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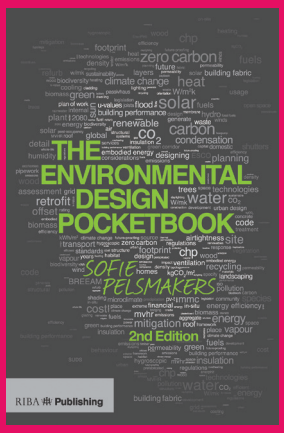

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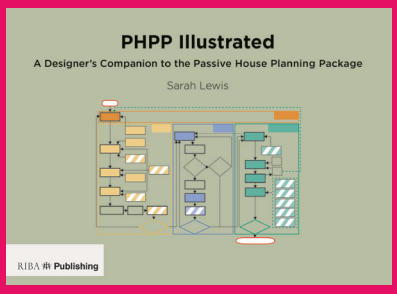

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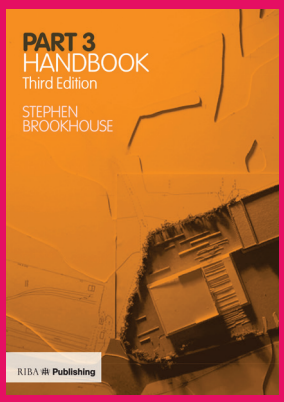

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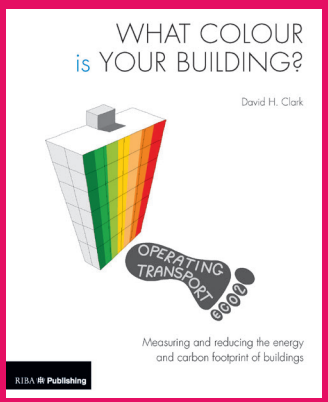

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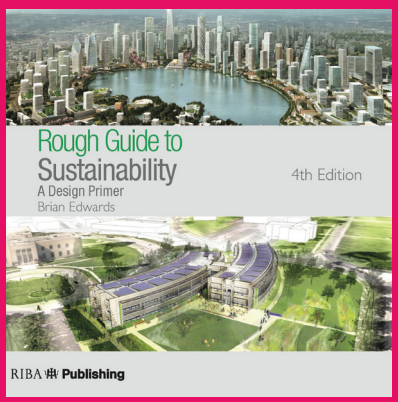

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"During the recession employers spent less on training and employee development and took on temporary staff on a needs basis, resulting in the current dearth of skilled and qualified candidates for positions that are now coming on-stream."

Richard Waterhouse
CEO, NBS and RIBA Enterprises

Introduction

Although the economic recovery in 2014 provided a much welcomed and needed injection of optimism and growth into the construction market, resulting in a six-year high of vacancies for architects, the effects of the recession continue to ripple through the profession and the industry in general.

The reality is that the creation of new positions in our industry in response to growing order books, however welcomed and needed, is only one indicator of the health of the employment and skills market. During the recession, employers spent less on training and employee development and took on temporary staff when necessary, resulting in the current dearth of skilled and qualified candidates for positions that are now coming on-stream. Add to this the pace and volume of changes taking place in working practice involving new technology, procurement and the expansion of international opportunities, and a complex picture emerges.

One of the emerging trends is that architects with the right mix of skills and experience can expect to attract higher salaries, leading in turn to a general inflation in pay and an increased turnover in staff. As we move into 2015, the sluggish employment market of the recession is well on the move.

All of this sounds like good news for recently qualified professionals looking for their first position, provided of course that they are equipped with the skills that employers want in today's market.

It was with these issues in mind that we undertook the research outlined in this report: a follow-up to our Skills Survey Report of 2011 which originally identified differences between employer and student expectations. In June 2014, we initiated fresh research into both architectural practices that are recruiting staff and the process of hiring students and graduates to review the real nature of the skills and job market. In this research, we are seeking a greater understanding of the underlying questions.

From an employer's perspective, we are looking to answer the following questions:

- Which skills are required by architectural practices as the market expands?
- How do employers find the skills they require?
- How do employers perceive the skills gap?
- Which software packages and technical skills are most required?

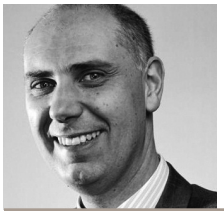
For the student architect and graduate, we are looking to identify:

- Which courses and modules are the most marketable?
- Which soft skills do I require to be successful in today's job market?
- Which specialisms do students today anticipate being their focus?

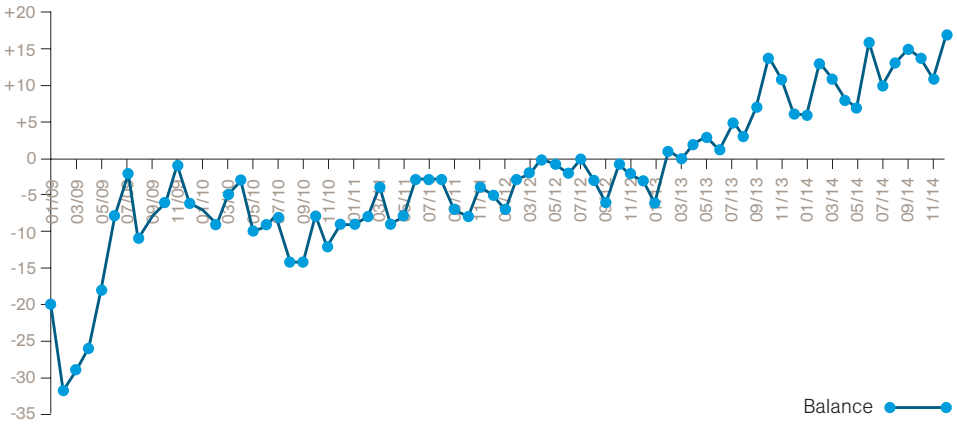
We believe this research provides a valuable insight for the whole industry, and we look forward to tracking more changes in the future. As ever, we are grateful to all 149 employers and 580 architectural students who took the time to complete the survey and thank them for giving up their valuable time. We hope you enjoy reading this report. ●

The importance of practical skills development within the education process

Adrian Dobson
Director of Practice at the
Royal Institute of British Architects



How do you think the number of architectural staff employed in your organisation will change over the next three months? - Permanent Staff



The RIBA Future Trends survey provides a monthly snapshot of workload and employment trends in architectural practice.

Skills are very much in the headlines at the moment. As the economic recovery begins to gather momentum, there is already plenty of anecdotal evidence of an emerging skills shortage in a variety of roles and occupations across the UK construction industry. The RIBA Future Trends survey provides a monthly snapshot of workload and employment trends in architectural practice. In 2014, we saw aggregate turnover increase by approximately 10% and a significant decrease in the spare capacity within firms. For the first time since the financial crash of 2008, we are now beginning to see evidence of practices struggling to find suitable candidates to fill some positions, and this is increasingly a UK-wide phenomenon, not just confined to London and the South East.

With fee margins remaining tight as a result of client financial expectations that have become somewhat entrenched during the long, drawn-out recession, it is perhaps not surprising that the RIBA Appointments Skills Survey found a growing disparity in salary expectations between Part 2 and Part 3 qualified staff and employers.

However, we can expect to see this gap close as the market for architectural services and, in turn, salary levels increase.

Overall this should be a good thing for the industry, as in a now growing economy we are increasingly forced to compete with other sectors for the brightest and best of the next generation of young professionals. It is noteworthy that in this year's RIBA Appointments Skills Survey 65% of respondents already reported difficulty finding candidates with the right skills and experience.

Health and Safety, Design for Accessibility and Sustainability all score quite high in terms of core knowledge expectations of both students and employers, although given the strong regulatory, ethical and government policy drivers around these issues we might perhaps expect them to be given even more prominence by both employers and emerging professionals. They are certainly going to remain important issues for the profession, and subjects that we need to take seriously to maintain the values of professionalism and commitment to our societal obligations.

"For the first time since the financial crash of 2008, we are now beginning to see evidence of practices struggling to find suitable candidates to fill some positions, and this is increasingly a UK-wide phenomenon, not just confined to London and the South East."

"Given increasing study costs, if we are to promote access, inclusivity and diversity in the profession, and ensure an adequate pipeline of new talent, there will need to be more exploration of alternative and flexible study modes and practice-located study periods."

It is difficult to argue with the top five scoring skill and knowledge areas: Building Regulations and Standards, Planning System, Design and Specification, the RIBA Plan of Work, and BIM. The fact that more than half of employers and students see BIM as an essential technical skill illustrates the effectiveness of the UK Government strategy for raising awareness of BIM. (At the same time it is interesting to note that excellent hand drawing skills remain an essential ability in the eyes of many architectural employers). Together these areas represent the core of design delivery in practice, but suggest a focus on process skills perhaps at the expense of some of the essential business, communication and other soft skills which architects also need. In my recent book 21 Things You Won't Learn in Architecture School, I shone a spotlight on this often neglected area of professional development:

Few people commence a career in architecture with the primary aim of achieving rich financial rewards; there are probably better options available if that is your main goal. The more egotistical may be motivated by the desire to leave behind some form of permanent imprint for posterity. Some perhaps fall into it as an acceptable alternative to apparently more mundane, less creative traditional professional occupations. But, it is my belief that most become architects because they have a passion to create a better world for people through contributing to making the best possible built environment in which they live, work and play.

Many who embark upon this journey may become frustrated. They may be lacking in preparation for the business and commercial issues which they encounter; the hard financial realities of architectural practice. They may have not developed the communication skills to be able to persuade the clients, financiers, planners, building control officers, builders, lawyers, journalists, building users and citizenry that they encounter in the course of their work of the value of architecture, and the benefits that their ideas and designs will bring. They may feel overwhelmed by the sheer complexity of factors which conspire to influence the making of buildings and the associated challenges and obstacles that come with them. The emerging architect might also sense that perhaps clients, or moreover the wider public, does not fully connect or understand the importance of what architects do, and thus perhaps begin to feel an absence of the appreciation which all humans of necessity crave.

The high profile achievements of the latest "starchitects" might also feed this need for positive feedback, and maybe even a sense of envy, certainly a desire for success. However, the fundamental driver for most architects is simply to do good work for the benefit of business and society, fairly rewarded, and for this to be recognised in a broad sense. Just as there is nothing wrong with ambition, neither is there with the search for recognition. Both are human characteristics of the most natural kind.

