



## Integrating ESD competencies development and assessment

A case study from University of Strathclyde – summer 2023

### 1. One-page overview

[Strathclyde's Vertically Integrated Projects for Sustainable Development \(VIP4SD\)](#) team sought to more fully embed the eight ESD competencies into the programme's learning, teaching, and assessment. Their aim was to do this meaningfully: Read below how they embedded competency development in the core learning experience, in a way that does not present competency development as an "add-on" to students' project work and instead enables students to articulate and relate their competencies to their professional development and support their confidence and employability skills.

#### Platform and reflection processes

VIP4SD projects are credit-bearing projects that enable students to work in interdisciplinary teams on research related to the [Sustainable Development Goals \(SDGs\)](#). Many of the projects engage in problem-based and experiential learning, and so the VIP4SD sought to formalise how students reflect on the skills they develop as a result of this work. [Practera](#), an ed-tech provider that supports experiential learning experiences, presented a way of managing the student projects, while also supporting consistent competency reflection. Strathclyde will soon embark on their third year of collaborating with Practera.

To provide a mechanism to include opportunities for reflection and feedback throughout the academic year, the platform includes:

- Baseline Competency Self-Assessment
- Biweekly individual reflections, using the [STAR\(R\)](#) method
- Team 360s and Post-Team 360 Reflections
- Final Reflection and Skills ePortfolio (graded) Students use the evidence and reflections completed throughout the year to complete a final reflection and then a Skills ePortfolio, which enables them to gain badges per competency via Open Badges.

#### Outcomes

In general, most students report an increase in their competencies in the final reflection at the end of the academic year. Louise Logan, one of the project coordinators, states: "These results largely reflect what tutors have anecdotally reported seeing in students – increased confidence and increased understanding of and ability to articulate their competency development. However, we also noticed some need for improvement in terms of how the competencies were communicated to students."

## 2. Full text version

### Context

The VIP for Sustainable Development model presents a new way of teaching and learning for both students and staff. As such, it presents new ways of assessing students, in ways that recognise and reward students not only for their disciplinary learning, but for their skills and competency development as well. However, how we might achieve this is less clear. As Strathclyde's VIP for Sustainable Development team sought to more fully embed ESD and sustainability competencies in the programme, we were also faced with the challenge of how to do this meaningfully and in a way that didn't present competency development as an "add-on" to students' project work. Rather, we were faced with the challenge of embedding competency development in the core learning experience, and enabling students to see the value of being able to articulate their competencies in relation to their professional development.



### What we did

[Practera](#), an ed-tech provider that supports experiential learning experiences via its online platform, presented a way of managing VIP for Sustainable Development projects, connecting students and academic leads, and supporting consistent competency reflection all in one place. We entered into a pilot with Practera in academic year 2021/22 and will soon embark on our third year of collaborating with them.

The problem we approached Practera with was that while we knew anecdotally students were gaining and developing skills and competencies through their VIP for Sustainable Development experience, we had no way of evidencing and quantifying this, or of helping students to fully understand and articulate their competency development throughout their experience.

### What were the aims?

In order to fully integrate competency development and reflection into the VIP4SD programme, the Practera platform provided a mechanism to include opportunities for reflection and feedback throughout the academic year. These include:

- **Baseline Competency Self-Assessment:** At the beginning of the academic year, students rate their current skill level against 3 measures for each of the 8 UNESCO ESD Competencies (the framework used throughout).
- **Biweekly individual reflections:** Students are asked to select their skill level for each competency on a Likert scale and then provide a short written reflection on the competency they have developed the most that fortnight and the competency they feel is the weakest/needs the most development. They complete this using the STAR(R) framework approx. 3 times per semester and can attach supporting evidence.

- **Team 360s and Post-Team 360 Reflections:** Each team member provides anonymous constructive feedback on their teammates' skills and abilities, which students then respond to in the post-Team 360 reflection. This is completed once per semester.
- **Final Reflection and Skills ePortfolio:** These are graded. Students use the evidence and reflections completed throughout the year to complete a final reflection and then a Skills ePortfolio, which enables them to gain badges per competency via Open Badges.

The aims of this collaboration were that it would 1) offer the opportunity for students to reflect, understand, and – crucially – articulate their competency development in real time, 2) enable and streamline consistent academic and peer feedback, and 3) provide the VIP for Sustainable Development programme leads with data that evidenced the programme's efficacy in developing the professional skills that would lead to greater institutional buy in.



Photos of VIP4ESD participants and Scott Strachan, one of the leads on VIP4ESD.

### What were the outcomes?

The first year of the pilot engaged a sample of 8 teams from a total of 24 VIP for Sustainable Development teams in total, representing 30 students and 8 members of staff, and the second year saw 7 teams comprising 30 students and 6 staff take part. In general, most students reported an increase in their competencies in the final reflection at the end of the academic year.

