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WORDS OF ADVICE

How to build a well-rounded CV and get hired after your PhD

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academia; career development; industry; PhD; postdoc

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Embarking on a PhD provides many opportunities for personal and professional development beyond scientific research. This instalment of the Words of Advice series aims to provide guidance and tips on harnessing these resources to build a well-rounded CV and increase your chances of getting hired after your PhD. We provide two perspectives on developing your CV to optimise career opportunities in academia and beyond. The first perspective is by Dr Zheng-Shan Chong, a post-doctoral researcher in Singapore, and focuses on the acquisition of a wide range of skills and experience that could open doors to a career outside of academia. Beyond her day job, Shan manages an article series on bioentrepreneurship and career development for Biotech Connection Singapore, which has allowed her to speak to several researchers who have successfully transitioned to non-research roles. Here, she summarises the insights gained from these conversations. This is followed by advice and tips from Dr Sara Clohisey, a post-doctoral researcher in Edinburgh who changed fields after her PhD, from *Drosophila* cell biology to human genetics and virology. Although not quite as dramatic as leaving academia completely, this shift prompted her to rethink her approach to writing an academic CV so that it would appeal to an employer from a different field. Sara's perspective is particularly geared towards careers in research. We hope that these unique perspectives from experienced individuals who have successfully navigated the path from graduate student to working scientist will prove useful to those who are planning their next moves after completing a PhD.

Part 1

Maybe it's been on your mind since the very beginning of your course, or maybe you're two years in and the reality of what comes after has finally hit you. Either way, the question 'How do I get a job after my PhD?' is one that every PhD student has asked themselves at one point or another. Whether you see a future for yourself in academia or whether you're

looking for a way out of the ivory tower, making use of the opportunities available during your PhD to build a well-rounded CV could boost your chances of landing you your ideal next position. Here are some tips to help you graduate with a bag full of experiences and a CV that reflects more than just your skills at the bench.

Abbreviations

BBSRC-PIP, Biotechnology and Biological Sciences Research Council – Professional Internships for PhD students; CV, curriculum vitae.

What are employers looking for in 2020 and beyond?

Problem solving and cognitive flexibility

According to a report by the World Economic Forum on the future of jobs, 35% of skills that are considered important now will have changed in the next five years [1]. As we enter an era of automation, machine-learning, and advanced materials and manufacturing, we can expect significant changes to the way we live, work and play. As such, there has been a general trend towards valuing transferable soft skills like creative problem-solving and collaboration that allow workers to adapt to new roles regardless of their previous professional background (Table 1) [2].

Adaptability and interpersonal skills are much sought-after qualities in the life sciences sector as well. In 2014, Deloitte predicted that healthcare research and development (R&D) in 2020 would be highly networked, with pharmaceutical companies collaborating with other stakeholders at earlier stages of research [3]. The current boom in biotechnology spin-outs and industry–university collaborations have all but fulfilled this prediction [4]. In addition, the COVID-19 pandemic has sharpened an already growing appetite for ‘use-inspired’ research, which refers to basic research driven by its potential use, as opposed to ‘curiosity-driven’ research [5]. All this means that scientists looking for a job must be ready to work with external partners and be flexible in applying their scientific training to ever-changing research needs.

Table 1. List of soft skills employers are looking for in 2020. As work becomes more collaborative and interdisciplinary, employers are progressively looking for soft skills that emphasise teamwork and flexibility.

Soft skills that employers are looking for in 2020		
From the Future of Work Report by WEF [1]	From LinkedIn survey [2]	Learning
1. Complex Problem Solving	1. Creativity	
2. Critical Thinking	2. Persuasion	
3. Creativity	3. Collaboration	
4. People Management	4. Adaptability	
5. Coordinating with Others	5. Emotional Intelligence	
6. Emotional Intelligence		
7. Judgement and Decision-Making		
8. Service Orientation		
9. Negotiation		
10. Cognitive Flexibility		

Big data and digital literacy

Another painfully obvious trend is the burgeoning impact of digital technology across many industries, including healthcare and life sciences. With the ability to generate more data than ever before, knowing how to handle and make sense of data to generate valuable insights is a key skill that is in demand across the board. It is no wonder that a 2020 study by LinkedIn Learning listed cloud computing, analytical reasoning, and artificial intelligence (AI) as some of the top ten hard skills that employers are looking for this year; a trend that is likely to continue in the future (Table 2) [2].

