

# The impact of future-oriented capabilities in professional contexts

## Supplementary material

**Authors:** [removed for peer review]

The alumni survey probed alumni perceptions of whether their degree program contributed to the development of future-oriented capabilities. This included whether graduates felt equipped with these capabilities, and whether they believed they could demonstrate workplace behaviours aligned with them.

This document provides detailed information on individuals' self-reported perceptions and the enactment of capability-related behaviours in their roles. It includes both their ratings of specific capabilities and their perceptions of how they demonstrate these behaviours in practice.

### Graduates' perceptions of their future-oriented capabilities

In response to the direct question about the development of future-oriented capabilities as part of their degree program, the majority of respondents across all cohorts indicated a strong sense of confidence in their capability development, with mean ratings mostly above 4.0 on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) (see Figure 1 and Table 1).

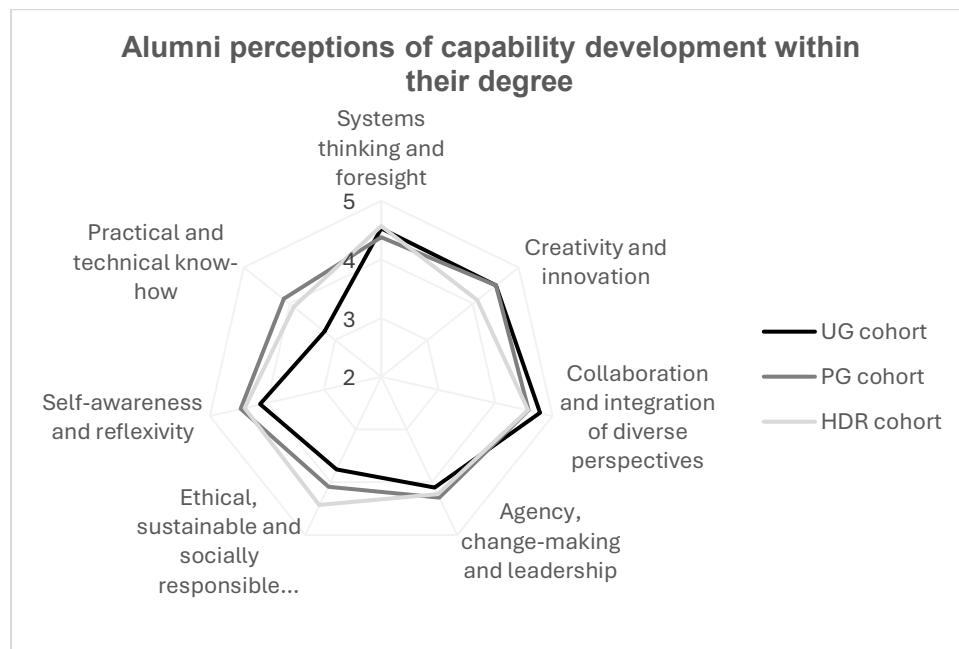


Figure 1. Alumni perceptions of how well their degree equipped them with future-oriented capabilities.

Table 1. Alumni perceptions of how well their degree equipped them with future-oriented capabilities (directly rating capabilities).

| Future-oriented capability | Undergraduate (UG) cohort (n=58) (Mean) | Postgraduate (PG) cohort (n=24) (Mean) | Higher Degree Research (HDR) cohort (n=23) (Mean) | All cohorts (n=104) (Mean) |
|----------------------------|---|--|---|----------------------------|
|----------------------------|---|--|---|----------------------------|

|  |      |      |      |      |
|--|------|------|------|------|
| Systems thinking and foresight                         | 4.53 | 4.38 | 4.57 | 4.50 |
| Creativity and innovation                              | 4.50 | 4.50 | 4.09 | 4.41 |
| Collaboration and integration of diverse perspectives  | 4.78 | 4.58 | 4.57 | 4.68 |
| Agency, change-making and leadership                   | 4.10 | 4.29 | 4.22 | 4.17 |
| Ethical, sustainable and socially responsible practice | 3.76 | 4.08 | 4.43 | 3.97 |
| Self-awareness and reflexivity                         | 4.12 | 4.46 | 4.39 | 4.25 |
| Practical and technical know-how                       | 3.24 | 4.13 | 3.91 | 3.60 |