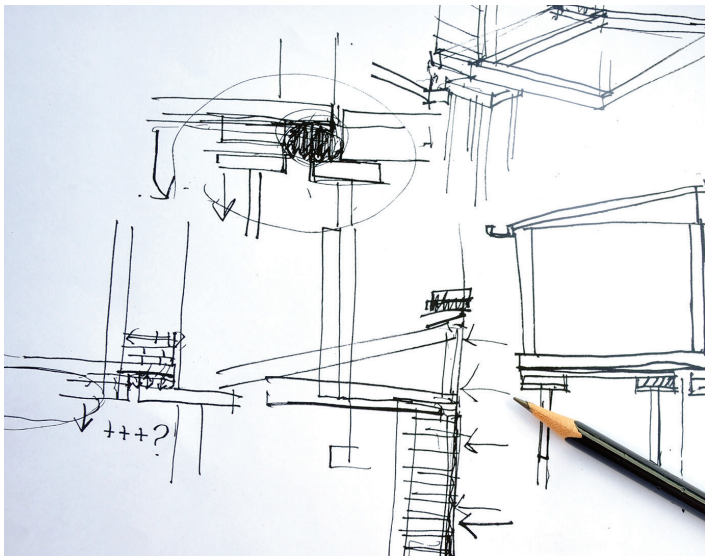
This book therefore focuses on some practical insights into the more general skills which the architect needs, in addition to their design skills and specialist knowledge of building construction, in order to survive and prosper in a highly competitive and testing marketplace. It is an examination of the elements of psychology, sociology, marketing, communications, economics, persuasion and resource management which are relevant to success in architecture, but which do not necessarily explicitly feature in the education and training of the contemporary architect. Our concern will be to check that we are equipped with the softer, more intangible, skills needed to reach our goals in this most demanding field.

Adrian is Director of Practice at the Royal Institute of British Architects.

He is a Chartered Architect with practice experience primarily in the education and community sectors. He has also taught in higher education and carried out research in building information modelling. Adrian has been closely involved in the development of the RIBA Plan of Work 2013, the key building design and process map used throughout the construction industry. He is the author of 21 Things You Won't Learn in Architecture School.

Relevant survey statistics

Worryingly, two thirds of employers often struggle to find someone with the right skills and experience.



Excellent hand drawing skills remain an essential ability in the eyes of many architectural employers.

Seeing things in this broader context of the real world environment in which architects operate, and conscious of the fairly widespread perception of our profession as being relatively weak in management, marketing and finance, it is a little disappointing that in the RIBA Appointments Skills Survey just 5% of students and employers rated a basic understanding of business management as one of the top five knowledge subjects for Part 2 graduates. This probably reflects a belief that these are issues which can be left to subsequent stages of career development, but I would argue that early exploration of these aspects is too important to the development of a successful career in architecture to be deferred to later in the day. Architecture cannot be realised in anything but paper form without a pro-active engagement with the messy and complex business aspects of development and construction; in other words, the industrial context of architecture. There can be no self-denial in this regard. At the end of the day, architecture involves the deployment of money and resources, and we are inevitably in the business of architecture.

There appears to be some consensus that a degree of recalibration of architectural education may be needed, so the current review of architectural education being undertaken by the RIBA is timely. According to the RIBA Appointments Skills Survey, employers and students agree that 'architectural schools put theoretical knowledge above practical ability' but also that 'courses encourage students to work on their own initiative and think for themselves'. Clearly, the critique of inadequate focus on the practicalities of construction and delivery is balanced by recognition of the high level skills of analysis and design development that the academic component of UK architectural education provides. Responsibility for practical skills development cannot all be laid at the door of the academy as practices also have a key role to play. It is widely accepted that younger architects sometimes lack sufficient site experience, but this is often a consequence of the increasing prevalence of design and build procurement, which reduces the opportunities for such exposure to the world of the construction site. Greater integration of the professional studies elements of the curriculum into the earlier stages of academic study might have a useful role to play. Given increasing study costs, if we are to promote access, inclusivity and diversity in the profession, and ensure an adequate pipeline of new talent, there will need to be more exploration of alternative and flexible study modes and practice-located study periods. There is a definite need for practices to get involved in and influence this debate, and contribute to the educational process.

UK architects have an excellent reputation throughout the world and the UK architectural education system attracts students from across the globe. However, in an increasingly internationalised market for both architectural education and architectural services, we cannot afford to rest on our laurels. The changes ahead in the education and training of architects represent a great opportunity for us to build on our excellent heritage and create an attractive, ethical and competitive UK architectural profession. ●

RIBA appointments skills survey report 2014

Jenny Dobson
Market Research Co-ordinator,
RIBA Enterprises

"Both employers and students are critical of architectural courses because they put theoretical knowledge ahead of practical ability and the courses are too expensive."

Introduction

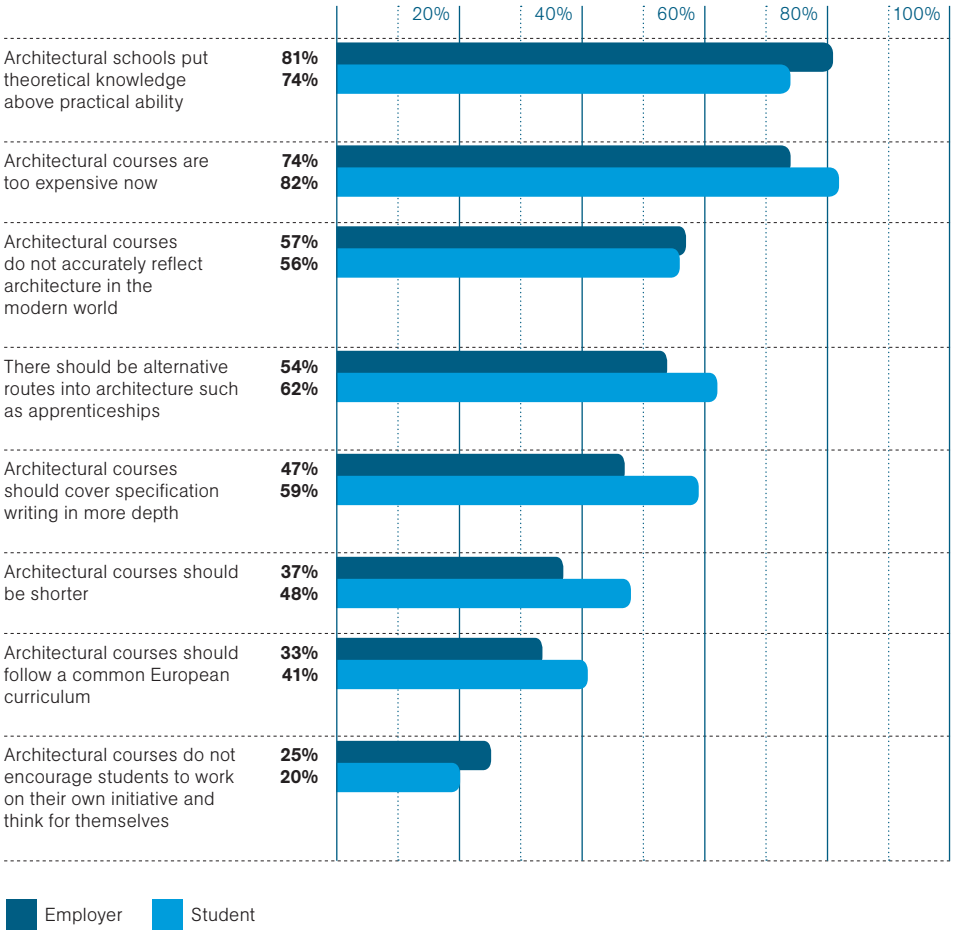
As we move out of recession, it is important that those who are entering the architecture and design professions are equipped with the right skills to help the construction sector grow, both in the UK and through our work overseas. We have seen skills gaps before, particularly in times of economic growth. These gaps may again be growing as the architectural community moves from recession.

In June 2014, RIBA Appointments carried out two complementary surveys. One was sent to employers. It sought to understand the experiences and expectations of those recruiting architectural students and recent graduates. The other survey was sent to architectural students and recent graduates, so we could also understand their experiences and expectations.

The research follows work we did with Newcastle University in 2011 (the 2011 summary report is available online[1]). In that survey, we found differences between employer and student expectations. We also saw shared concerns related to graduates' preparedness for work. Here, we investigate whether those differences can still be found.

The path to qualification as an architect is long; not all who embark on an undergraduate course in architecture become an architect. Different skills and abilities are taught and expected at different levels. Thus we explore how these expectations vary according to the stage of qualification the student is at. Within this report we will, where possible, track changes from 2011.

Percentage of respondents who agree that...



1 http://www.thenbs.com/topics/PracticeManagement/articles/skillsSurvey2011.asp

Relevant survey statistics

The conclusion for many (79% of employers and 77% of students) is that students should spend more time learning in practice.

In total, 149 employers and 580 architectural students or recent graduates responded to the survey. These students were from all stages of their professional qualification.

As ever, we are grateful to all those who took the time to complete the survey and would like to thank them for their time. We hope you enjoy reading this report.

Architectural Schools

First we look at what employers and students (or recent graduates) think about their architectural schools. Opinions remain similar to those held in 2011. Both employers and students are critical of architectural courses because they put theoretical knowledge ahead of practical ability and the courses are too expensive.

The point about cost is not trivial. If architecture is to be diverse, reflective of the community it serves, then the ability to pay (or accrue debts for) high fees over many years should not be a criterion of qualification.

Both employers and students or recent graduates are concerned about students' practical knowledge and skills when they graduate. In fact, most (86% of employers and 82% of students) agree that students/graduates lack the knowledge to build what they design. Eighty per cent of employers and 73% of students also believe that they lack the practical skills needed to practise architecture.

Opinions about transferable skills differ: employers are more likely to agree that students lack the theoretical knowledge and the soft (transferable) skills needed to practise architecture. We'll look at which specific skills employers are looking for later in the report.

"Eighty per cent of employers and 73% of students also believe that they lack the practical skills needed to practise architecture."