Already, pharmaceutical and biotech companies are integrating AI and machine-learning into their drug discovery pipelines, with the market for AI in biopharma projected to increase by 52.9% every year from 2018 to 2025 [6]. This has been driven in part by advances in next-generation sequencing and genomics technologies like single-cell sequencing or spatial transcriptomics, making large-scale sequencing data sets increasingly common in biomedical research. This also means that the ability to analyse and interpret such data sets is becoming increasingly relevant even for those planning to stay in academia [7].

How can I build or demonstrate these skills?

Having a PhD is no longer a golden ticket to a stable, high-paying job [8]. So how can one go about building a CV that will stand out from the rest? Those keen to pursue a career in academia might be better off focusing on the mainstay of academic research: publishing good science and getting grants, as expanded on in Part 2. For the rest, the upside is that there are now

Table 2. List of hard skills employers are looking for in 2020. Digital literacy and data analytics rank high amongst the list of hard skills that employers see as valuable.

Hard skills that employers are looking for in 2020 [2]
1. Blockchain
2. Cloud computing
3. Analytical Reasoning
4. Artificial Intelligence
5. UX Design
6. Business Analysis
7. Affiliate Marketing
8. Sales
9. Scientific Computing
10. Video production

more options than ever open to individuals with life sciences PhDs. However, transitioning to these not-so-alternative career pathways may take a bit of preparation [9]. Thankfully, there are many avenues available to those undertaking their PhD to gain the translatable skills needed to remain competitive in the job market after graduation.

Teaching experience

Most PhD programmes have this already built in, with students required to fulfil a required number of teaching hours to graduate. However, teaching experience can come in other forms as well, such as conducting workshops for fellow researchers, mentoring other students in the lab, or holding summer programmes. If you have a certain skill that might be valuable to other researchers in your field, ask your institute or department if they would consider organising a workshop on it. Most universities also run outreach or volunteering programmes for schools, such as the STIMULUS programme at Cambridge University, which gives STEM students (including graduate students) an opportunity to volunteer as teaching assistants working alongside teachers at local schools.

Having teaching experience on your CV is good for showing that you know how to put together a class and pass on your knowledge, but bear in mind what you want to get out of the experience. If, for instance, you are applying for faculty positions, conducting technical workshops for your peers or undergraduate tutorials might be more relevant to prospective employers than teaching a class of primary school students. Nonetheless, teaching is a great way to demonstrate your mentorship and communication skills, which are valuable in any industry.

Industry internships

Although much more common in undergraduate degree programmes, taking some time out of your PhD to work in industry is possible in certain circumstances, if agreed with your supervisor before starting [10]. Some PhD programmes provide integrated work placements, such as the BBSRC-PIP programme in the UK, which provides an opportunity for PhD students to undertake a work placement unrelated to their field of study. It should be said that such stints in industry during your PhD are not at all necessary for landing a job in a pharmaceutical company after your PhD and might even be more disruptive than useful. In addition, companies like AstraZeneca and Genentech offer (highly competitive) postdoctoral programmes for

those looking to experience working in industry after their degree. However, for those looking to leave the bench entirely, a non-academic internship in the final year of your PhD, if the right opportunity arises, could help you adjust to a different workplace dynamic and bring valuable connections for your next career move [9]. For instance, the Royal Institution sometimes offers 3 month placements for Research Council-funded PhD students in the UK who are interested in science policy.

Awards and competitions

Awards are a great way of demonstrating recognition in your chosen field, but they are also good for showing your potential in other areas as well. As scientists, we are probably most familiar with awards for best poster or best talk at a conference, but there are many other programmes and competitions that give PhD students and early-career researchers the opportunity to demonstrate their aptitude and gain translatable skills in other areas such as journalism or entrepreneurship [11]. Having these awards on your CV demonstrates genuine interest and potential in related career paths, for instance if you intend to transition into roles such as medical communications or business development.

