



## EAN Congress 2024-Mary Curnock Cook Lecture Report

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Thanks to the Engineering Professors Council inviting me to come to the EAN Congress 2024-Engineers for the Future in Cardiff between 9<sup>th</sup>-11<sup>st</sup> July 2024. This is amazing event with very interesting topics these days.

On 10<sup>th</sup> July 2024, Mary Curnock Cook, Chair of the Dyson Institute of Engineering and Technology, delivered a very good lecture.



The lecture was to start from very interesting information “how long it took 100M people to adopt telephones, mobile phones and ChatGPT”. For telephones, it takes 75 years. For mobile, it takes 16 years. For the ChatGPT, it is only used 2 months. Also, Open AI in 2023, it is 19.6% Global of kids using and the overall website rank is 18<sup>th</sup> place. For the UK, it is 15.5% of kids using and overall website rank is 43<sup>rd</sup> place. In addition, 25% of change in skill sets for jobs since 2015. By 2027, this number is expected to double. Average number of skills required for a single job has increased 10% annually since 2017. However, the core skills aren’t changing that much. Thus, she has shared the top 20 rankings for skills from 2010 to 2020 and is expected to 2035.

35% of Americans can work from home 5 days/week and 23% of Americans can work from home 1-4 days per week. The percentage of workers empowered to take advantage of flexible working arrangements before the COVID is around 25% and after the COVID is around 65%. Workplaces are leaning away from rigid job structures and hierarchies, and towards agile, flexible environments. How business executives want to organise work to create value in the workplace. It is around 60% of business executives believe fractionalized work is the best way to create value for workers and the organisation. This is when workers flexibly flow tasks, assignments and projects based on their skills and interests. 21% broadened work when worker roles and responsibilities are structured around broad problems to be solved or outcomes to be achieved. Only 19% is traditional work.

For the students, 42% of students have regrets about their study choices in 2023. Some examples about what students say were given. Example 1: I feel we are all told a magical story of studying exciting things that we love, fun and socialising with friends and peers and leaving with a good job. I



feel none of it is true. You have to pay huge sums to attend uni classes where course materials also cost and you could do it all online yourself for free. You have to work evenings after uni to make ends meet so you don't get to socialise. You have to pay huge rent bills to private landlords to make them richer, while getting deeper in debt, eating poorly and having no assurance of anything above minimum wage when you leave." Another example shows "Every week my Tuesday looks like this: up at 2:30 am, but at 3:00, airport at 4:00, frying chicken until the afternoon. This is my regular shift working at KFC in Manchester Airport, which suits my university life well. As I do not have any lectures or seminars on Tuesday, I choose to do my weekly shift, then I can easily balance work and studying. Finding a workplace where you are able to decide what days you work on is really beneficial in the long term, especially as university timetables change every semester. That brings me to my second part-time job, working as an events steward for a security company. This role is amazing in terms of flexibility, as my company allows employees to pick and choose which events they would like to work at from their extensive list. This is great because it allows me to go to events I am interested in, from festivals to football matches."

About students' lives are changing, the first is more students are working, and working for more hours. The second is engagement in social, volunteering sports and clubs is declining. The third is students' attendance is declining too as they forego lectures and seminars for shifts. The fourth is engagement with career service suffers. The fifth is more students live at home and commute. The last is university becomes transactional. After meeting students where they are concerned. The first is to make skills for employability more visible. The second is timetabling to acknowledge working hours. The third is extending careers service to cover work during studies and following graduation. The fourth is flexing the three-year "full-time" model using lifelong learning entitlement (LLE). The five is making "switching" easy.

In 2017-2023, they have run BEng Engineering Degree Apprenticeship. However, from 2024 onwards, they have Meng employer-sponsored degrees. In the end, she shared with us their progression and outcomes. All graduates have moved into full-time employment. 96% of graduates have moved into engineering roles with Dyson. Graduates are highly valued by Dyson's business.

This is an excellent lecture delivered. Thanks for it.