



Starting out in Acoustics: A Journey into the Unknown

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SUMMARY (ABSTRACT)

Have you ever been asked how you got into acoustics? Are you a recent graduate employed in acoustics and unsure of what the future holds? Do you employ young engineers and acousticians and not know what to do with them half the time or worry if they will stick around? Being the specialised field that it is, getting that first job in acoustics or employing the ideal graduate can be like finding and catching a unicorn. This paper explores what makes the field so unique for those starting out, in an anecdotal telling of one graduate consultant's story, 6 years down the track. The balanced discussion also includes summaries of interviews with employers and educators in the field. Topics explored will interest employers, employees and educators - including insight into retaining young staff, developing knowledge base versus on-the-job training, and shaping the industry to attract new talent and create jobs.

1 INTRODUCTION

It is by taking the time to turn around, look back, and gauge the terrain that we understand more about where we came from and how we want to continue onward. This paper looks at some of the interesting aspects of career progression as they relate to acoustics – a field that is both diverse and niche all at the same time.

2 THE EARLY YEARS

As a former graduate engineer, I can share my early career experiences and those of my peers. Graduate engineers love a challenge, we generally yearn for it, and we also crave new experiences especially early in our careers. Our theory learning is over, we've gotten a taste of the real world and want to get stuck into something that will show off our skills. All graduates are eager to shake the "graduate" title. They are also eager to get paid. These things work together to give graduates and young engineers a restless itchy feet feeling. Does this make them good employees? Some would say 'no', others would say 'yes'. In one camp, you invest in someone's development and then expect a return 2-3 years down the track – but many of them don't last that long in one job!

In the other camp, some would say the eagerness to build skills and search for the next challenge or complex problem is what drives good people. So as an employer you have to weigh up the risk, roll the dice but also do your best to affect the outcome. How do you develop someone into a useful contributor and keep them onboard at the same time? Is there a difference within companies, big or small? How have others tackled this issue? More importantly, how does this relate to acoustics? By all accounts acoustics is a niche field, it's hard to get into yet opens up a world of applications.

3 THE PANEL

In search of some answers, I interviewed several acousticians and professionals in the field, all of whom experienced the development of others. I asked them to take a step back and reflect on their careers and specifically their experiences with growth and development. Without naming names, brief profiles of my panel members are as follows:

- Principal Acoustical Consultant, Multinational consulting firm, 15 years experience;
- Retired Principal Environmental Noise Officer, Environmental Regulation, 40 years experience;
- Environmental Manager, State Level Infrastructure and Planning, 10 years experience;
- Senior Lecturer (Acoustics), Science and Engineering Faculty, WA University, 30 years experience.

Hearing the experiences and thoughts of this accomplished group I was able to derive some concise thoughts on what tools promote the development of great careers within the field of acoustics.



4 DEVELOPMENT TOOL 1: ESTABLISH A SUPPORTIVE ENVIRONMENT

The common theme from my interview panel was to ask questions, know your shortcomings, and look for mentorship. Acoustics is **not** easy. If you are expecting simple concepts, basic problems, and someone to guide you every step, you have landed in the wrong place. Most roles in acoustics are within small teams or self managed projects, and therefore the supportive environment is even more critical. Whether you are doing research, or working as a consultant, you will generally be responsible for your own work and time.

When I started out as a graduate acoustic consultant, I joined a consultancy of 4 others and I was expected to work on my own after 12 months. I was supervised, had my work reviewed and encouraged to ask any questions I wanted no matter how dumb they might seem. To start with, graduates are often given the field/technician work then eased into the reports and meetings as they develop. Meetings are great, take lots of notes, smile and nod and ask your questions on the car ride back to the office. A panellist proposed that “education starts when you leave university.”

Young acousticians should be encouraged (read: forced) to go on training courses early, have others teach the acoustic and regulatory theory and then apply it on actual projects. Promote mentorship, someone who is a sounding board, both technically and professionally. If you are struggling to find a mentor or to be a mentor within your company, improve your networks at AAS events and see where they lead.

5 DEVELOPMENT TOOL 2: ENCOURAGE SOFT SKILLS

In the vital first two years, a graduate looks for ways to prove themselves to you and the team. In acoustics, the technical expertise takes time to master but people skills or “soft skills” can be honed early. These include (but aren’t limited to), responsibility, self-motivation, communication, time management and team work. If you ever passed a job interview you probably have most of these to some degree. As an acoustician, these are valuable in all areas of the field. In a consultancy environment, I was encouraged and valued for my team work and flexibility but also my ability to communicate well with clients. One panellist used the term “translator” when working between technical concepts and laymen stakeholders. They elaborated: “Get good at simplifying and explaining the tricky acoustic concepts to everyday people and conversely, translate real life requirements and outcomes back into the acoustics language.”

6 DEVELOPMENT TOOL 3: CAREER COMMUNICATE

Speak up about career development. If you are a budding young acoustician, schedule in time with your boss to discuss how you are going, where you want to go and how to get there. If you are the boss, encourage the same discussion – it will go down better coming from above. Recognise that many young professionals leave work places because they don’t feel like their employers made time for their professional development. Your young guys and girls are also more likely to stick around if they can see a clear path of progression within your organisation that aligns with their ambitions.

7 DEVELOPMENT TOOL 4: INSPIRE AND CHALLENGE

Every now and then young acousticians like to be shown something cool, something challenging, and something blue - the last one of course applies only to marine acoustics. The good news is acoustics is a broad field with many applications. Sure, some are cooler than others but all of them can be challenging in one form or another. The deep end is where we learn to swim, having the right attitude towards challenging work and new experiences will make a huge difference for all parties. If a new job comes up that is a bit unusual, put the graduate onto it. If a community talk or a presentation opportunity arises, put the grad onto it! All panellists recognised the value in exploring ideas and challenges presented by others too, such as at the AAS conference. Sending your young acousticians along to these types of events with the objective of presenting, learning, networking and reporting back on the experience will tick most of the development boxes.

8 CONCLUSION

The above tools are dual purpose, to be considered useable by both employer and employee. It’s one thing to attract new and young talent to a specialised STEM profession, it’s another thing entirely keeping them around. Establishing the right culture early is key, and working at it constantly on both sides is vital.