If you enjoy science communication and are based in the UK, there is the Max Perutz Science Writing Award organised by the Medical Research Council in partnership with The Observer, which tasks PhD students with writing a 1100-word essay about why research in their field matters. The British Society for Cell Biology also runs an annual science writing prize open to PhD students and undergraduates to write about key topics in cell biology for a non-specialist audience. Keep a lookout also for ad-hoc or regional science writing competitions such as the recent COVID-19 Creative Communication Competition organised by *The FEBS Journal*, or the Asian Scientist Writing Prize which is held every two years by Asian Scientist Magazine, specifically to highlight research coming from Asia.

For the more business-minded, the Merck Innovation Cup is an international competition that aims to give PhD students an insight into the drug development process from a business perspective. Teams learn about the drug discovery process, then brainstorm and evaluate ideas to build a convincing business plan in a specific area of medicine. Another global competition is the biotechnology Young Entrepreneurs Scheme (YES), where teams are familiarised with the process of technology transfer and what it takes to bring a technology to market. The programme culminates in a pitch competition where teams convince a

panel of academic and financial representatives to invest in their startup idea. Participation in such programmes can help demonstrate skills that might not be so apparent from just a publication record, such as persuasion, stakeholder engagement and business acumen.

Purposeful volunteering

Volunteering is a great way of trying things out, especially for those who are undecided about what they might do after their PhDs. During your PhD there will be many volunteering opportunities, typically to organise science outreach activities or student conferences. A Pint of Science is a good example of a global science festival typically run by PhD students and postdocs. Be careful, however, not to volunteer for things just for the sake of having them on your CV; think about why you are doing it and what you want out of the experience, especially since time is a precious commodity during your PhD. From personal experience and discussion with other early-career researchers, prospective employers rarely ask about voluntary roles unless they are directly relevant to the job you are applying for. In fact, trying to pad out your CV with irrelevant volunteering experience can work against you, as anyone who has looked through enough CVs generally sees through this.

Relevant skills training

Learning new skills to stay up to date with your field is important to boost employability. PhD students not only receive rigorous training at the bench but are also fortunate to have access to a variety of courses organised by their university at their disposal. These may include introductory courses to statistics, programming, scientific writing and presentation skills, as well as more specialised courses on microscopy and image analysis or genomics analysis techniques. Scientific societies such as the Biochemical Society and Federation of European Neuroscience Societies (FENS) also conduct workshops aimed at PhD students or early-career researchers in their field of research. For those seeking a more convenient option, online platforms such as EdX also offer comprehensive scientific courses run by professors from eminent universities such as Harvard and MIT. On this platform, participants may attend ('audit') courses for free or pay a fee to complete an assessment and receive a certification at the end of the course.

It could also be worth looking into relevant courses or accreditation to get an introduction to the field and boost your application. These professional training courses usually cost a fair amount, so most embark on

them only when they are sure of what path they would like to take. For example, the Chartered Financial Analyst (CFA) Program is a professional certification offered internationally by the CFA Institute in the US and is commonly taken by researchers hoping to transition to investment-related roles in venture capital firms. If you have a career path in mind, you might be able to find training courses through the relevant professional organisations, such as the American Medical Writers Association or Regulatory Affairs Professionals Society.

Core competencies

Of course, building a well-rounded CV should not happen at the expense of your research! Even if you envision a future away from the bench, it is still essential to make use of your current position to practice the key skills expected of a scientist (Fig. 1). These include being able to read and understand scientific literature in your field, planning and conducting experiments, as well as writing and presenting your research. These skills may be more translatable than you think. Many researchers who have successfully transitioned to other careers have found that the core scientific skills gained during their PhD continue to help them in their new roles, whether it is interpreting scientific data as a biotechnology startup investor doing due diligence, or understanding the nuances of a platform technology as a legal partner negotiating collaboration agreements.

Presenting your CV

Now that you have gotten all that experience, how should you present it? A well-crafted CV can go a long way in helping your application for a new job, grant or award. Knowing how to present your CV is therefore an important skill, whether you intend to embark on an academic career or not.

