures' and examples of people whose ideas were rejected e.g. JK Rowling	4.2 Sharing feedback 5.1 Evaluating impact

Table 2.2.1