



4th October 2022



Digital Health & Care Innovation Centre

How can data guide the development of digital skills, workforce recruitment, retention and resilience?

Setting the scene

Dr Sanna Rimpiläinen

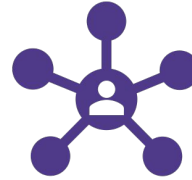
Who are the workforce?



Frontline health & social care staff

Use digital solutions to support the day-to-day delivery of care.

Digital skills



Specialist digital, knowledge, information and data roles in H&SC

Deal with the influx of data & information resulting from digital transformation of services in H&SC.

Specialist digital, data, analytics and informatics skills



Technical professionals

Design, develop, deliver & implement digital solutions for use by H&SC; incl. cyber security.

Tech skills; software development, computing, cyber security, UX, project management, change management, implementation facilitation, etc.

Digital health and care sector



Heated demand for digital skills and capabilities across the economy

13,000 new digital job opportunities annually in Scotland – just 5000 home-grown graduates.

75% Scottish tech companies are struggling to recruit qualified staff (ScotlandIS).

69% projected increase in demand for digital and data specialists in NHS England by 2030.

Health Education England: Data Driven Healthcare 2030



Role family	Area of work	Workforce size in 2020 – WTEs	Projected demand in 2030 – WTEs	10-year decrease (-) or increase (+) required – WTEs	10-year decrease (-) or increase (+) required – %
Data architecture	Clinical coding	3,560	3,101	-459	-13%
	Health records	12,610	12,315	-295	-2%
	Information management	8,113	15,961	+7,848	+97%
Technical infrastructure	Information and communications technology	16,407	21,963	+5,556	+34%
Application	Clinical informatics	1,778	13,731	+11,953	+672%
	Knowledge management	788	2,199	+1,411	+179%
Organisational transformation	IT programmes and project management	1,741	4,859	+3,118	+179%
	IT strategy and development	801	3,407	+2,606	+325%
	IT education and training	212	387	+175	+83%
	Total workforce	46,009	77,923	31,914	+69%

Review of Scottish course provision with the potential to support digital transformation of H&C (autumn 2021):



FE heat map – 27 Colleges

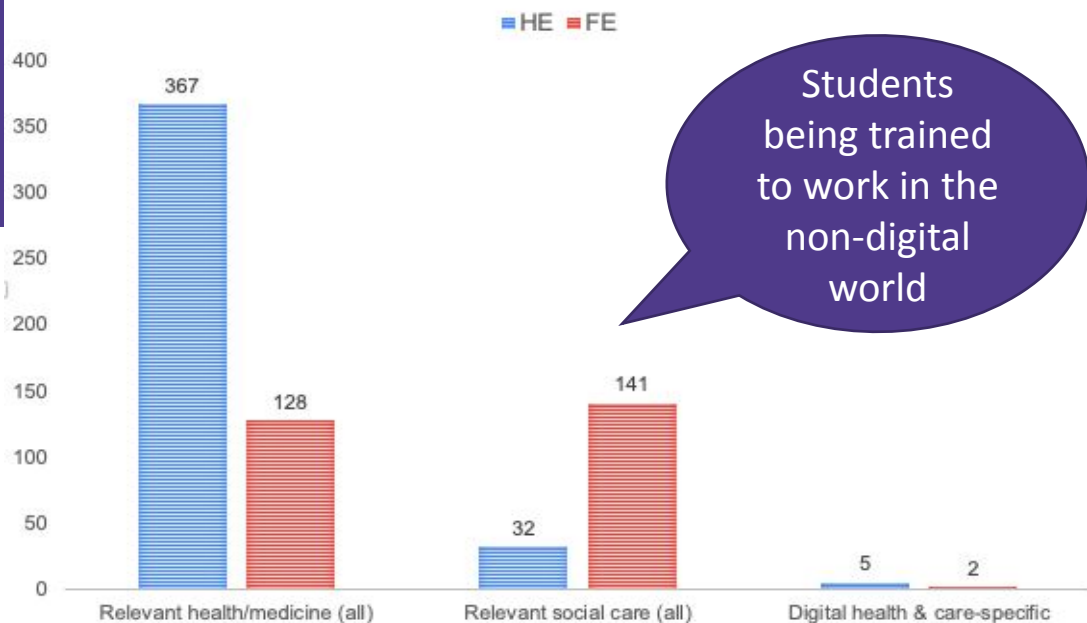
Name of educational establishment	Digital health and care specific	ICT/computing/relevant STEM	Health/Medicine	Social care	Design	Business/Management/Leadership	(out of which) Entrepreneurial
Argyll College UHI	0	5	1	6	2	3	1
Ayrshire College	0	12	3	2	0	3	0
Borders College	0	5	6	6	0	2	2
City of Glasgow College	0	24	4	7	10	9	2
Dumfries & Galloway College	0	6	3	6	3	6	0
Dundee and Angus College	0	12	9	13	7	7	0
Edinburgh College	0	17	9	8	6	5	0
Fife College	0	26	7	9	4	8	0
Forth Valley College	1	11	2	10	3	5	0
Glasgow Clyde College	0	13	15	6	0	11	0
Glasgow Kelvin College	0	3	4	4	3	2	0
Inverness College UHI	1	10	7	8	1	6	1
Lewis Castle College UHI	1	8	7	3	1	4	0
Moray College	0	7	5	6	2	6	0
Newbattle Abbey College	0	0	0	0	0	0	0
New College Lanarkshire	0	23	6	1	0	3	0
North East Scotland College - Aberdeen	0	21	6	6	4	2	0
North Highland College UHI	0	10	4	6	0	6	0
Orkney College UHI	0	5	5	7	0	3	0
Perth College at UHI	1	6	7	5	1	9	0
Sabhal Mòr Ostaig UHI	0	0	0	0	0	0	0
Shetland College at UHI	0	5	5	6	3	8	1
Scotland's Rural College	0	0	0	0	0	0	0
South Lanarkshire College	0	0	2	7	0	2	0
West College Scotland	0	4	4	2	0	2	0
West Highland College UHI	0	3	1	4	2	3	0
West Lothian College	0	8	6	3	3	3	0
Total	4	244	128	141	55	118	7