The conclusion for many (79% of employers and 77% of students) is that students should spend more time learning in practice:

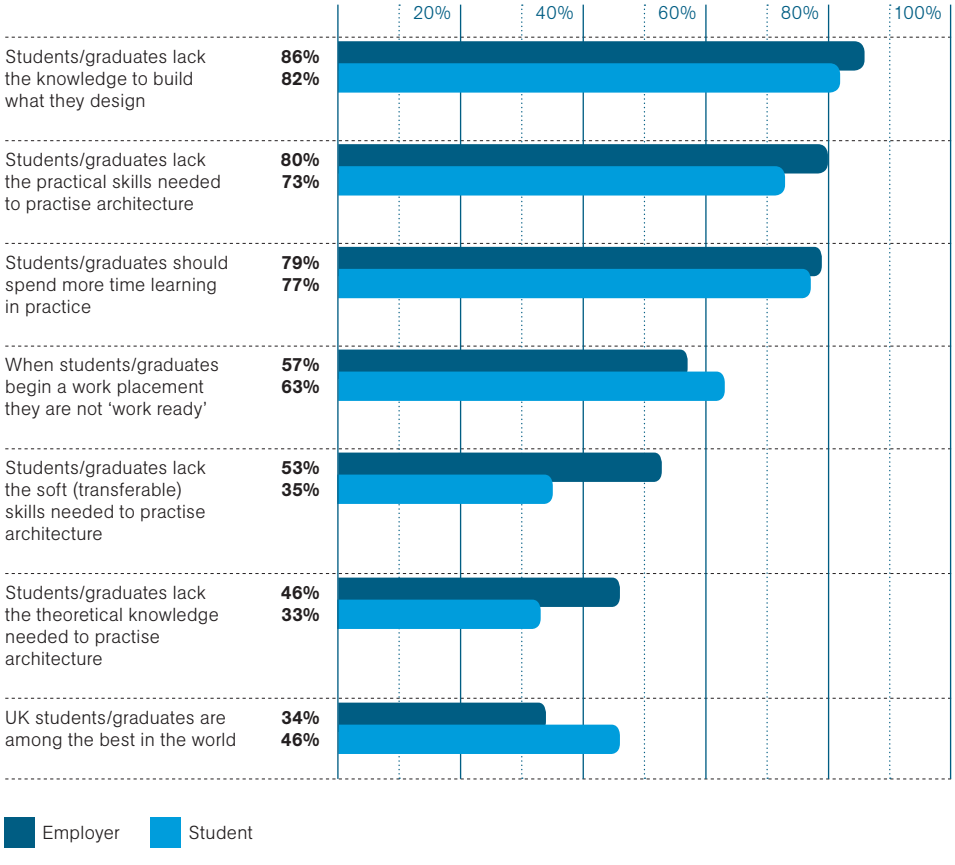
"Teach more about the realities of practice, and less blue sky thinking. We were often told that you'd never be able to build most of what we design in school, so why encourage it?"

"Less emphasis on the theory and concept side of architecture, and more courses to prepare for practical work after graduation - at the end of the day, that is what we are working towards. More practical experience (working during university) combined in the course can also help this."

Jenny is Market Research Co-ordinator at RIBA Enterprises

Jenny has worked within market research for nine years, the last two of which have been within RIBA Enterprises. During her two years' experience of the construction industry, Jenny has been involved in extensive research within the sector including the NBS Specification Survey 2013, the NBS National BIM Survey 2014, and BIM platform usage. She has also carried out a number of research projects for the RIBA and NBS.

Percentage of respondents who agree that...



"We were swamped by CV's from people who did not have the right experience in the hope they would slip through but in fact it became overwhelming and hard to find the few good people as there were too many replies."

Architectural Recruitment

Over three quarters of responding employers have recruited a student or recent graduate in the last 12 months; primarily they have recruited Part 2 Assistants (63%), although nearly half told us that they had recruited Part 1 Placements and 45% recently qualified Part 3 graduates.

When employers are recruiting for architectural placements or graduate roles, and students are searching for these roles, there are multiple approaches that can be, and are, used. The clear favoured approach by both groups is still a direct approach, more so than in 2011. 'Word of mouth' recommendations and the placing of (or responding to) adverts on company websites are also popular.

Networking is important in many professions, and the construction industry is no exception. Students recognise this, and so want appropriate opportunities:

"Introduce me to architects and get to have real discussion with them on the different projects they work on."

This collaboration is something that at least some employers would like to see:

"Collaborative working between University Students and the Architectural Practices during their education."

Throughout our analysis of the survey, we saw the effects of the very difficult economic times the industry has been through. Employers have used all of the recruitment methods less than students. Students have had to take the lead in searching for architectural roles, with some left disappointed at the end of the process:

"With the lack of Part 2 work places and a bad experience as a Part 2 Assistant, I have decided to re-think my career path."

"I'm finding the whole process of qualifying so cumbersome and strenuous on my time that I'm not sure I want to qualify any more. Applying for jobs is hard work and so much is expected because companies don't want to pay to train people."

We see this in the students' rating of the number of available opportunities – only one out of five rated the number of available opportunities as very good or good. Most also rated the quality of information about those roles as neither good nor poor (44%), indicating that detail is often lacking from job descriptions, as is the focus of the role and salary information:

"Advertise jobs with increased detail, such as explaining how a role may be more graphical based or more technical based"

"State all job facts, i.e. role and/or salary are often not clear or missing."

There are, however, concerns for employers too. Worryingly, two thirds of employers often struggle to find someone with the right skills and experience. We'll look at which skills employers are looking for later, but what else may be causing this trend? Positively, for many, it is not because not enough students complete their Part 3. In fact, nearly all the students we spoke to (98%) intend to take this part of their qualification, so it looks like there's not going to be a shortage of Part 3-qualified architects any time soon.

Whilst more than half (53%) rate the number of applications as good or very good, they are less positive about the quality of the applications or CVs and the candidates themselves (41% and 46% respectively rate them as good or very good).

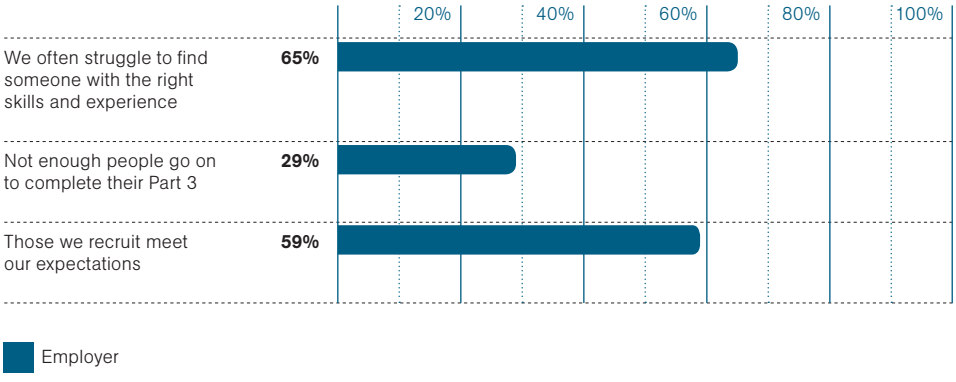
"Course should include skills in CV preparation, letter writing, interview preparation and interview skills."

"We were swamped by CV's from people who did not have the right experience in the hope they would slip through but in fact it became overwhelming and hard to find the few good people as there were too many replies."

Clearly, there's a role here for specialist recruitment agencies.

Despite the concern about finding people with the right skills, 59% of employers agree that those they do recruit meet their expectations.

Thinking about your previous experience of recruiting, how strongly do you agree or disagree with the following statements?



Remuneration

In 2011, we found that Part 1 students' salary expectations exceeded, by around £4,000, what employers would pay. We wanted to understand how this gap had changed and explore whether the same could be said of Part 2 students and recently qualified Part 3 graduates.

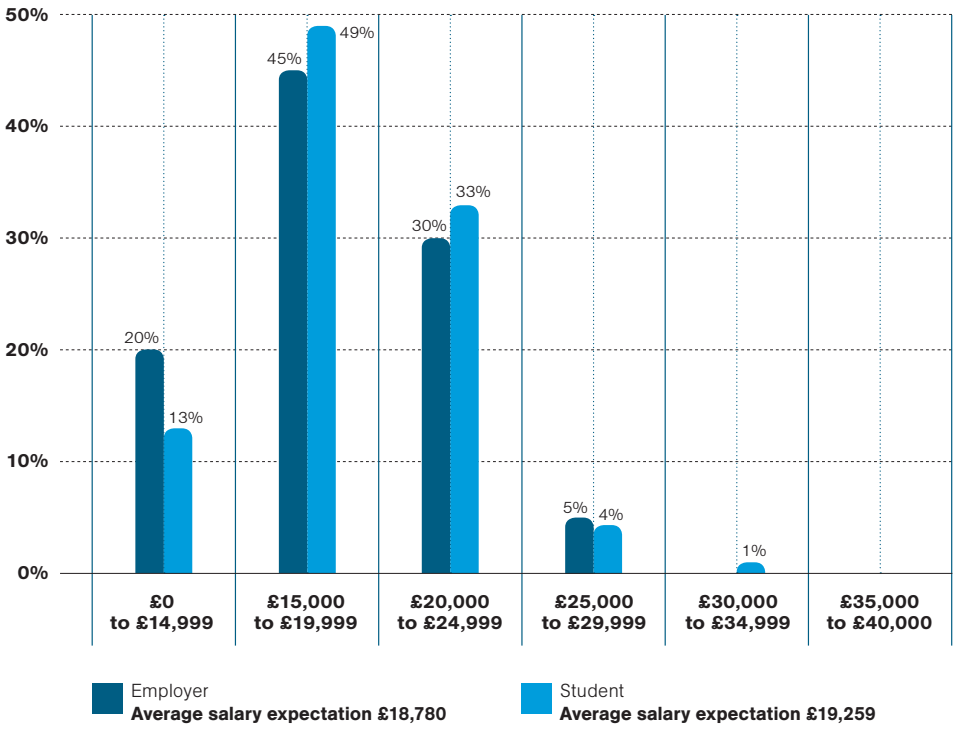
This year's results demonstrate that students' salary expectations continue to exceed those of employers, with the difference increasing as the student progresses through their qualification. However, the gap between Part 1 student expectations and what employers report they would pay has narrowed due to both sides revising their expectations. This gap now stands at around £500.

Bigger differences can be seen in the salary expectations of both Part 2 students and recently qualified Part 3 graduates. Expected remunerations for a Part 2 student exceed those which employers report they would pay by around £2,300.