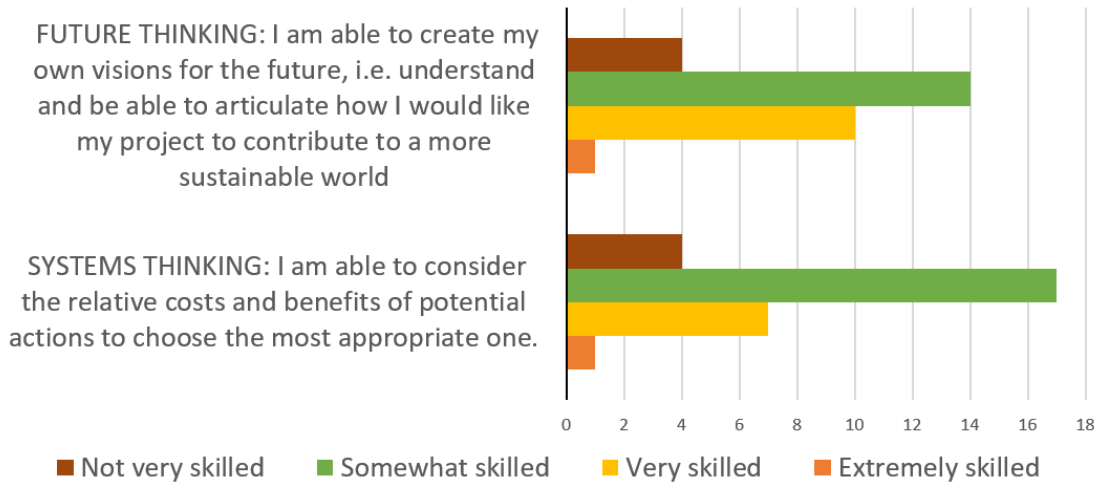
**Systems thinking example.** In the baseline competency self-assessment for the pilot year (2021-22), students were asked if they were able to consider the relative costs and benefits of a potential action in order to choose the most important one, the answer to which would indicate their level of competency in systems thinking. This approach – which uses the UNESCO definition of systems thinking - was chosen rather than simply asking students to rate their systems thinking competency as it's unlikely that all students would know what systems thinking was.

In the initial survey – which students completed at the beginning of the first semester as part of their Practera onboarding – most students selected 'Very skilled' (40.6%) or 'Somewhat skilled' (again, 40.6%) in response to this statement.

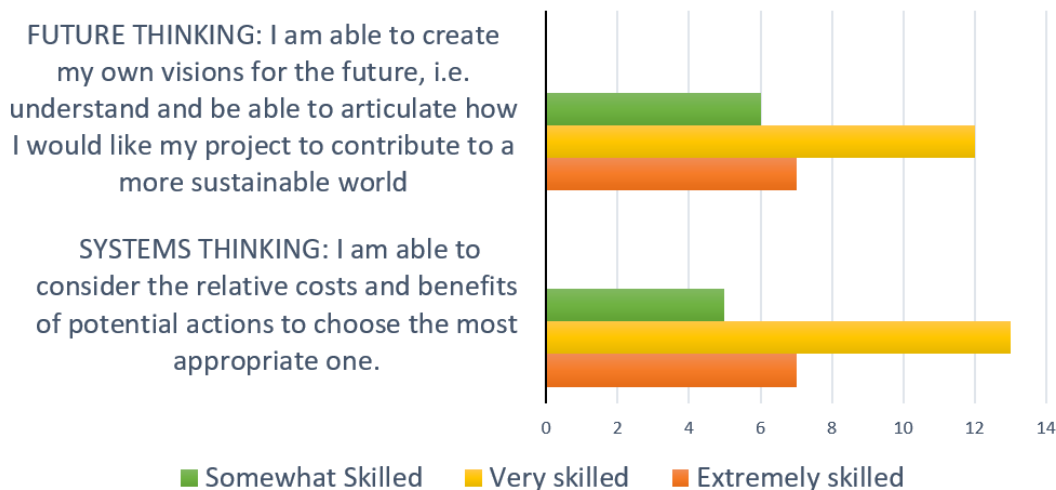


In the exit survey at the end of the second semester, the majority more confidently selected 'Extremely skilled' (38.9%) and 'Very skilled' (44.4%). See graphs illustrating this for future thinking and systems thinking below

### Baseline Competency Self-Assessment



### Final Competency Self-Assessment



These results largely reflect what tutors have anecdotally reported seeing in students – increased confidence and increased understanding of and ability to articulate their competency development. However, we also noticed some need for improvement in terms of how the competencies were communicated to students. While Practera built in supportive sections that explained what the competencies were, we realised that more than this was needed to get students to not only understand what the competencies were, but to understand why it was important for them to be able to articulate their own skills.



**Interested in this project?**

Get in touch with Louise Logan ([louise.logan@strath.ac.uk](mailto:louise.logan@strath.ac.uk)) or Scott Strachan ([scott.strachan@strath.ac.uk](mailto:scott.strachan@strath.ac.uk)) to find out more about VIP4ESD.

**Have your own example to share?**

Email Kathrin ([kmobius@eauc.org.uk](mailto:kmobius@eauc.org.uk)) or the EAUC team ([info@eauc.org.uk](mailto:info@eauc.org.uk)) to publish a case study of your own or speak at one of our events.