What to include in your CV

It is perhaps obvious, but a CV should start off with your personal details and contact information. The basic information required would be your name and email address, and perhaps your current designation and address of your institute. You can include a picture of yourself; however, this is not necessary and is generally actively discouraged to protect applicants from potential discrimination. It is also possible to include links to your LinkedIn profile and other social media handles, but only if they are relevant, as all important information should be in the body of the

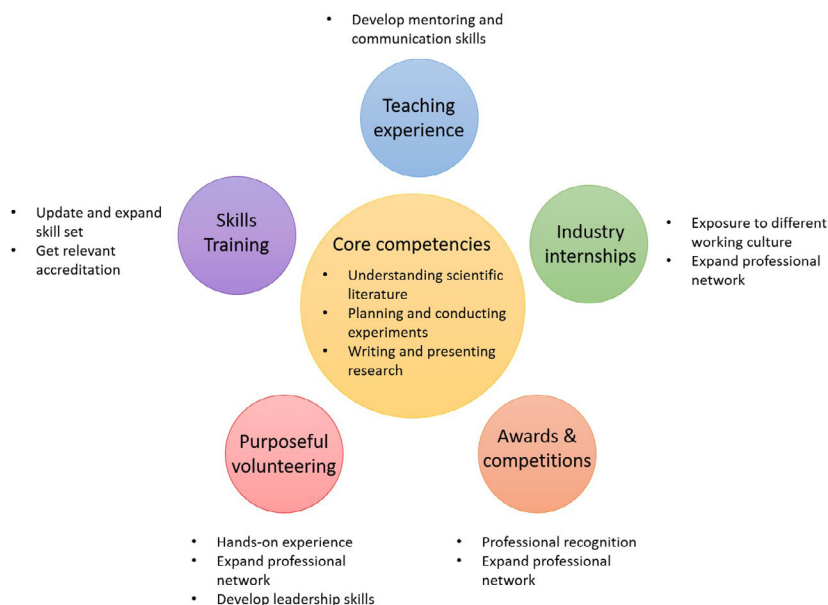


Fig. 1. Building a well-rounded CV. Through their research, PhD students gain a set of core competencies in scientific literacy and experimentation that can be complemented by extra activities such as teaching, undertaking internships, participating in awards and competitions, volunteering, and attending additional skills training.

CV anyway. For instance, links to social media might be useful when applying for science communications roles, as these increasingly require social media know-how.

The rest of the CV should contain all professional accomplishments starting with your undergraduate degree. It should include any additional degrees, employment, professional training, awards, publications, scientific presentations given and teaching experience. Most guides advise listing your experience in each category in reverse chronological order, with the most recent item listed first, so that prospective employers can quickly get a sense of your current position. For publications, only published and accepted manuscripts should be listed. If manuscripts are in preparation or submitted, do not include a journal name. Volunteering experience can be included too if relevant, at the end of the CV. It is also good practice to include up-to-date contact information of three referees at the end of the CV. These are general guidelines for an academic CV. However, different industries might have different requirements. It is therefore advisable to do your research on how CVs are typically structured on your chosen field before applying for non-academic positions, as discussed further below.

Clear, concise, and readable

Although a CV should provide a comprehensive list of professional achievements, it should also be clear, concise, and easy to read. As such, most guides advise against complicated formatting and recommend using

classic fonts and a font size of 11 or 12 (Table 3) [12,13]. Do not try to cram in as much information as possible but focus on providing the most pertinent details. For degrees, this might be the name of the course and school as well as duration and date conferred, whilst for employment this includes your position title, company name and duration spent in the position, with a maximum of two or three keywords to describe the role, if not already apparent from the title. Pay close attention to spelling and consistency, as mistakes can make your CV difficult to read and leave a bad impression of you as a candidate.

Tailoring your application

Although most guides advise CVs to be kept to two pages, academic positions generally allow some flexibility for longer CVs, depending on experience. Career advisors also recommend tailoring your application depending on the institute and job you are applying for. For instance, if applying to a teaching university, it would be best to highlight your previous teaching experience by placing it before the research and publications section, and vice versa for applications to a research institute that does not emphasise teaching.