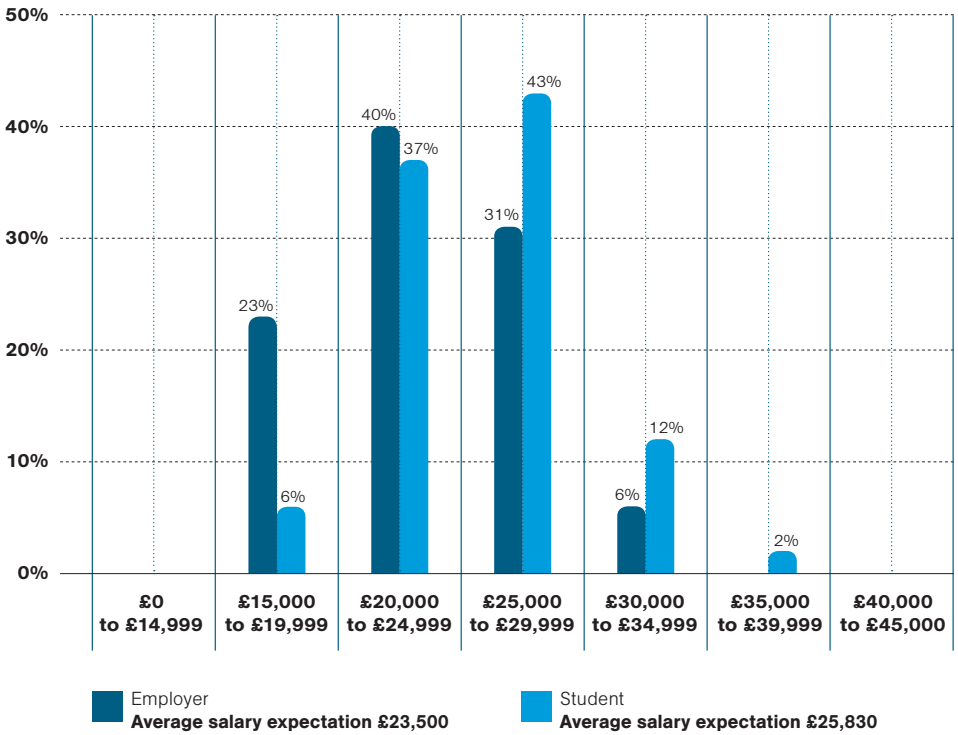
Whilst at Part 3, employers reported they would pay around £3,700 less than students or graduates expect.

By taking the average salaries set out in the RIBA salary guide[2] (based on the RIBA Business Benchmarking Survey 2013/14), and comparing these with students' expectations, we might say that students are not being unrealistic, but perhaps a little premature. Salaries at any level tend to increase with experience.

Salary expectations of a Part 1 Placement student



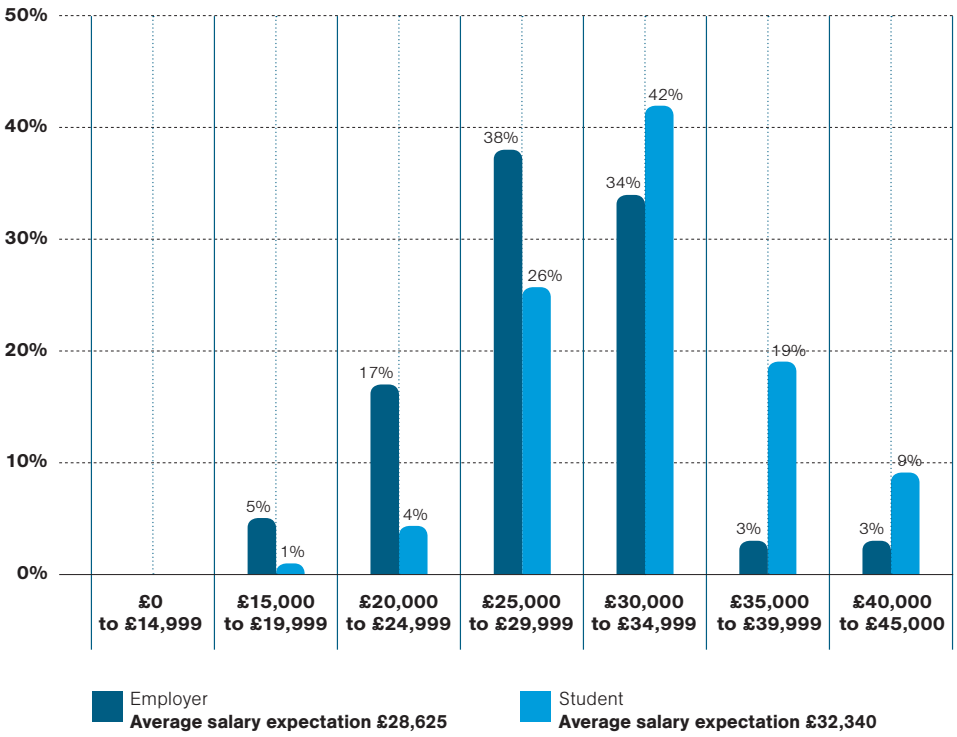
Salary expectations of a Part 2 Assistant



2 http://www.ribaappointments.com/Salary-Guide.aspx

"The difficult economic circumstances of recent years have resulted in many firms within the built environment sector needing to cut costs and often compete on price."

Salary expectations of a recently qualified Part 3 graduate



Comments by students suggest that salary is a particular concern for them, with many feeling they are underpaid for the tasks that they perform:

"Employers need to compete with graduate schemes offered in other industries otherwise we risk de-valuing our industry in terms of pay and quality of working conditions."

"I am a female student that works 4 days a week and am working many hours of unpaid overtime... I have completed Part 1 and I am in the final year for my Part 2 and still I would earn more working anywhere else and for less hours then I am doing now. More needs to be done to make sure newly qualified students are not taken advantage of."

There is no easy answer to the situation. The difficult economic circumstances of recent years have resulted in many firms within the built environment sector needing to cut costs and often compete on price.

A key benefit at all stages, for both employers and students, is personal and professional development (84% of employers and 85% of students see this as a core benefit for Part 1 students, with this rising to around 92% for recently qualified Part 3 graduates). As in 2011, employers also see paid sick leave and annual leave as benefits at all levels; however, students now also view these as benefits rather than entitlements. There is an expectation among both groups, but especially amongst students, that their annual leave entitlement should increase as they progress through their qualification, with 84% of students expecting to receive more than 20 days' annual leave as a recently qualified Part 3 graduate.

Career progression is associated with personal and professional development. The value and expectation of this benefit increases for both students and employers as students progress through their qualification. Students are also more likely to feel they will receive additional benefits such as an annual bonus (80%) and pension scheme (89%) once they reach Part 3. Access to an occupational pension scheme is something that is likely to increase as part of the UK Government's requirement for employers to automatically enrol workers in a workplace pension scheme.

Core Skills and Knowledge Expectations:

We asked employers and students to indicate which five knowledge topics, technical skills and transferable (or 'soft' skills) are most important to employers, and to indicate the level they expect students to be at in each of those topics or skills. We then asked them to rate their own skills (in the case of students) or their experience of students' skills in these areas (in the case of employers).

Key Areas of Knowledge

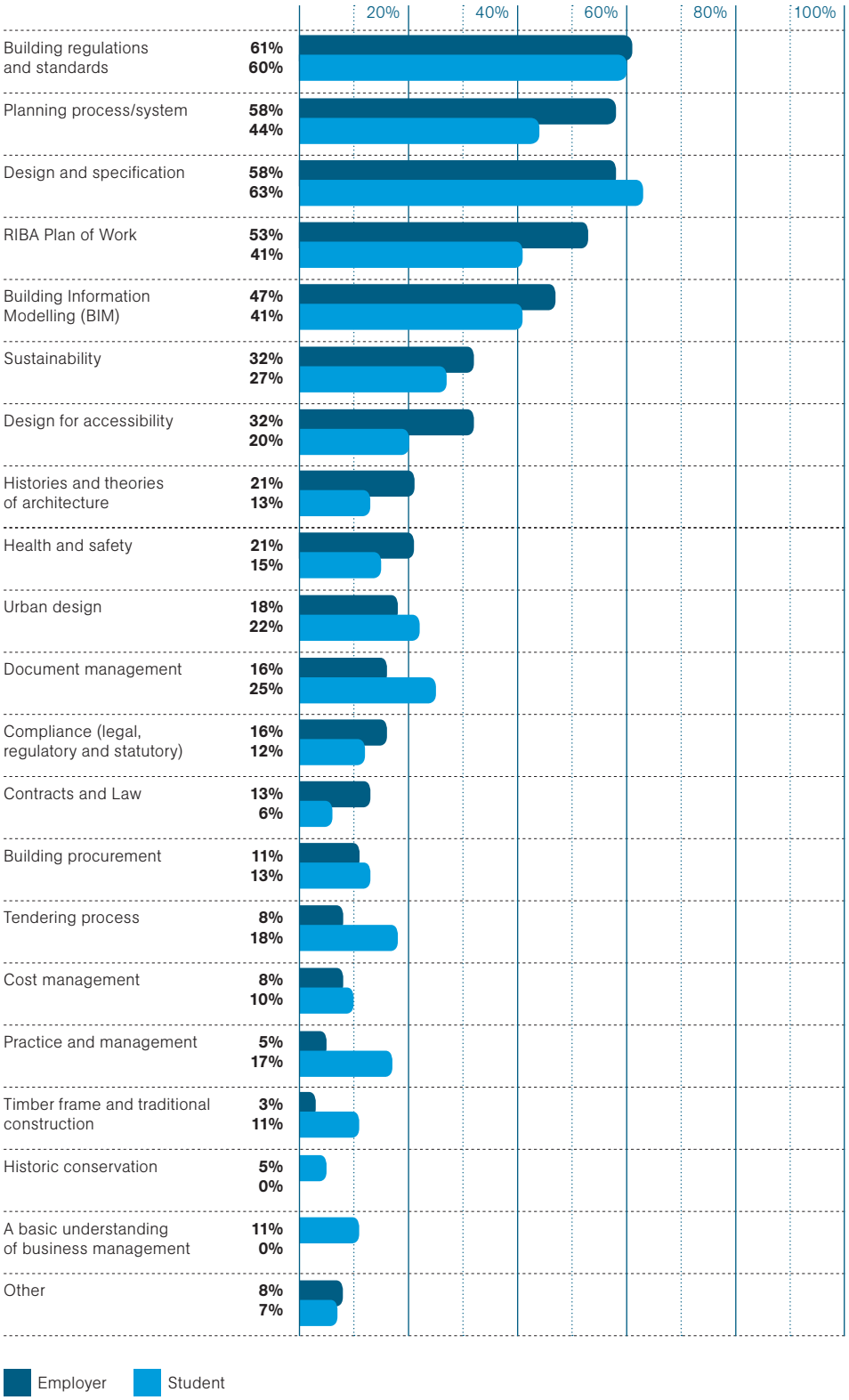
Overall, both employers and students pointed to the same five key knowledge areas:

- Building regulations and standards
- Design and specification
- The planning process
- Building Information Modelling (BIM)
- The RIBA Plan of Work

Employers' expectations of a Part 1 Placement student and a Part 2 Assistant are largely similar. In both cases, they feel that students do not have enough knowledge of the planning process. For example, one employer commented:

"[Universities should] prepare them better for 'the real world' in practice – be more aware of the client's budget and planning policy implications on projects."