HE heat map – 16 Universities

Name of educational establishment	Digital health and care specific	ICT/computing/relevant STEM	Health/Medicine	Social care	Design	Business/Management/Leadership	(out of which) Entrepreneurial
Abertay University	0	15	17	0	3	6	1
Edinburgh Napier University	0	24	23	2	8	20	4
Glasgow Caledonian University	0	20	33	2	5	3	1
Glasgow School of Art	1	1	2	0	11	1	0
Heriot-Watt University	0	41	3	0	7	14	0
Queen Margaret University	0	0	24	0	0	3	1
Robert Gordon University	0	19	18	0	6	10	1
University of Aberdeen	3	21	47	0	0	6	0
University of Dundee	0	12	52	4	12	10	7
University of Edinburgh	0	47	38	5	15	17	2
University of Glasgow	3	33	23	2	5	14	2
University of the Highlands and Islands	2	9	16	7	4	6	2
University of Stirling	0	13	21	5	0	7	0
University of Strathclyde	1	34	15	3	10	14	3
University of St Andrews	1	12	9	0	0	2	0
University of the West of Scotland	1	21	26	2	2	12	0
Total	12	322	367	32	88	145	24

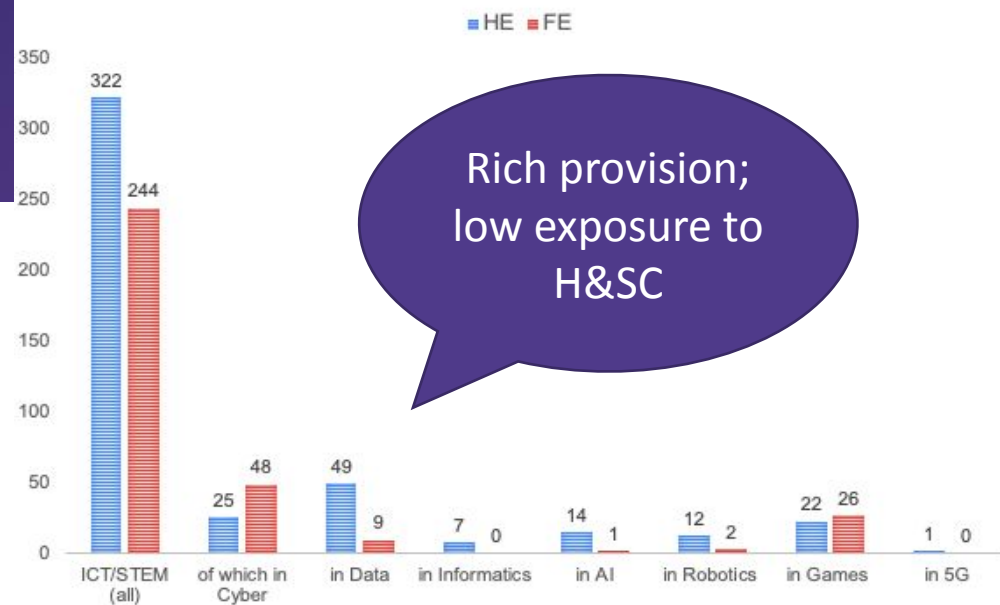
ICT/computing/relevant STEM; health & medicine; social care; design; business & leadership