For non-academic roles, there is an even greater need to structure your CV according to the requirements of the job you are applying for. It is worth noting that there is a subtle difference between CVs and resumes - CVs are an extensive record of your career and academic experience whilst resumes are short one to two page documents meant to present only the most crucial experience or qualifications for

Table 3. A guide to formatting your CV. Your CV should provide a comprehensive list of professional achievements but should also be concise and easy to read. A well-organised CV makes it easier to extract key information and let recruiters know if you are the right person for the job.

Formatting your CV	
Dos	Don'ts
Use a simple and consistent layout	Use complicated or inconsistent formatting
Use classic fonts, size 11–12	Use fonts that are difficult to read or font sizes below 10
List achievements in reverse chronological order	List achievements in chronological order, unless specifically indicated
Provide key details and highlight relevant experience	Exaggerate or lie about your achievements
Tailor your CV for each application	Send in the same CV for multiple applications
Check for spelling mistakes or formatting errors	

the job in question (Table 4). Depending on the job, highlighting relevant experience outside of the laboratory in your CV can help to support your application. Some careers, such as medical communications or science journalism, might also require a portfolio of work, which can be built up during your PhD.

Get personalised feedback

Although there are many excellent guides available on how to organise your CV, personalised feedback and career advice can be useful for PhD students. Make the most of the university's career service and explore what they have to offer in terms of CV workshops, interview skills training and 1-1 career counselling sessions. Some universities even have a list of alumni in various professions who are happy to be contacted by current students wishing to enter their industry. A phone call with one or two established professionals might just provide the invaluable advice needed to jumpstart your job search.

In summary

Doing a PhD is a great opportunity not only to contribute to scientific knowledge but also to develop personally and professionally. For those looking to transition out of academia, there are many resources available to develop complementary skills that will make you valuable and competitive in the workplace after graduation. We hope this article inspires you to

Table 4. The difference between CVs and resumes. CVs and resumes may contain different information and serve different purposes, so it is important to find out which kind of document employers require for any application.

	Differences between a CV and a resume	
	CV	Resume
Purpose	Provides full professional and educational history, along with all professional achievements	Provides recent professional and educational history relevant to the position applied for
Use	Typically required for academic positions, grants, and awards	Typically required for non-academic positions
Length	No page limit, length is dependent on experience	Should not be more than 1–2 pages long
Scope	Includes full education and employment history, publications, awards, teaching experience and other professional achievements	Includes only relevant educational and professional experience, with flexibility to include hobbies or volunteering experience if appropriate
Organisation	Achievements should be listed in reverse chronological order	Some sections may contain unordered lists of relevant skills or experience (for instance, language proficiency)

take charge of your professional development and craft your CV for a better chance of embarking on your dream career!

Part 2

Preparing your CV can be as daunting as writing a thesis chapter. For some, it's their first time applying for a 'real job'. For others, it's the first time they have sat down and really thought about their skills and talents outside the laboratory in detail. As you have probably been told multiple times already in your academic career: the sooner you start, the better.

There are a variety of ways that you can build your CV to make it more appealing to those looking at it, but in principle the most successful CV will have what your potential employer is looking for. So what does that mean for individuals seeking to forge careers in academia?

Potential future PIs look for a range of qualities [13], but these can be roughly summarised in the following list:

- Academic record
- Ability to work in a team
- Leadership roles
- Relevant work experience
- Skills relevant to the position.

When crafting your CV, addressing these points will help make you stand out.

Building your foundations

Keep track of your achievements

The first and potentially most important step is to keep a written record of everything you do that might be ‘CV worthy’. Do not trust that you will remember everything relevant. Many PhD programmes will require that you keep training records and evidence of workshop attendance but if yours doesn’t, this will fall to you. You never know; the afternoon course you took on a whim in your first year might be integral to you getting that job in future.

Build relevant experience

What does it mean to be well-rounded in academia? For most of us, this will come down to our experiences and what we have learned from them.

If you know what you want to do after your PhD, try to make an effort to work towards it now. You can attend seminars that are relevant to the direction you want to take or seek out opportunities to join relevant committees. If you don’t know what you want to do after your PhD, get involved! Find those that are relevant to your current interests and don’t be worried about a lack of experience – everyone has to start somewhere.