Graduates were also asked a series of Likert-scale questions (1 = *strongly disagree* to 5 = *strongly agree*) about their workplace behaviours associated with future-oriented capabilities. The link between each statement and its corresponding capability was not disclosed to respondents during the survey. For example, participants rated statements like '*I bring together multiple perspectives and stakeholders when examining complex challenges*' and '*I have strategies for establishing productive collaborations across professional silos and hierarchies*' to gauge their workplace behaviours linked to the *collaboration and integration of diverse perspectives* capability. Similarly, they rated '*I am able to introduce and implement ideas under constraints*' and '*I can inspire and/or mobilise others to take action*,' corresponding to *agency, change-making, and leadership* capability. The consolidated ratings of these statements are presented in Table 2, under the associated future-oriented capabilities.

Table 2. Alumni perceptions of their ability to enact capability-linked workplace behaviours (rating behaviours).

| Future-oriented capability                             | Undergraduate (UG) cohort (n=58) | Postgraduate (PG) cohort (n=24) | Higher Degree Research (HDR) cohort (n=23) | All cohorts |
|--|----------------------------------|---------------------------------|--|-------------|
| Systems thinking and foresight                         | 4.48                             | 4.50                            | 4.57                                       | 4.30        |
| Creativity and innovation                              | 4.34                             | 4.48                            | 4.26                                       | 4.27        |
| Collaboration and integration of diverse perspectives  | 4.53                             | 4.54                            | 4.46                                       | 4.51        |
| Agency, change-making and leadership                   | 4.18                             | 4.38                            | 4.03                                       | 4.19        |
| Ethical, sustainable and socially responsible practice | 3.75                             | 3.80                            | 4.36                                       | 3.94        |
| Self-awareness and reflexivity                         | 4.24                             | 4.40                            | 4.32                                       | 4.29        |

|                                  |      |      |      |      |
|----------------------------------|------|------|------|------|
| Practical and technical know-how | 4.39 | 4.13 | 4.51 | 4.48 |
|----------------------------------|------|------|------|------|

### *Graduates' perceptions of the capabilities required in their roles*

In the survey, graduates were also asked about their perceptions of role requirements for future-oriented capabilities. This included two types of questions: one asking to what extent their roles required these capabilities, and another asking them to rate behaviours suggesting their workplaces allow the application of these capabilities. Alumni perceptions of whether their roles require future-oriented capabilities are presented in Figure 2 and Table 3, while their perspective on how their roles allow them to enact capability-linked behaviours are shown in Table 4.