Knowledge expectations of a Part 1 Placement student



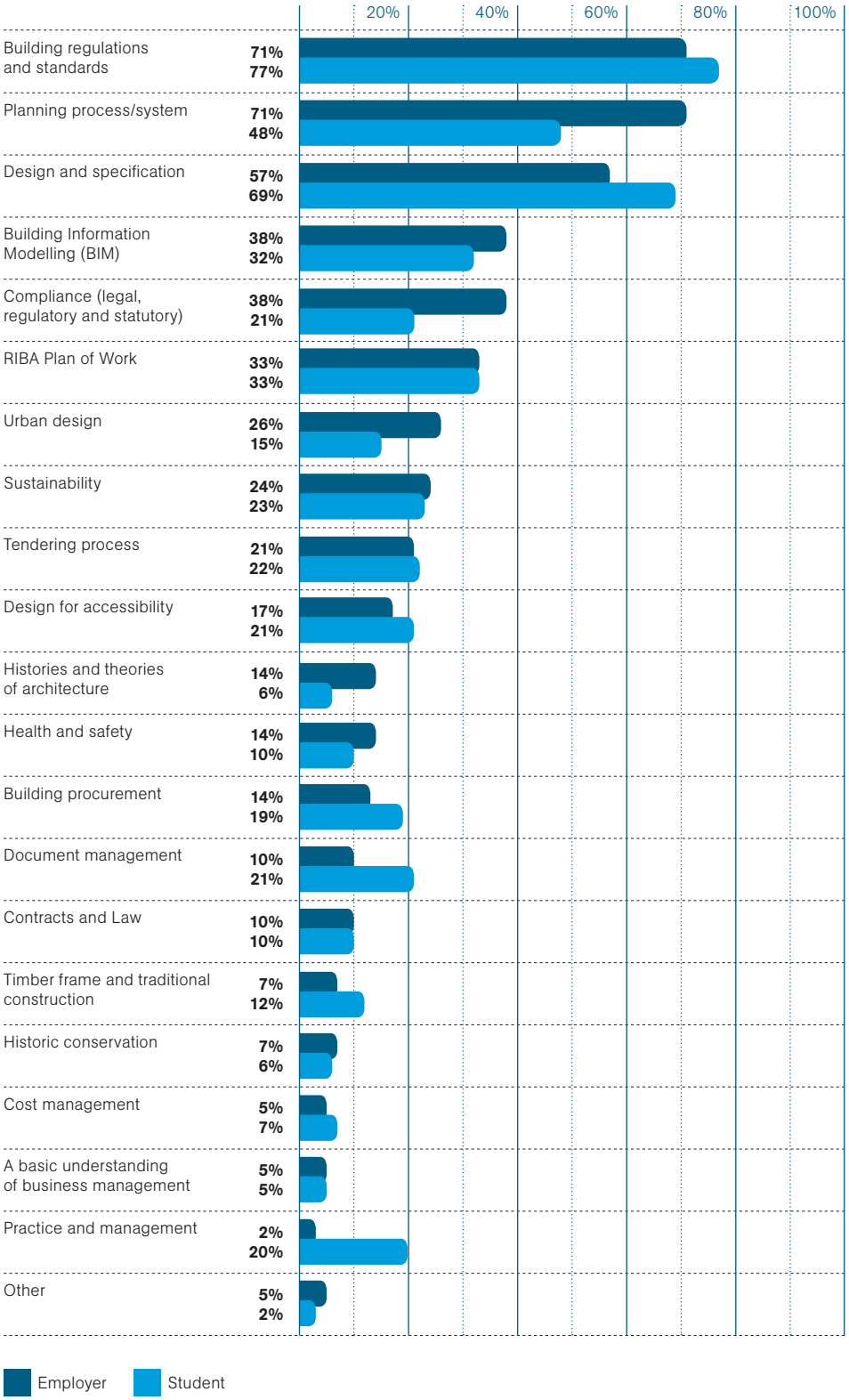
"Students consistently rate their actual knowledge higher than employers' experience, especially for building regulations and standards and the planning process."

For employers, knowledge of the planning process becomes less of a priority for recently qualified Part 3 graduates, presumably because they expect students to have developed a good grasp of the subject through their Part 1 and Part 2 stages. Rather, their focus now turns to legal and regulatory issues, with compliance and contracts and law now appearing in their top five knowledge areas.

We also looked at the depth of knowledge employers were looking for. The picture for both employers and students is simple: as a student progresses through their qualification path, their knowledge should deepen.

That said, when we compare employers' assessments of students with those of students themselves, there are some key differences. Students consistently rate their actual knowledge higher than employers' experience, especially for building regulations and standards and the planning process.

Knowledge expectations of a Part 2 Assistant

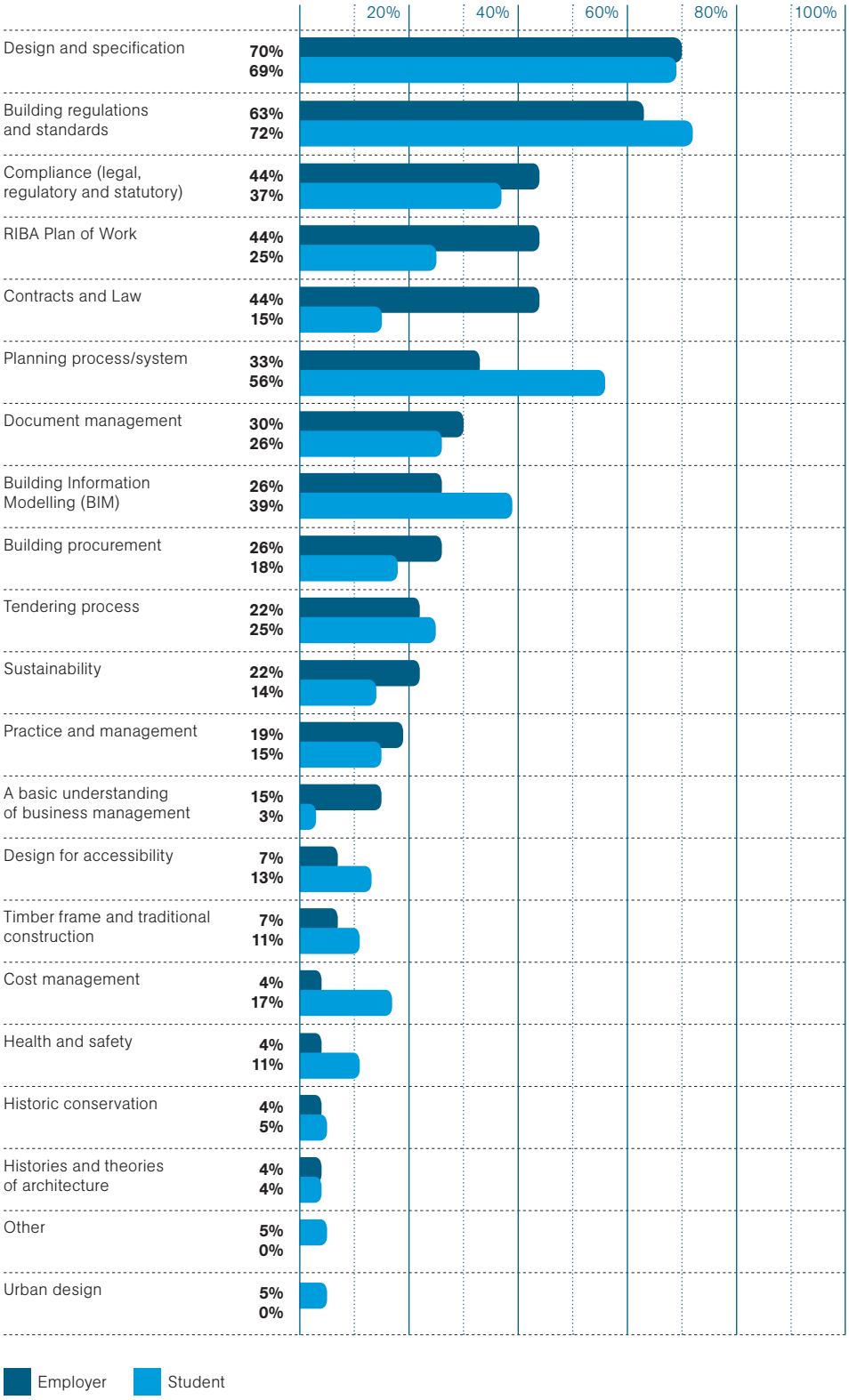


"Across all stages, there is a need to develop knowledge in building regulations and standards and the planning process."

The difference between employers' expectations and their actual experience helps us identify potential areas for development. Across all stages, there is a need to develop knowledge in building regulations and standards and the planning process. Part 1 students also need to concentrate on developing their knowledge of the RIBA Plan of Work – perhaps as a result of the new version released in May 2013. Part 2 students need to look to improve their depth of knowledge in BIM; and recently qualified Part 3 graduates need to focus on their design and specification skills.

We previously raised concerns about graduates' knowledge of specification writing in the NBS Specification Survey 2013[3]; we will now look at this, and the importance of other technical skills.

Knowledge expectations of a recently qualified Part 3 graduate



3 http://www.thenbs.com/pdfs/SpecSurvey2013.pdf

Technical Skills

Overall, both employers and students or recent graduates recognise the importance of technical skills in 2D and 3D CAD as well as in BIM. The biggest difference in expectation is in hand drawing.

"Ban CAD for a term and make students draw/sketch. This skill is now almost gone."

