



# Arkwright

SCHOLARSHIPS

## CASE STUDY

Roy Poulton

### My Journey from Whitgift to Dyson

I was about 15 when I started to develop a keen interest in Design and Engineering. I had always been interested in technology and science as a child but it was the application and embodiment out of the text book that interested me. Being a keen musician I wanted to design an electric cello; partly out of curiosity and partly because I felt that it offered a challenge to re-write certain rules. Too ambitious for GCSE my teachers convinced me to save this for an A-level project. After successfully completing the Arkwright Selection Procedure I secured the much needed A Level funding for my electric cello. The completed cello opened doors to exhibitions and presented a good case study for various interviews. – For this first step I am in debt to Arkwright.

#### Arkwright Scholar 1997 Whitgift School, Croydon

A/S Further Maths	A
<b>A Levels</b>	
Maths	A
Physics	A
Chemistry	B
Design & Technology	A

Having carried out work experience, in the sixth form, with Arup, I became interested in studying engineering, with top A Levels I accepted a place to study Engineering at Cambridge on the condition of taking an industrial gap year. I was lucky to gain a place with Arup and worked as a mechanical building services engineer in London where I worked on exciting projects including Zurich Airport and Canary Wharf developments. Arup gave me sponsorship during my degree and I returned to work during the vacation on placements in London.

My post A Level education was unconventional with the first year at Cambridge reading General Engineering. Unfortunately, personal challenges forced me to re-start my studies at Imperial College in London reading Mechanical Engineering. At Imperial College I assumed the position of year representative and ran the Rock Society and generally enjoyed student life. However, after two years, my desire to study theory and yet still have creative freedom finally began to clash with the traditional engineering.

After a very positive phone call I transferred into the second year of the Engineering Product Design course at London South Bank University. I wasted no time in returning to the workshops for the next two years. The course was heavily based on project and design work, which suited me greatly. The support of the tutors in encouraging creative problem solving was second to none.

For my major project I returned to music to revolutionise the hurdy gurdy (a 13th century instrument) for the world of contemporary music. I started from scratch with motorized controls and a completely different playing approach. It was at this point that I returned to my educational roots at Whitgift and in no small way to the effects that Arkwright had had on the department since I had left some years before. I had always kept in touch with Bob Johnstone, the Head of Design Technology at the school and when approached he quickly responded to my request to use their CAM router to help produce the body shape of my new musical concept – it was during this



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time that I realised the CAD/CAM set up within the school was partly funded via the Arkwright scheme. The completion of this project ultimately involved three workshops: conventional machining at LSBU, Timber CNC work at Whitgift and assembly / final carpentry in my student kitchen (I had very understanding house-mates!). The finished project proved again to be successful and earned me a 1st class honours BSc and allowed me to exhibit at the New Designers exhibition in Islington. The project also provided me with an excellent conversation piece when invited to interview with Dyson.

After graduating in 2005, I had assumed the role of Engineer in Melbourne Australia on a working holiday. Only a few weeks into the job I received an offer of a position with Dyson. Needless to say I returned to England. My first nine months were spent living and working in rural Wiltshire on my first job as a Graduate Design Engineer in the NPI Team (New Product Ideas). I realized how lucky I was to have finally achieved the rare position of looking forward to going to work in the morning. After almost 5 years with Dyson I am now a Design Engineer and have worked on numerous projects in the UK, China and Malaysia and have been credited on a number of patents.

I am now able to draw on many experiences in both personal and professional life which allow me to move forward with open eyes as I learn the most crucial lessons in design; the ones which can only be learnt from the real world. For this I am indebted to both Arkwright and Whitgift School for allowing me to follow my dreams at such a crucial stage in my life.



“Arkwright has become embedded in the Whitgift culture since our first Scholar in 1997 who received a 1st at Cambridge and is now a practicing engineering in the USA. I have used funding intelligently to purchase equipment including a flatbed router to computer hardware and software. The equipment is used across all years (Y6 – Y13) and children in the schools ‘Primary schools Project’ Long may Arkwright flourish”.

Bob Johnstone,  
Director Faculty of Design, Whitgift School.