Joining a relevant society as a PhD student shows you are engaged with research culture and the wider research community. Societies often have conferences aimed at student researchers. Not only will your likelihood of securing a chance to present be higher at these than at bigger conferences, but it can also be easier to network with your peers, rather than those further along in their careers.

Don’t confine yourself to academic pursuits. Look out for opportunities in your local community where you can develop your skills.

List your skills

If you’re planning to stay in the same academic field, the skills you need will be clear to you. You’ve been training for this. You know your stuff. Not everyone stays in the

same field and how to make yourself seem desirable for a position outside of your area of expertise might not be immediately clear. You can identify the skills you require from the CVs of people with more experience, but remember, you might be able to bring more to the table from your background. Dig deep and consider everything you do as part of your day-to-day PhD work (Table 5). Are you responsible for a piece of equipment? Timetabling, solving problems, contacting support staff and engineers – these are all transferable skills that can be useful in a range of varied jobs. Writing these down can help you recognise when you are using these skills and help you identify new skills that you didn’t even know you had [14,15]!

Talk to people

The best way to figure out what you want or need to do to move forward is to take a break from the bench or the computer and talk to people in an informal setting. We occasionally find ourselves unable to see the big wide world outside the few career paths that are represented in our bubble. The only way to find out what’s required in the role you are aspiring to is to find people who already do that job and ask them. Do not feel shy about introducing yourself to new people by email. Many people are happy to have a quick chat about their work and their background and most importantly, what experience and skills they think would benefit you in the role.

Writing your CV

It’s possible you may never have seen a CV before, let alone an academic CV. Ask post docs or PIs you know if you can see their CV, but don’t be intimidated! Templates can be found online too. You can always change the format later to suit your personal style but having a starting point will help you get the important information down on paper/screen. Decide on a layout before you begin. It can be tweaked later.

There is no hard or fast rule as to what you should include. Templates that outline specific sections should be used as a guideline. Here, I’ve outlined a few sections that will help showcase your talents but make sure your CV reflects what you have achieved. If you don’t find any templates for a section that you feel is important, add it!

Personal Information

As a general rule of thumb, the most important information should always come first, and that’s the

Table 5. Identifying potential transferable skills. We gain transferable skills from many different activities. Look not only at the activities you carry out as part of your PhD but consider other roles you have outside the laboratory.

Activity	Examples of potential transferable skills
Giving a laboratory meeting presentation	Public speaking, organisation, communication, design, thinking on your feet
Writing a report	Writing skills, communication, structuring ideas, setting time frames, meeting deadlines
Coordinating the microscope timetable	Time management, negotiation, conflict resolution, problem solving, equipment management, enforcing regulations
Supervising students	Supporting others, mentoring, explaining concepts, inducting new laboratory members, delegating
Inviting a speaker	Management, interpersonal communication, showing initiative
Collecting laboratory data	Creating spreadsheets, keeping records, critical analysis, coping with stress, tackling a variety of tasks, computer skills, setting goals, forward planning
Captain of quidditch team	Leadership, managing a team, dedication and discipline, performing under pressure
Organise the laboratory Christmas lunch	Managing funds, organisation, accommodation, conflict resolution, meeting deadlines, managing large groups, decision-making

information about you. Provide your name and contact details, but feel free to include your Twitter account if you are active in science communication (and your Twitter account is professional enough to be shared) or your Github if you have coding projects you'd like to show off, particularly if you haven't published any code in peer-reviewed journals. It is becoming increasingly popular to include your Orcid ID (<https://orcid.org/>) and this can be especially useful if you have a common name as it provides a unique number you can link to your publications.

There is debate over what identifying personal information you should include. Do you really need to provide your date of birth to a potential future employer? Some will actively discourage such information, so make sure you read the guidelines of where you are applying.

Statement

Short personal statements are optional, though are common. Such statements give you a chance to highlight your most important skills and talents, drawing the reader to these points early. One ideal use of this

section is to elaborate on your research interests. You can provide an overview of your research experience so far and outline your aspirations, particularly if these fit with the target lab.

However, keep it short and to the point. The best place to elaborate on why you are the perfect fit for the role you're applying for is in your cover letter [16]. Each cover letter should be individually tailored to the application, while the CV can be kept more generic so that you don't need to rewrite the whole document each time.

