

Evidence for SFC's review of coherent provision and sustainability in further and higher education

SINAPSE (Scottish Imaging Network: A Platform for Scientific Excellence) is Scotland's medical imaging research pool, comprising seven Scottish universities (Aberdeen, Dundee, Edinburgh, Glasgow, St Andrews, Stirling, and Strathclyde) along with NHS Scotland as its partner institutions. SFC originally developed the research pooling initiative with the aim of growing a critical mass of excellent research in the relevant disciplines in Scotland, and we suggest that the success with which this aim has been achieved and advanced – demonstrably benefitting research, education and innovation in Scotland¹ – serves as a model for assuring coherence and sustainability in future education arrangements.

Collaboration and connectivity are central tenets of the now well-established Scottish research pooling model, through which a critical mass accomplishes more than its constituent members can by working separately. The same philosophy has underpinned the structure (and the resultant achievements) of SFC's Innovation Centre initiative, focused on partnerships between universities and businesses. Across settings, such an approach is highly effective in a nation as small as Scotland where it is economically sensible to share pooled expertise and resources in multi-institutional consortia. This is an especially important consideration at a time when public resources for investment in expertise and resources are scarce. The existing foundation of cross-institutional cooperation developed through SFC's research pooling initiative deserves to be leveraged in planning for the future of further and higher education in Scotland, and should be recognised as a significant asset when competing and collaborating on a global level.

Multi-institution graduate schools were a particular strength of the original Scottish research pooling framework, delivering geographically distributed programmes of cohesive doctoral training that have since been reproduced in UK-wide CDT and DTP schemes. An ecosystem for post-pandemic learning and teaching and research in Scotland would flourish through reinvestment in such collaborative partnerships among Scottish tertiary education institutions. Successful joint provision of the research pools' pan-Scotland graduate schools attests to the feasibility of inter-organisational coordination for skills and talent development, an education arrangement that is more cost effective than multiple institutions redundantly offering the same training courses in isolation.

¹ Heathwaite Review of Scotland's Research Pooling Initiative
<http://www.sfc.ac.uk/research/research-pooling/research-pooling-review.aspx>

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Although the research pools' pan-Scotland graduate schools were founded among university partner institutions, there is scope for this model of inter-organisational coordination to be expanded in a more inclusive ecosystem that also integrates colleges and specialist institutions. In the case of SINAPSE, for example, training relevant to medical imaging is not restricted to postgraduate degree work at one of our partner universities but actually belongs within a coherent and sustainable system incorporating educational opportunities in colleges (e.g., mechanical engineering) and bodies such as NHS Education for Scotland (e.g., healthcare science). The track record that SINAPSE has already established for collaborative doctoral training networks is being built upon and broadened for future education arrangements, to ensure continued delivery of high quality training relevant to medical imaging, and the same will be true for the other research pools in their respective disciplines.

The COVID-19 crisis has challenged the conventional mode of delivery of teaching, training, and collaborating. SINAPSE has responded by sharing online materials developed in our partner institutions², enhancing our own freely available eLearning resources³, allowing us to improve accessibility for learners at different stages. Additionally, we held the 2020 SINAPSE Annual Scientific Meeting as a virtual event, a format that received positive feedback while incurring fewer running costs and generating a smaller carbon footprint. Such approaches permit progress despite uncertainty, and promote inclusion for students who are remote or geographically dispersed, have caring responsibilities or disabilities, or must comply with lockdown measures. Preparing for a robust response to further challenges to conventional education provision will require heavier reliance on online resources and training on effective methods of online learning.

A challenge for Scotland's post-pandemic further and higher education environment will be improving strategic alignment between existing structures in order to best meet the skills needs of the economy and society. The model of research pools' cross-institutional doctoral training programmes, for example, could be improved through closer working with the Innovation Centres to better prepare learners for private sector employment opportunities. Cross-pool efforts are already underway to advance interdisciplinary research and development across Scotland, and additional top-down support would help to expand this bottom-up initiative to contribute to education provision directly supporting Scotland's social and economic recovery. Strong networks established by the research pools – not only across Scottish higher education institutions but also with international partners – form a valuable infrastructure into which additional capacities can be integrated as part of a national plan for education-led recovery.

Yours sincerely,



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² <http://www.sinapse.ac.uk/news/free-access-to-transferable-skills-in-imaging-training-for-sinapse-affiliated-phd-students>

³ <http://sinapse-cpd.dcn.ed.ac.uk/>

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