

Report from the Horizon Scanning Panel

Issue

1. The board is kept informed of the Horizon Scanning Panel by receiving a report on the outcomes of each meeting. The enclosed report summarises the outcomes of the meeting held on 25 November 2019. This report will be supplemented by an oral report given by the chair of the panel.

Recommendations

2. The board is invited to receive the report of the Horizon Scanning Panel.

Main points from November meeting

3. Artificial Intelligence (AI) has wide ranging implications for society and higher education. The OfS should consider the implications for its regulatory regime.
4. There is a major decline in the numbers studying foreign languages, which could have significant implications – for example, around security services, collaboration and research. Currently, it is left to the market to determine the level of graduates in these subject areas.
5. English higher education has a substantive role to play in addressing climate change, and increasingly their response is influencing student choice. In prompting the sector to address climate change, the OfS should take account of any trade-offs that may occur as a result.

Further information

6. Available from Sir Michael Barber.

Horizon Scanning Panel report

November 2019

Artificial Intelligence in education

7. The panel received a presentation on Professor Rose Luckin's work on Artificial Intelligence (AI) in education. Professor Luckin argued that AI's impact on higher education (and education more broadly) can be grouped into three themes:
 - Firstly, the design and use of AI technologies to tackle educational challenges. AI can support development of the meta forms of intelligence in humans by helping us to be more strenuous in the effort to learn, by continuously assessing and tracking developing intelligence, and engaging learners more effectively in the learning process.
 - Secondly, Professor Luckin argued that societies will need to educate people about AI so they can use it safely and effectively. This led to a discussion about ethical aspects of AI: for example, ownership of data about a student's progress and performance, and the importance of ethical decision making in that context. Professor Luckin noted that she and colleagues were working on ethical guidelines in the context of AI and education and hoped to publish these in February 2020.
 - Thirdly, innovation will be needed in education to prepare people for an AI world. There are substantial implications for the future of work as AI is adopted across sectors, and education needs to enable individuals to navigate these new labour markets.
8. Following the presentation, the panel discussed the following points:
 - The application of ethics to AI in education – for example, ownership of data about a student's progress and performance, and the importance of ethical decision making.
 - Thinking through relevant risks to students and lecturers, and guidance to help mitigate these risks.
 - Potential workforce issues – for example, the changing landscape of jobs and pensions due to greater AI.
9. **Next steps** involve:
 - Professor Luckin to share additional reading on the intersection between AI and diversity.
 - Professor Luckin to circulate the Institute for Ethical Artificial Intelligence in Education's interim report in February 2019, if possible.

- At the next panel meeting, to table a follow-up paper on AI, suggesting questions, challenges and recommendations to go from the panel to the OfS board and executive.

Subject trends in English Higher Education

10. The panel received a paper considering subject trends at English higher education providers. The paper covered a broad overview of subject provision across the sector so that the panel could focus their discussion on the over-arching trends and dependencies. The panel also received a subject spotlight to illustrate more detailed analysis possible with the available data. This focused on engineering and languages, noting the growth of engineering and apparent decline in students on language courses.

11. The panel discussed the following points:

- The paper shows substantial changes over time. The panel agreed this should prompt a set of questions for the panel and the OfS, including whether anything should be done in response, what that response should look like, and who should do it.
- As machine-based translation improves, there is a risk this could be seen as a reason not to study/learn languages and the associated cultures. Panel members noted that the value of the disciplines lies not just in the act of translation but in the cultural understanding that often comes with these types of study.
- It was suggested there may be 'marketability' issues with studying foreign languages, in that they may not appear to have an obvious career path after study in comparison to other subjects with a clearer career trajectory. Small adaptations to courses and their marketing (such as reframing them as 'management and modern languages') might result in greater uptake.
- The significant risk that as student numbers fall in particular subjects and disciplines, there is a knock-on effect on provision and research activity.

12. **Next steps** involve:

- Sir Michael Barber to raise at the OfS board meeting in November the panel's suggested question about the OfS's role in shaping subject choice.
- Internal panel members to find the most recent work on the rationalisation of language provision.
- Internal panel members to discuss with the executive whether it would be helpful for the panel to further explore analysis on subject trends.

Climate Change

13. The panel received a paper on the impacts of climate change on higher education from 2020-2030. The panel discussed the following points:

- The leadership role of higher education in the UK on the subject of climate change, for example world-leading research.
- Some panel members thought that the statistics on higher education's own contribution to climate change were relatively unknown.
- The potential for higher education providers' investments to support the climate change agenda. Some providers control substantial funds and student activists have identified these as targets for generating substantive impact. Panel members also acknowledged that there is a trade-off here – if divestment away from fossil fuels results in lower returns, providers will have less money to invest in teaching and research.
- Students are making decisions about where to study partly based on how green they perceive institutions to be. This suggests that information based interventions that use competitive mechanisms may be effective in driving change.

Panel impact update

14. The panel received a paper on the impact of the Horizon Scanning Panel so far on the OfS. The following points were made in discussion:

- Examples of action taken following the panel conversations, including project inclusion in the project pipeline and promoting messages across the OfS and student panel.
- Members felt that the panel was a good use of (and reasonable demand on) their time.
- It was generally agreed that the test of the panel's utility is how useful the panel is to the OfS and its mission.
- The panel noted the challenges of creating accurate measures of performance in this context, and in particular the arbitrary nature of some of the targets. On balance, panel members indicated that the measures were helpful, if not definitive.

15. **Next steps** involve:

- Sir Michael Barber and Josh Fleming to interview all members of the panel to seek their reflections on its operation so far.
- OfS staff to create a trajectory of expectation for the impact and influence of the panel, relating to the success measures presented.

Future meetings

16. The next meeting will take place on 24 February 2020.