Education

List your educational achievements in reverse chronological order. Employers are less concerned with your A level results 10 years ago (no matter how well you did!) and more concerned with your PhD subject material and your undergraduate degree. There are, of course, exceptions. For example, if you are branching out to a new field and have some experience at a pre-university level you should attempt to highlight this.

If you are applying to a different country to that in which you completed your education, do make an effort to translate your marks into the local equivalent. A 70% in Britain is worlds apart from a 70% in the United States. Universities will have their own guidance on how to accurately translate or present your marks [17].

Experience

They say there's no substitute for experience, but perhaps they should say there's no substitute for *relevant* experience. Sit down and really think about the job you're interested in, talk to people (see above) and, most importantly, read the job description. Relevant experience can range from research and teaching to administrative experience and project management.

Determine not only what experience you have that is relevant, but what *aspects* of that experience are relevant. If you are applying for a teaching role, for example, include your teaching experience. If you don't have any, determine what experience you have that might give you the transferable skills employers might be looking for in someone working in this role. Have you trained undergraduate students in the lab?

This section is ideal for showing off any opportunities you had to display leadership, this will be easy if you were fully in charge of your own work. If you have not come across such chances yet, don't despair, use this section to demonstrate your ability to work as part of an effective team.

Publications

This section covers many different types of publications; Journal articles, book chapters and patents are among the most common. Try to list your publications in reverse chronological order and highlight your contribution to the project, particularly if you are not the first author. There is debate over whether to include an exhaustive list or highlight some relevant papers but this will mainly depend on career stage and the type of role for which you are applying.

Awards and funding

Grants, big and small, along with travel prizes, extra-curricular funding for science communication and any prizes you have received over your career are relevant in this section. For grants, it helps if you identify your role, such as co-applicant, and if the grant is finished you can mention what publications or positive outputs resulted. Studentships awarded during your undergraduate and your postgraduate degrees can also be included in this section. The amount of the funding isn't always necessary, but it can help contextualise the amount of work required to the reader.

Conferences, seminars and workshops attended

If you have had the opportunity to attend a conference or two during your PhD mention them here. You can link it to your funding section if you were awarded a travel grant. This section is also wonderful for drawing attention to any opportunities you had to present, either orally or through a poster.

Knowledge exchange

Research isn't just about publications and your work likely has an impact outside the lab. If you have had a role in communicating this, here's your chance to mention it. This includes speaking to the public at events, interacting with industry and the communicating the impact of your research on policy changes, whatever they may be. This section can also be used to highlight if you, or your research, have received any media attention.

References

Choosing referees is an easy task for most; Your PhD supervisor, a friendly post-doc in the lab, members of

your thesis committee. The aim is to ask people who know you and can provide an honest summary of your personality and your academic achievements.

However, choosing referees is not an easy task for everyone. You may not have a good relationship with someone who would traditionally act as your referee and be self-conscious about not including them. If you are in this situation, it's reasonable to find a mentor, someone you trust within your field or even the career service staff and discuss the topic with them. You may find that more people than you expect are willing to vouch for you.

The most important, and final point here is: Always. Ask. Permission. No matter who it is, it will not reflect well on you if your referee receives an unexpected phone call!

Final points

Have a 'go-to' CV

You won't always have time to take an hour to tailor your CV. You may meet someone at a conference and want to impress them right then and there. It is useful to have two prototype CVs handy. The first, a 2-page summary which lists your most important achievements. The second, a longer document, including every section you think might ever be relevant and every achievement you can think of (or have recorded, see the earlier section!) This second document will help you pick and choose relevant sections to whip up a reasonably tailored CV in no time at all.

Less can be more

Academic CVs can be long. There is no point providing a blow-by-blow account of life to-date, no matter how proud of your achievements you are. Four to five pages in length is usually acceptable, though some roles will have a specific page limit. If you have so much to write about that your CV seems excessively long; you should be in the privileged position to pick and choose the most relevant information to really wow your potential future employers.

Be realistic about your skills

Reading the CV of more experienced people might stir up feelings of inadequacy but don't let such feelings coax you into exaggerating your role in a grant submission. Employers will be understanding of your career stage.

