

NEXTGEN: HNC HORTICULTURE



META-SKILLS IN PRACTICE

Practitioners' reflections and advice
on incorporating meta-skills.

NEXTGEN: HNC HORTICULTURE — META-SKILLS IN PRACTICE

We asked subject-specialist writers with experience of delivering meta-skills in NextGen: HN Qualifications to write a 'Meta-skills in practice' guide, giving us a sense of how they approach the integration of meta-skills within course delivery. In this way, practitioners could share real-life insights, practical advice and examples with course teams who are new to NextGen Qualifications and meta-skills.

[Amber, Curriculum Lead and lecturer, explains in their words how the course team at their college contextualise, integrate, and assess engagement with meta-skills within NextGen: HNC Horticulture.](#)

TOP TIPS

- **Keep it personal.** Use teaching methods that encourage learners to apply meta-skills information to themselves, so that they understand their own development and don't just view meta-skills as an educational concept.
- **Keep it relevant.** In our experience, students of horticulture want to learn about horticulture, and previous attempts to deliver generic skills have had mixed-to-poor results. Make sure you use horticultural meta-skills examples and discussions.
- **Keep it scientific.** Help students to have confidence in the benefits of developing meta-skills by giving them evidence of these benefits.
- **Keep it bite-size.** Address meta-skills in small and easily digestible chunks, making each one relevant to an activity learners are doing, and avoiding the meta-skills assessment becoming disproportionately big.
- **Keep it together.** Integrate assessment and activities, wherever possible, to broaden the opportunity for meta-skills development, and to replicate more accurately the activities people do in the horticultural industry.

META-SKILLS IN HORTICULTURE

Give us a general introduction to meta-skills within the context of your subject area.

Horticulture is a very broad subject, which incorporates science, art, business and physical skills. As a result, as long as the broad skillset required by the industry is represented well in the course, learners are likely to have the opportunity to develop the full range of meta-skills the industry values.

Horticulture is not a well standardised industry compared to, for example, agriculture, forestry, construction or architecture. There are many horticultural enterprises carrying out a very wide range of activities from cut flower production to plant breeding trials, landscaping to ornamental plug production, market gardening to plant pathology, therapeutic horticulture to garden maintenance, and many more. This means that the industry needs employees with a wide range of meta-skills.

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As the HNC Horticulture course aims to introduce learners to the full spectrum of the horticulture industry — from the sciences, through business skills, the arts, and physical skills — it follows that learners can develop a very wide range of meta-skills as they progress through the course.

Meta-skills easily slot into every part of horticulture from the more scientific disciplines to the art of design:

- Botany and plant sciences help develop skills such as focusing, initiative, collaborating, curiosity, sense-making and critical thinking.
- Garden design helps develop skills in integrity, adapting, initiative, communicating, feeling, collaborating, curiosity and creativity.

Meta-skills categories in context

Explain the three meta-skills categories as they relate to your subject.

The mix of disciplines involved in the horticulture industry means there are many opportunities to develop meta-skills. In the examples below, we contextualise them to specific situations, but you can see how applicable they are across the board.

SELF-MANAGEMENT

- You need **focus** to sift through large quantities of data — environmental, growth rate, growing media, costings and markets — to create an effective plant production plan.
- You must have **integrity** to run a sustainable and environmentally sound horticultural enterprise, such as a landscaping company that uses locally sourced, green products.
- You must be able to **adapt** to changing environmental conditions, market trends and customer requirements to maintain a successful plant nursery.
- You must use your **initiative** to create a unique product, business or idea to find your niche in the market, whether you are a garden designer, grower or gardener.

SOCIAL INTELLIGENCE

- To run a public garden you must be able to **communicate** with customers, suppliers, employees and colleagues to ensure everyone is using the garden appropriately and working to improve it.
- You must have a good **feeling** for the needs and wishes of your client if you are designing a garden for them.
- You may be working with a team to erect a new poly tunnel. You must be excellent at **collaborating** to see the tunnel construction through to completion.
- If you run a garden services company, you will need to develop **leading** skills to inspire and motivate your horticultural team even when you aren't with them.

INNOVATION

- To run a market garden, you must have **curiosity** to explore which crops grow well and what customers may be interested in buying.
- When designing a garden, you need **creativity** to create an innovative and interesting design which reflects your style and fits the needs of your client.
- If you are a plant scientist gathering data, you need to know how to use your **sense-making** skills to recognise patterns, and process your data into a hypothesis.
- If you are managing a garden centre business that is in financial difficulty, you will need **critical thinking** skills to identify issues and find solutions.

INTRODUCING AND UNDERSTANDING META-SKILLS

How do you help learners to buy in to meta-skills and understand their relevance?

Meta-skills can be introduced early in the course to allow learners to begin reflecting on

“...reinforce that they already have some of the skills they require to work in horticulture

their skill level straight away. You can then link meta-skills to activities throughout the course, encouraging the development of the skills throughout the year.

In the following two examples we show how you can embed meta-skill activities into the course.

META-SKILL INTRODUCTION ACTIVITY

This has worked well for us for an ice-breaker and a 'getting-to-know-you' activity at the start of the year:

Introduce meta-skills in a series of class discussions.

- 1 Choose a meta-skill category (e.g. self-management) and a skill (e.g. initiative).
- 2 Describe the skill briefly (5 minutes or less).

- 3 Split the class into groups to discuss how they have personally used that skill in their lives. Ask the groups to report back a summary of the range of circumstances this skill has been used in their lives.
- 4 Describe how necessary this skill will be for them in their horticultural careers. Praise them for already having this skill and reinforce that they already have some of the skills they require to work in horticulture.

META-SKILL DEVELOPMENT ACTIVITY

Identify and develop a range of meta-skills through interviews.

