

**Future Skills and Access and Inclusion:  
A Briefing Paper for the Scottish Funding Council Board**

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**Introduction**

1. At its meeting on Thursday 8 March 2018, the Access and Inclusion Committee received a presentation from Joshua Ryan-Saha of The Data Lab.
2. This presentation highlighted their research findings in terms of future skills needs. In turn it highlighted the implications for access and inclusion.
3. After detailed discussion, it was agreed that the Chair would draft a briefing paper for the SFC Board Meeting in April 2018. Further, the Committee advised that the SFC Board should consider the following points:
  - That investment and resource are needed at every level to support the STEM Strategy and address the needs of the current workforce who are struggling with technology.
  - That it is important to ensure that policies are put in place now that overcome inequalities in the future.
  - That if students are trained to be digitally expert along with studying human psychology that combination would support their futures.
  - That the school curriculum needs to address digital needs for the future and the mature workforce need access to flexible learning opportunities to support their upskilling.
4. In discussion the Committee noted that:
  - Small interventions could have a massive impact and intervention at governmental level is needed to drive change.
  - The learner journey should take into account the outdated curriculum and needs to rebadge qualifications to ensure that students are globally competitive.

- Changes in automation will affect manufacturing, transport, customer service and routine jobs, but will also impact on professional roles, with healthcare being revolutionised by better diagnostics and prediction of disease and bespoke treatments.
  - 9%-40% of jobs are at risk of redundancy, but other roles will grow significantly or be created in as yet unknown areas.
  - Empathetic and social interaction roles will continue to be valued.
  - Artisanal and craft jobs will still be required and creative roles will continue to be valuable, including combined creative and technology, i.e. gaming.
  - There will be an increase in need for algorithmic decision making and ethics in data roles.
  - Teachers are needed to support the demand for computing in schools.
5. Occupation redesign is taking place and colleges and other routes to training will have an opportunity to upskill the workforce with financially accessible computing courses as well as high end mathematics and statistics to support data literacy.
  6. It is important to communicate the message that Scotland is a great place to work in data science. Creating employment in those roles now will help future-proof and protect Scotland economically and help to encourage a global workforce to make Scotland their home.
  7. In England coding is a mandatory part of the curriculum and private schools run python courses (programming language) which is advantageous for those students but have the result of increasing economic stratification.
  8. There is a skills shortage for computing teachers and more needs to be done to promote/integrate computing science to support upskilling.
  9. The Committee then received a presentation on SFC's skills policy from Sharon Drysdale, Outcome Agreement Manager. This included observations on interdependencies and challenges.

10. In discussion the Committee noted that:

- A draft Digital Strategy has been considered by the Skills Committee and was updated following input from The Data Lab.
- Key drivers for the skills team work are Scottish Government skills policy, i.e. Developing the Young Workforce (DYW), Early Learning and Childcare etc.
- The STEM Strategy is in its implementation phase, with partners engaging well, through STEM hubs, and different models being used in different areas to progress the aims.
- There are challenges around gender balance issues, qualifications and articulation.
- More flexible training opportunities are needed so that people can learn while employed, and so that seasonal workers can learn in gaps between employment.

11. There was a very robust discussion which emerged from both presentations and the Access and Inclusion Committee believes this data to be of such importance, that it wishes the SFC Board to consider the points raised.

12. Further, the Access and Inclusion Committee recommends that the SFC Board should identify what actions it would wish to put in place, in response to this data.