Don't be modest

Conversely, make sure your CV is an accurate reflection of you and your skills. Don't undersell yourself in an attempt to sound more formal. Make sure you highlight the role you had in achieving grants or writing papers, whilst ensuring that you don't embellish your achievements to seem more experienced.

Proofread. Please

We've all heard the 'excellent attention to detail' joke when it comes to proofreading your CV. A minor spelling mistake or misplaced comma can, unfortunately, colour the reader's opinion and make them think twice. Ask a friend or colleague to look over your writing so they can find any bloopers that your brain is contentedly glossing over.

Read the job description thoroughly, and then read it again

I've mentioned tailoring of CVs throughout this article as it can be the key to a successful job application. Read through the job description and highlight the areas where you think you fit, and more importantly, identify areas you don't think you fit. Once you've done this, you can identify where your own weaknesses are and tackle them head on by providing alternative experiences where you have gained relevant transferable skills. You may not be the perfect candidate, but you can be the next best thing.

In summary

If you find a position you are really enthusiastic about, writing cover notes, researching the laboratory and institute to which you are applying and filling out application forms will take up a huge amount of time. Following these tips in advance of starting job applications will leave you free to concentrate on the details and give you a full template that you can tailor to the role, giving you the best chance, with the least amount of stress.

Good luck!

References

- 1 World Economic Forum (2016) Future of Jobs Report. World Economic Forum, Geneva, Switzerland.

- 2 Pate D (2020) The Top Skills In Demand For 2020—And How to Learn Them. LinkedIn Learning Blog, Sunnyvale, CA.
- 3 Taylor K, Ronte H & Hammet S (2015) Healthcare and Life Sciences Predictions 2020: A Bold Future? Deloitte UK Centre for Health Solutions, London, UK.
- 4 Hodgson J (2019) Biotech's baby boom. *Nat Biotechnol* **37**, 502–512.
- 5 Linden B (2008) Basic blue skies research in the UK: are we losing out? *J Biomed Discov Collab* **3**, 3.
- 6 Steedman M, Taylor K, Properzi F, Ronte H & Haughey J (2019) Intelligent Biopharma: Forging the Links Across the Value Chain. Deloitte University EMEA, Belgium, Brussels.
- 7 Dhillon P & Thornton JM (2020) In conversation with Janet Thornton. *FEBS J* **287**, 4106–4113.
- 8 Weissmann J (2013) The Ph.D Bust: America's Awful Market for Young Scientists—in 7 Charts. The Atlantic, Washington, DC.
- 9 Her S, Jacob MD, Wang S, Xu S & Sealey DCF (2018) Non-academic employability of life science PhDs: the importance of training beyond the bench. *bioRxiv*. <https://doi.org/10.1101/485268>
- 10 Sagers J (2019) Five reasons to do an internship during your PhD programme. *Nature*. <https://doi.org/10.1038/d41586-019-01087-9>
- 11 Leeming J (2017) Science Competitions Earn You Fame, Glory and Transferable Skills Naturejobs Blog, London, UK.
- 12 Webb SA (2006) Tips for a successful CV science. <https://www.sciencemag.org/careers/2006/10/tips-successful-cv>.
- 13 Elsevier Global Communications (2019) Writing an effective academic CV *Elsevier Connect*. <https://www.elsevier.com/connect/writing-an-effective-academic-cv>.
- 14 Ratcliffe (2015) Applying for a postdoc job? Here are 18 tips for a successful application. <https://www.theguardian.com/higher-education-network/2015/feb/01/applying-for-a-postdoc-job-here-are-18-tips-for-a-successful-application>.
- 15 Kuo (2017) Transferring skills beyond the lab. <https://www.sciencemag.org/careers/2017/03/transferring-skills-beyond-lab>.
- 16 Nair (2016) Transferable skills: what are scientists good at (other than science)? <http://blogs.nature.com/nature-jobs/2016/08/29/transferable-skills-what-are-scientists-good-at-other-than-science/>.
- 17 Borchardt (2006) Writing a winning cover letter. <https://www.sciencemag.org/careers/2006/03/writing-winning-cover-letter-2006>.