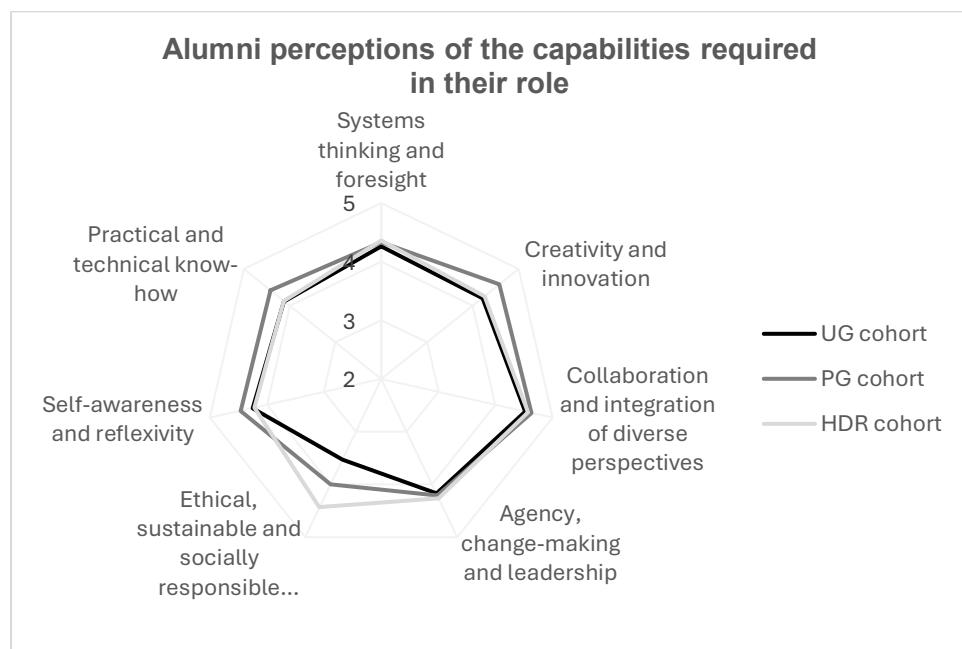


Figure 2. Alumni perceptions of the capabilities required in their role.

Table 3. Alumni perceptions of the extent to which their role requires future-oriented capabilities (directly rating capabilities).

| Future-oriented capability                            | Undergraduate (UG) cohort (n=58) | Postgraduate (PG) cohort (n=24) | Higher Degree Research (HDR) cohort (n=23) | All cohorts (n=104) |
|---|----------------------------------|---------------------------------|--|---------------------|
| Systems thinking and foresight                        | 4.26                             | 4.33                            | 4.36                                       | 4.29                |
| Creativity and innovation                             | 4.21                             | 4.58                            | 4.26                                       | 4.32                |
| Collaboration and integration of diverse perspectives | 4.52                             | 4.63                            | 4.57                                       | 4.56                |
| Agency, change-making and leadership                  | 4.17                             | 4.21                            | 4.26                                       | 4.19                |

|  |      |      |      |      |
|--|------|------|------|------|
| Ethical, sustainable and socially responsible practice | 3.53 | 4.00 | 4.43 | 3.83 |
| Self-awareness and reflexivity                         | 4.25 | 4.46 | 4.22 | 4.28 |
| Practical and technical know-how                       | 4.12 | 4.42 | 4.13 | 4.19 |

As in the previous section, graduates were also asked a series of Likert-scale questions (1 = *strongly disagree* to 5 = *strongly agree*) about their work tasks associated with future-oriented capabilities, without disclosing the link between each statement and its corresponding capability. For example, participants rated statements like '*I deal with complex societal or sustainability challenges*' and '*I work with alternative future scenarios and evaluate the implications of actions over long-term horizon*' to evaluate the extent to which their role enabled them to enact capabilities linked to the systems thinking and foresight capability. The consolidated ratings of these statements are presented in Table 4, under the categories of the future-oriented capabilities.

Table 4. Alumni perceptions of the extent to which their role involves capability-linked tasks (rating behaviours).

| Future-oriented capability                             | Undergraduate (UG) cohort (n=58) | Postgraduate (PG) cohort (n=24) | Higher Degree Research (HDR) cohort (n=23) | All cohorts (n=104) |
|--|----------------------------------|---------------------------------|--|---------------------|
| Systems thinking and foresight                         | 3.98                             | 4.35                            | 4.28                                       | 4.14                |
| Creativity and innovation                              | 4.45                             | 4.63                            | 4.45                                       | 4.50                |
| Collaboration and integration of diverse perspectives  | 4.43                             | 4.42                            | 4.43                                       | 4.42                |
| Agency, change-making and leadership                   | 4.15                             | 4.48                            | 4.33                                       | 4.27                |
| Ethical, sustainable and socially responsible practice | 3.94                             | 4.21                            | 4.18                                       | 4.08                |
| Self-awareness and reflexivity                         | -                                | -                               | -  | -                   |
| Practical and technical know-how                       | 4.03                             | 4.08                            | 4.13                                       | 4.06                |