This activity allows learners to identify a range of meta-skills they already have as well as those they are developing on the course.

- 1 Give students a list of interview questions to prepare ahead of time that include meta-skills; e.g. 'Give an example of when you have had to adapt to a change', 'Give an example of when you have used your initiative to solve a problem', or 'Do you feel you are a good leader?'
- 2 Get the students to interview each other in pairs, alternating between asking and answering the questions.
- 3 Ask the students to complete the relevant section of their Meta-skills Development Log while this activity is fresh in their minds.

Interviewing each other rather than being interviewed by the lecturer can be a lower-pressure experience and more fun for the students whilst still developing important employability skills.

You can also use this kind of activity to support goal setting and reflection, and align it with learners' future ambitions.

DEVELOPING META-SKILLS

Tell us about your experiences, hindsight and future plans. Give us a sense of how and where meta-skills fit most naturally in your course delivery.

It is important to take a whole-course approach to meta-skills to give learners the greatest amount of opportunities to develop and reflect on as full a range of skills as possible, so they can take these forward to their next step in education or employment. Although the meta-skills outcome sits in one unit, meta-skills are developed and recorded across the course. Lecturers should embed meta-skills throughout the activities they deliver. A consistent approach encourages buy-in from the students. The teaching team should plan their delivery of meta-skills at the start of the course, and review it as the course progresses, ensuring lecturers are signposting meta-skill development opportunities to learners.

By developing meta-skills authentically as they carry out horticultural projects, rather than in short-term memory cramming, learners have the opportunity to reflect on their choices and consider their approach, strategy and intended outcome.

“ ...developing meta-skills authentically [...] rather than short-term memory cramming

Being assessed through a broad range of scientific, design, environmental and business projects gives the learners the opportunity to develop a very broad range of meta-skills.

Learners' work in the horticultural industry will likely involve projects incorporating a wide range of skills. The more their project work during the course resembles real activities and challenges in the workplace the better.

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You can flag meta-skills to students in assessment instructions, e.g. 'By completing

this project you will be developing the following meta-skills in the following way...'. You can also highlight meta-skills in the assessment feedback, e.g. 'Well done for developing your communication skills through the delivery of this presentation...'.
the better.

LEARNER EXPERIENCE

ISSUE

You may find that learners, particularly mature students, are resistant to the idea of meta-skills, believing that they already have these skills from previous careers and life experience. In our experience, these are the hardest students to persuade to buy-in to the idea.

SOLUTIONS

- **Make it personal.** People love talking about themselves; give the students plenty of opportunity to discuss with the class how they have developed particular meta-skills in their lives and how that is of benefit to them now.
- **Contextualise to horticulture.** If learners understand why they need meta-skills in their horticultural career, then they can think of it as a tool to help them build confidence as they start their horticultural career — they may not have all the horticultural knowledge they need yet, but they do have a good range of meta-skills which will be of great value.
- **Use science to get learners' buy in.** Show them the scientific evidence that self-reflection improves learning and skills development. Horticulture is a science; horticultural learners may believe scientific evidence more than 'educational ideas'.

GATHERING ASSESSMENT EVIDENCE

[We've produced guidance around the assessment of meta-skills. There's quite a lot of flexibility around assessment evidence. Can you give us a sense of what you've been doing in this space?](#)

The course allows you to create a wide range of assessment types, which enable students to develop different meta-skills, as we detail below.

- Presentations encourage creativity and communication skills and enable learners to develop their focusing skills as they learn to summarise large quantities of information.
- Practical activities, such as garden maintenance, enable learners to develop their social intelligence skills, communicating and collaborating with others and taking a leadership role when the opportunity arises.
- Investigating horticultural enterprises offers the opportunity for learners to develop their innovation skills, including being guided by their curiosity and making sense of the way enterprises are organised.

Combining assessments, either by combining outcomes within a unit or outcomes across units, allows students to show they can apply a broad range of skills to a situation. You can integrate assessments into a single project that simulates a real-life industry context, where an employee would have to use a wide range of skills to plan, carry out and reflect on a horticultural issue.'

COMBINED ASSESSMENT EXAMPLE

Horticulture practical journal

UNITS AND OUTCOMES COVERED

- Designing Gardens and Greenspaces — outcome 3
- Production Horticulture — outcomes 2 and 3
- Maintaining Gardens and Greenspace — outcome 2

ASSESSMENT

Learners complete a journal throughout the year in which they record the practical work they carry out, the health and safety considerations of the tasks, and reflections on the success of the tasks. They record the 'what', 'when' and 'why' of each task. You should

encourage them to reflect on the meta-skills they have developed in these activities, and to record their reflections for the meta-skills outcome.

ASSESSMENT FEEDBACK META-SKILLS

For every assessment learners complete, lecturers provide not only assessment feedback and feedforward but also a comment on how the learner has developed their meta-skills. It is important not to use generic statements. Your statement should be individual to that learner in question, and detail to their personal development. An example could be:

“ Give personalised and detailed feedback

‘Well done Sean, you have really improved your **communication** skills since your last presentation. In this presentation you spoke confidently to the class and did not rely on reading from your PowerPoint like you did last time. By giving personal examples of the gardening work you have done, you connected well with the audience, and your humour really helped **communicate** some of the difficulties you faced in your job. You also used the PowerPoint software much more **creatively** than before, by including attractive images and using colour themes to differentiate your sections.’

SUMMARY OF RECOMMENDED RESOURCES AND APPROACHES

- Group activity — charting meta-skills already developed
- SQA Academy modules to prompt early discussion
- Activities asking students to connect meta-skills to horticulture
- Meta-skills Development log
- Mini-lecture on SMART goal setting
- Paired interview activity
- Introduce a range of reflective practice techniques
- Integrate meta-skills feedback with all assessment feedback