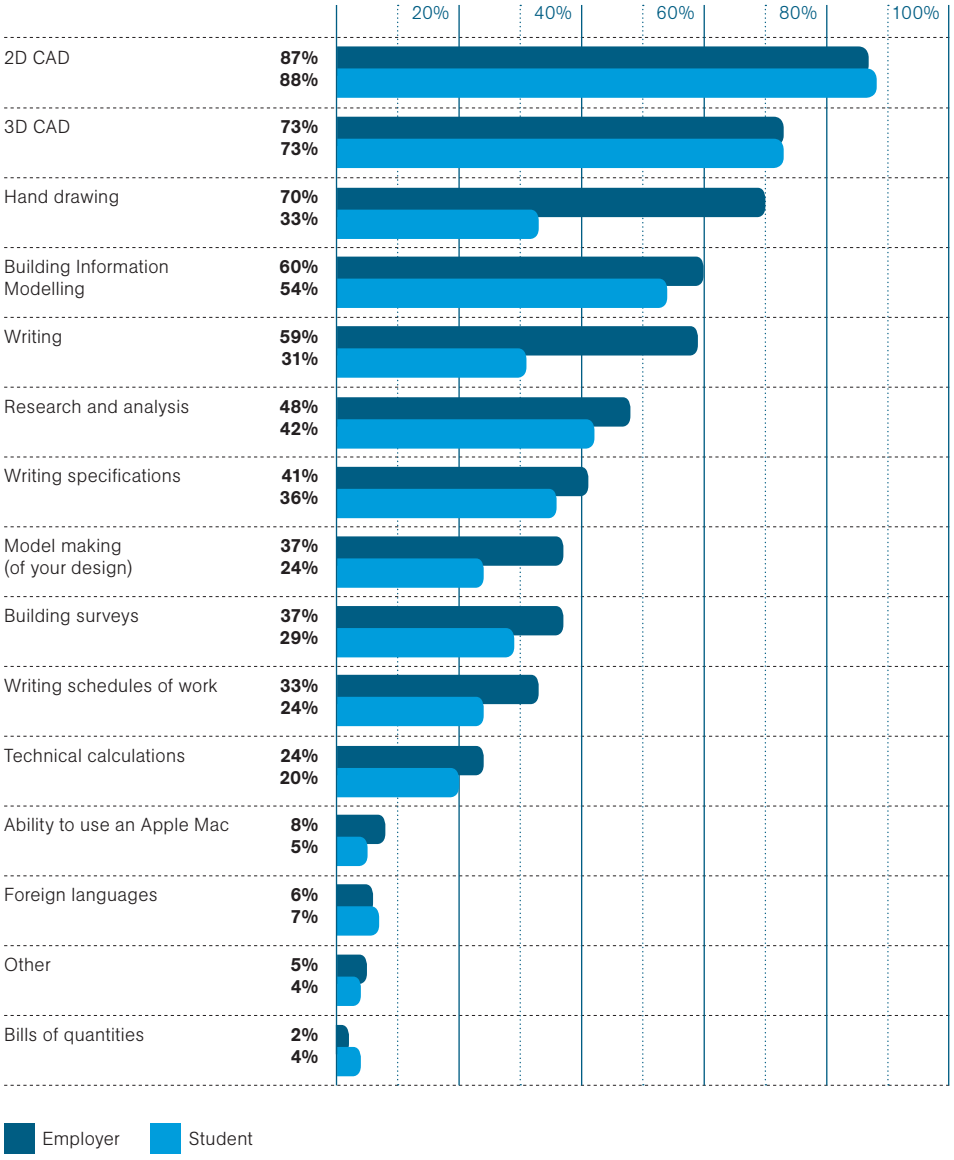
Hand drawing is a skill that employers particularly look for amongst Part 1 Placement students and Part 2 Assistants, but it's a skill that only around a third of students acknowledge as important. Around half of employers (or more, depending on the level) expect students' ability at hand drawing to be advanced.

What we may be seeing is a tipping point in design practice. Many young professionals, alive to the possibilities offered in digital design, now see hand drawing as an old, superseded technology. In contrast, many employers are alive to the importance not only of hand drawing per se, but to the part that it plays in architecture as an art. They view it as being an ongoing development of, and conversation with, an historical tradition.

Students' perceptions of the importance of being able to write both specifications and schedules of work increase as they progress through their courses. As we saw in the NBS Specification Survey 2013, this is a topic that some students feel they are not sufficiently taught about. The importance of this skill increases as concerns about their education in it rise.

Again, the level these skills are expected to be at increases at each qualification stage, so that by Part 3 the technical skills are expected to be at least intermediate, with more than half of employers expecting the more important skills to be advanced. Generally, the largest discrepancies in rating students' skills occur amongst the rating of Part 2 Assistants: at this level, students rate most of their technical skills higher than employers do.

Employer and student expectations of technical skills (at all levels)



The importance of most of these technical skills is increasing, compared with 2011. For both employers and students, skills in writing (in general, and writing specifications and schedules of work), building surveys and technical calculations are all becoming more important.

By the time a student graduates, employers are likely to rate their BIM skills higher than the students themselves (77% of employers rate these skills as satisfactory or good, compared to 51% of students). As BIM becomes an increasingly important part of the design process, the skills students are acquiring in the subject are perhaps those that employers cannot easily source elsewhere.

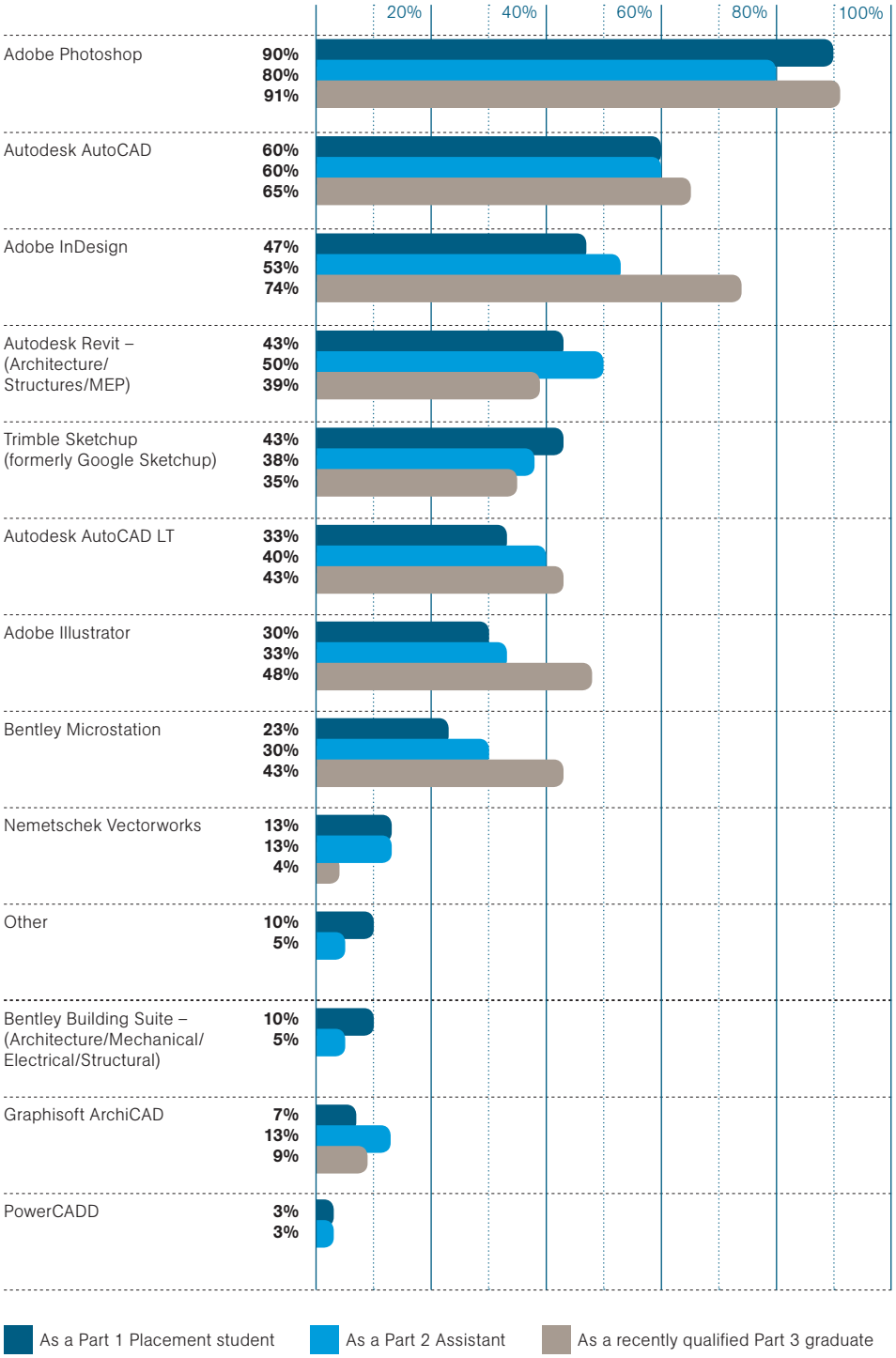
Software Packages Used

Given the importance both employers and students place on 2D and 3D CAD, we wanted to explore which software packages students are expected to be able to use for drawing. In both cases, ability in using Adobe products such as Adobe Photoshop and Adobe InDesign are clearly important, although students' use of these exceeds employers' expectations.

Employers' expectations relating to the use of more tailored 2D and 3D CAD tools such as Autodesk AutoCAD and Autodesk Revit vary. They tend to expect highest familiarity with Autodesk AutoCAD, whilst expectations relating to the use of Bentley and Nemetscheck products are low. Having said that, employers' expectations of students' abilities to use Bentley Microstation increase as they progress through their qualifications.

"Adobe products such as Adobe Photoshop and Adobe InDesign are clearly important, although students' use of these exceeds employers' expectations."