HEALTH, MEDICINE AND SOC CARE



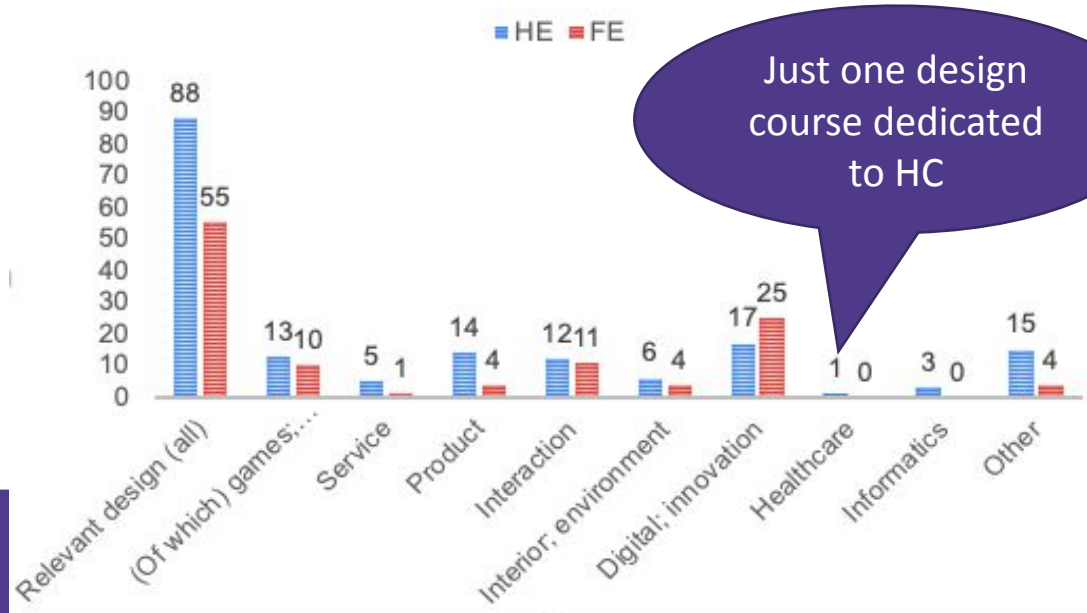
Students being trained to work in the non-digital world

COMPUTING/ICT AND RELEVANT STEM WITH SELECTED SPECIALITIES



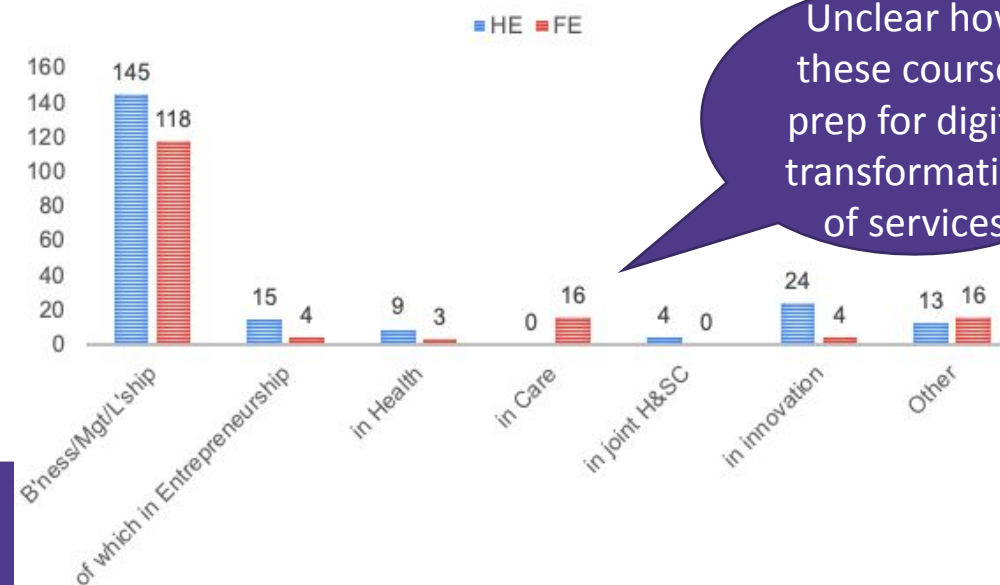
Rich provision; low exposure to H&SC

RELEVANT DESIGN COURSES



Just one design course dedicated to HC

RELEVANT BUSINESS, MANAGEMENT AND LEADERSHIP COURSES



Unclear how these courses prep for digital transformation of services