Employer expectations of software packages the recruit should be able to use to draw

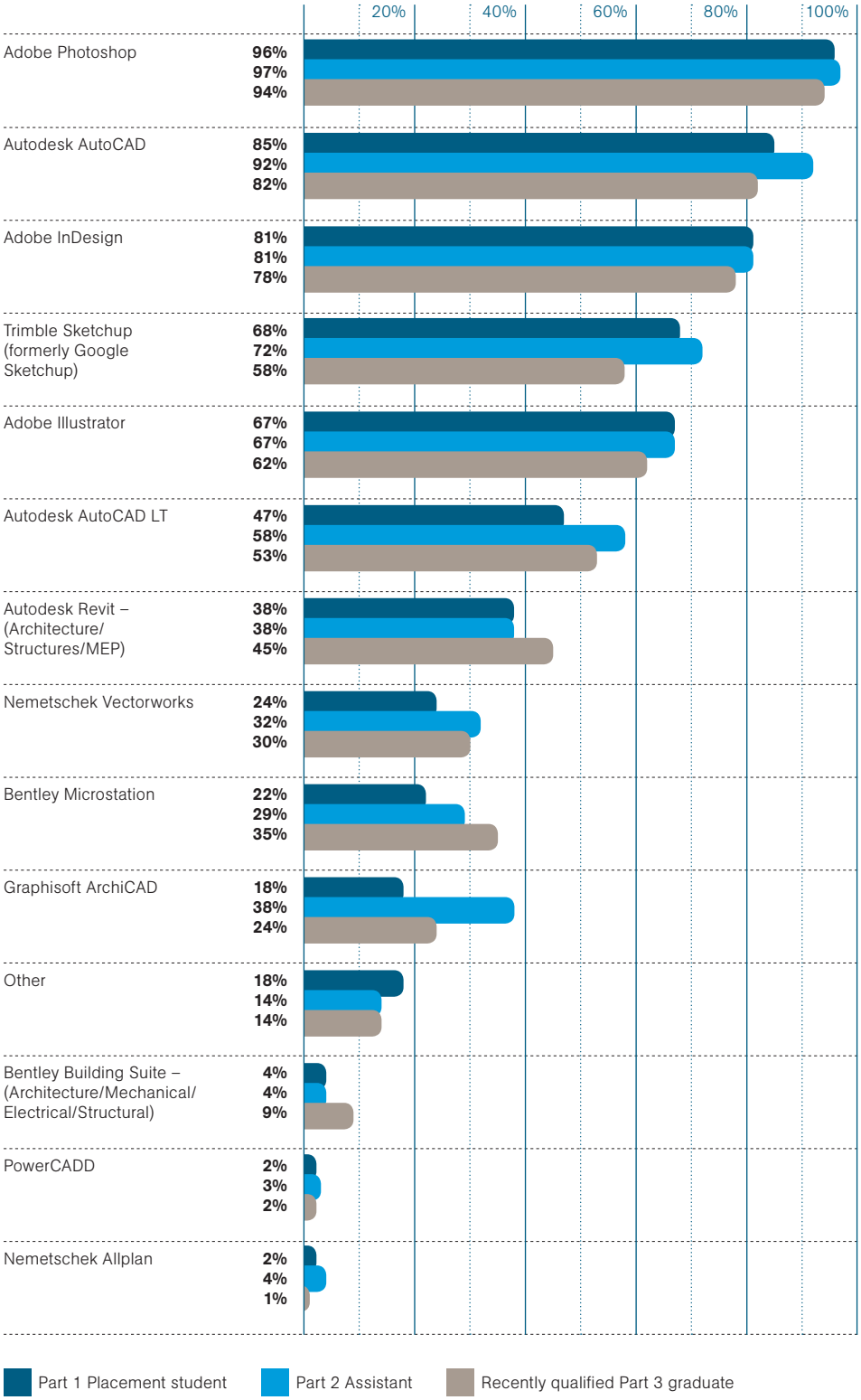


Nearly all students report having used Autodesk AutoCAD to produce drawings, whilst two thirds report having used Trimble Sketchup, perhaps because of its ability to provide rapid visualisations of concept design. Students' use of Bentley Microstation mirrors employers' expectations of their ability to use it, with recently qualified Part 3 graduates more likely to report that they have used the programme.

Overall, compared with 2011, both employers and students are more likely to believe that skills in Bentley Microstation, Autodesk Revit, Adobe Illustrator and Adobe InDesign are needed. However, they feel that employers are less likely to value skills in Trimble Sketchup, perhaps because it is of less use at the detailed design stage.

"Employers and students are more likely to believe that skills in Bentley Microstation, Autodesk Revit, Adobe Illustrator and Adobe InDesign are needed."

Software packages students or recent graduates have used when producing drawings

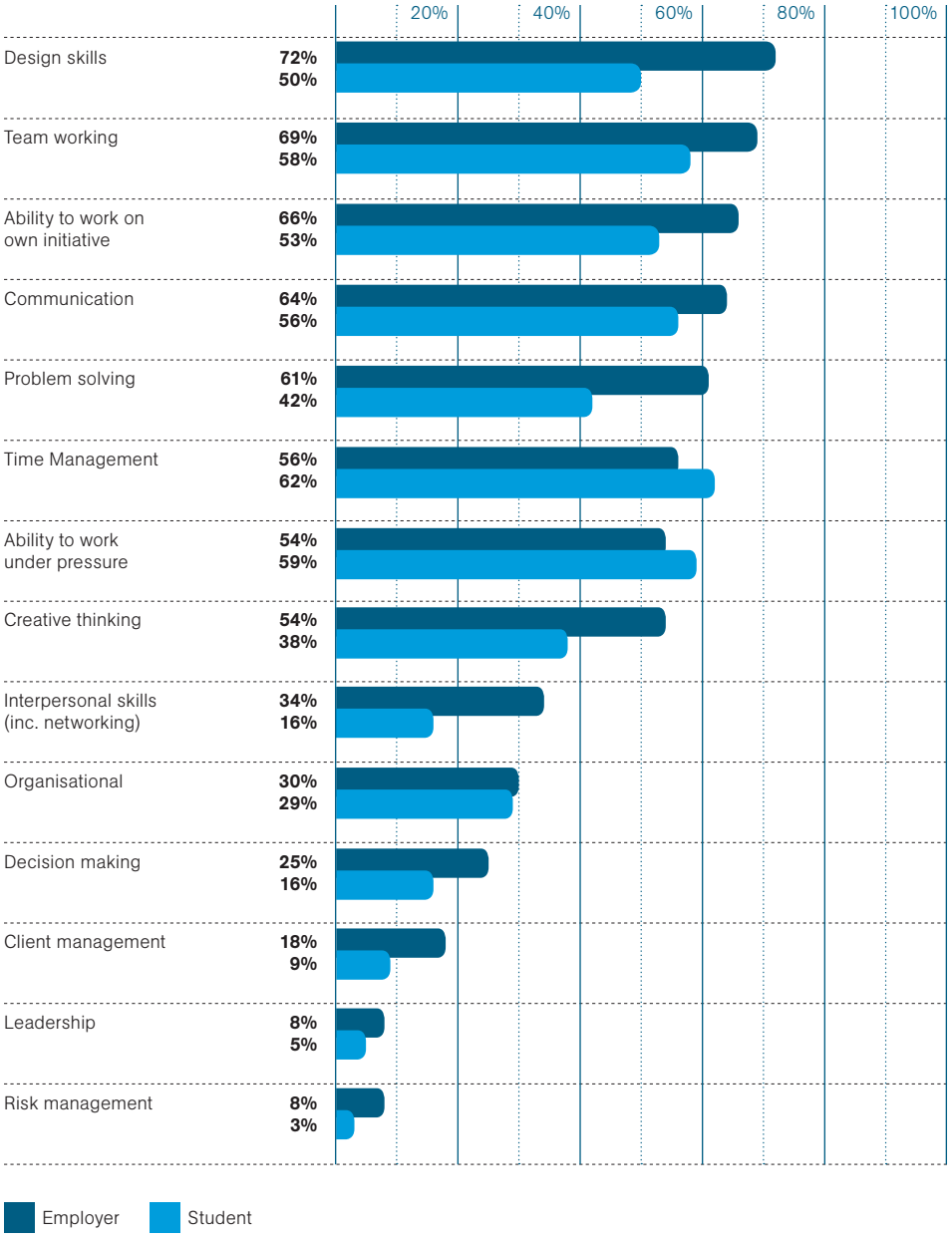


Transferable (or 'Soft') Skills

Both employers and students see the importance of team working, communication skills, and the ability to work on one's own initiative. Surprisingly, perceptions of the importance of design skills varied widely, with employers putting a much greater emphasis on these skills. Employers also place a higher emphasis on problem-solving skills, whilst students do not consider this to be as important until they have completed their Part 3.

Students see time management and the ability to work under pressure as key transferable skills. Whilst these skills are naturally important to employers, the emphasis they place on them decreases as students progress through their qualifications. For example, whilst 67% of students identified time management as a key skill for a Part 2 Assistant, only 41% of employers agreed with them. By this stage, employers expect these skills to exist, rather than considering them a priority.

Percentage of respondents who expect a student or recent graduate to have the following transferable skills (at all levels)



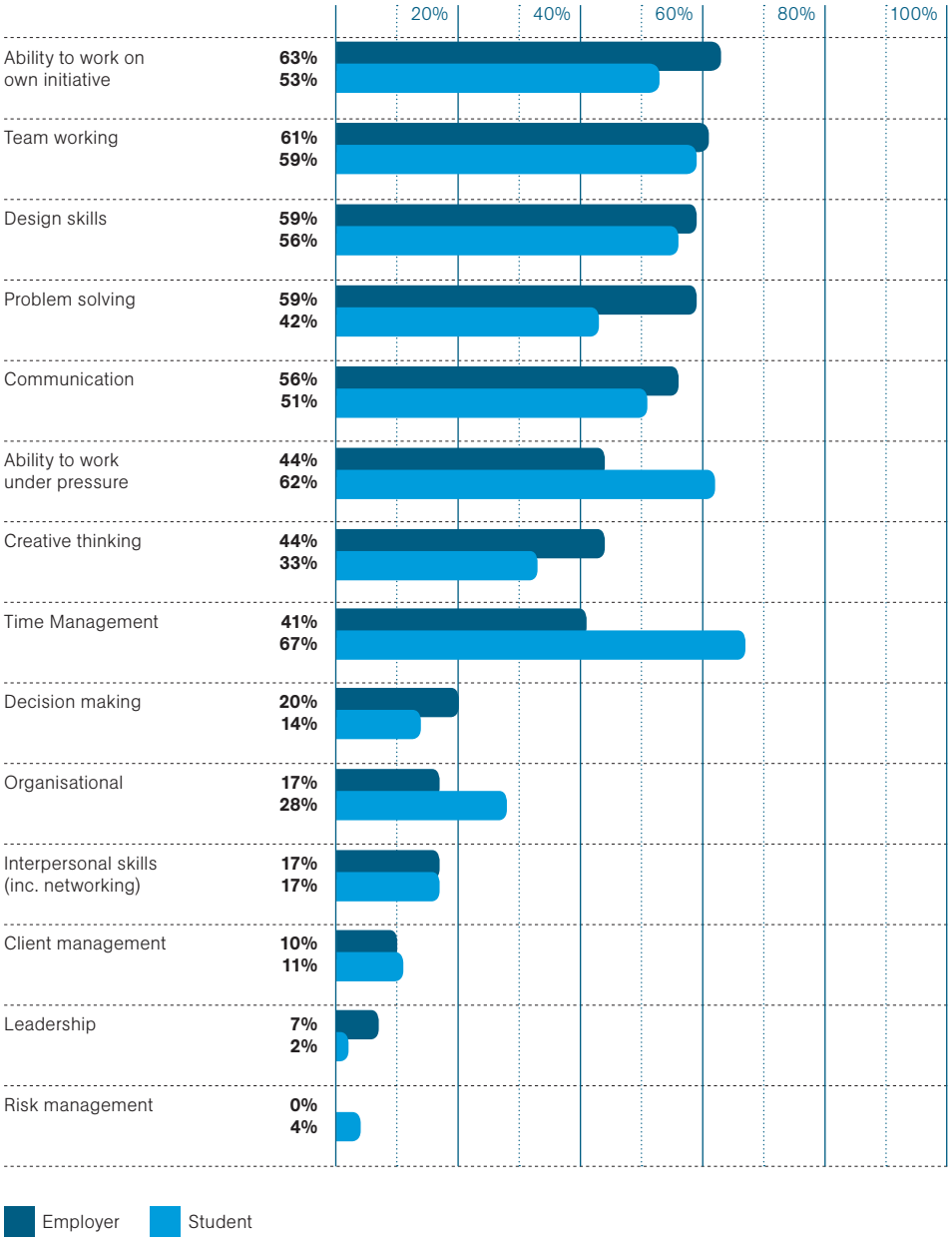
"Whilst 67% of students identified time management as a key skill for a Part 2 Assistant, only 41% of employers agreed with them."

Both employers and students have high expectations of all of these skills, with a majority expecting at least intermediate skills from Part 1 students. When we turn to client management and leadership, we find lower expectations: employers only expect Part 1 Placement students to be at beginner level in terms of client management, and none of them listed leadership as important at this stage.

By the time a student becomes a qualified Part 3 graduate, most employers rate all of their transferable skills as satisfactory. However, half rate a Part 1 Placement student's organisational skills as poor and a third are negative about both their time management and ability to work on their own initiative; only a very small minority class these skills as good (13%, 6% and 6% respectively). Students are generally more positive about their own transferable skills, with many rating these as good.

It is clear from the results that students need to focus on their ability to work on their own initiative. Part 1 and 2 students should develop their time management skills more. Though employers generally found students' design skills to be satisfactory, the importance of these should not be forgotten.

Percentage of respondents who expect a Part 2 Assistant to have the following transferable skills



"It is clear from the results that students need to focus on their ability to work on their own initiative. Part 1 and 2 students should develop their time management skills more."

Personal Attributes

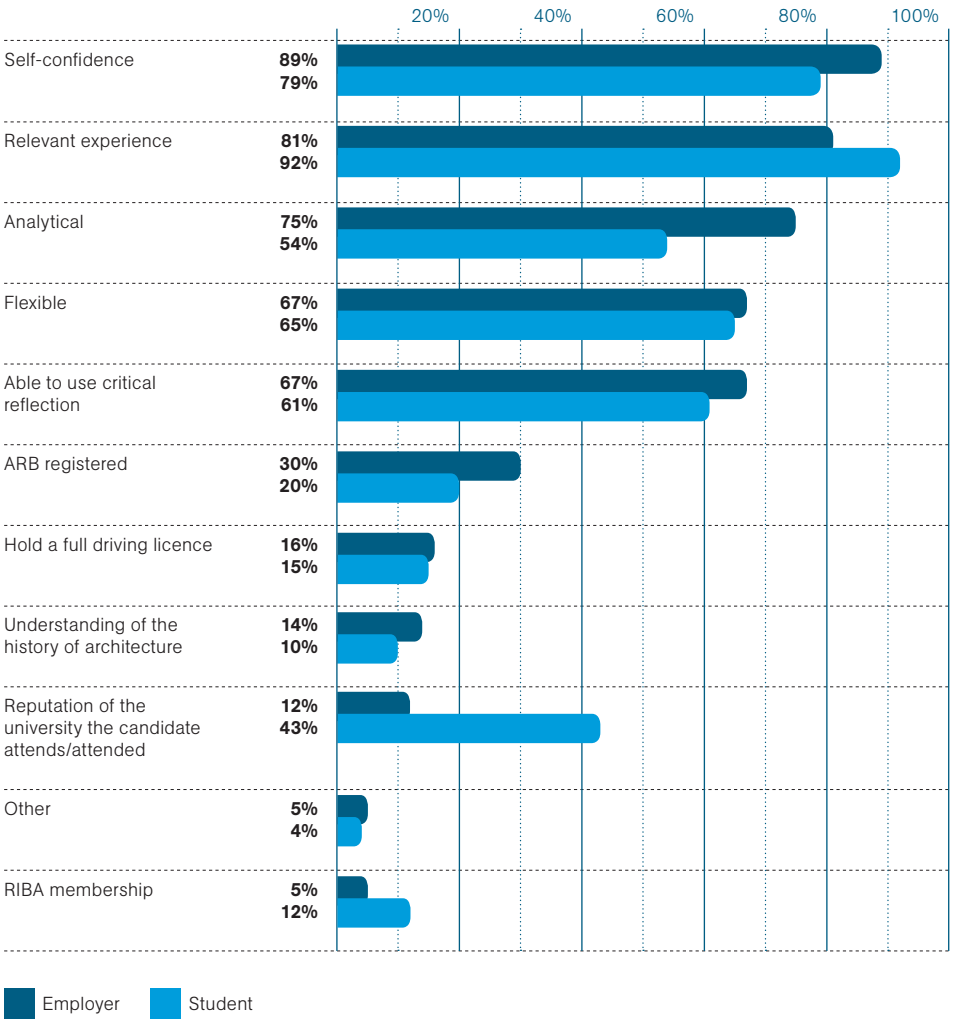
As well as seeking knowledge of core topics, and both technical and 'soft' skills, potential employers look at personal attributes. The self-confidence of candidates is clearly important to both groups, but especially to employers; it could be assumed that this is associated with the importance they place on students' ability to work on their own initiative. Students are also less likely to view being analytical as important.

As we found in 2011, relevant experience is an important attribute when recruiting an architectural student. Surprisingly though, students place more emphasis on this than employers, making this the most important attribute that students think employers are seeking. Despite this, relevant experience is now more important to both employers and students.

Only one in ten employers view the reputation of the candidate's university as important, whereas four out of ten students think this is important. In 2011, students also cared more than employers about the reputation of their university, but since then this difference in opinion has widened. This is likely to be a reflection of the increases we have seen in university tuition fees since 2012 – students now expect a qualification from some universities to have more weight.

For students, the importance of some personal attributes change as they progress through their qualifications. As Part 1 Placement students, they are more likely to view an understanding of the history of architecture as important. Similarly, the importance students place on the reputation of their university decreases as they progress and gain practical experience through work placements, which then become more important.

Which 5 of the following attributes do you think are most important?



"Only one in ten employers view the reputation of the candidate's university as important, whereas four out of ten students think this is important."

"If the industry and universities wish to equip architectural students with the skills they need for future work, it is important that practical skills are taught and experience given."

Closing remarks

Overall, we found some similarity in employers' and students' attitudes towards architectural schools, as well as some of the skills and knowledge students are expected to have. There is real concern about the practical skills and abilities of students and graduates: students are not seen as 'work ready' when they begin their placements.

"There should be a little more in the way of preparing you for the work you are expected to do in practice and some education on building control, building regulation, the process of planning and such."

It is clear that in the minds of both employers and students, relevant experience is vital and students need more time learning in practice. Employers require students at all levels to have knowledge of building regulations and standards, design and specification, and the planning system. But they also need those skills in BIM, both in terms of knowledge of the subject and the technical skills, which employers already rate as good among recently qualified Part 3 graduates.

Reviewing employers' requirements for technical skills both confirmed our expectations and led to some surprising results. As we would expect, skills in both 2D and 3D CAD are important core skills, whilst hand drawing is a dying art, but one which is valued. Writing skills are also of increasing importance to both employers and students, whether in relation to general writing or writing specifications and/or schedules of work.

The importance of design skills should not be forgotten, although the practical limitations of real world projects need to be borne in mind. Perhaps the highest expectations relate to these transferable skills. From the early stages of their qualifications, students are expected to be at an intermediate to advanced level.

The economic climate has had an impact on both recruitment and salary expectations. Students have had to work hard to find their placements. It will be interesting to watch as we move into a period where many practices expect to see growth, and see whether these trends continue or if employers have to work harder to find the students or graduates they want and need. The mismatch in employer and student salary expectations has reduced amongst Part 1 Placement roles; however, there is a clear difference of opinion when it comes to both Part 2 Assistants and recently qualified Part 3 graduates.

If the industry and universities wish to equip architectural students with the skills they need for future work, it is important that practical skills are taught and experience given. But architecture is not just a technical skill: architectural theory surely has a place too. Students need to understand the development and meaning of architecture and its place in culture and values.

With the RIBA already undertaking a review of architectural education, it will be interesting to see how routes into architecture change, and how these change attitudes towards architectural schools and students' skills in the future.

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Architectural education. The view from practice.

Yarema Ronish
RIBA FRSA
Director at Richard Morton Architects and an RIBA client adviser

The day I first sat down at a drawing board in an architect's office was the start of a 15-year vertical learning curve which is only now levelling out. I was embarrassed to find that I had no idea how to detail a door, let alone a building. I have often wondered why my architectural education left me so poorly prepared for life in architectural practice.

I graduated from a four-year architectural course in Canada which was validated to RIBA Parts 1 and 2, and completed my Part 3 in London while working for a large architectural practice. I was surrounded by bright young architecture graduates from 25 countries, most of whom were also struggling to acquire basic architectural skills.

The reason for this has only just dawned on me: the RIBA Part 1 and 2 validation criteria[1] read like a prospectus for a foundation arts course, rather than a recipe for shaping future practitioners. The RIBA validation criteria focus on the acquisition of general knowledge rather than practical skills. The CIAT equivalent is much more focused, and covers all the skills my colleagues and I have struggled to acquire for over a decade.

The RIBA Part 1 and 2 validation criteria state that:

Broadly interpreted, design represents the key intellectual and practical skill of an architect; therefore, at least 50% of all assessed work at Part 1 and at Part 2 is to be executed as design studio projects.

This statement is hardly representative of life in an architect's office. As a practising architect, design represents no more than 10% of my time, and is done in short, sharp bursts rather than as a continuous activity.

The real bulk of my work consists of managing design information in a team environment. The RIBA validation criteria are silent on the topic of managing design information. Compare this with the CIAT criteria[2]:

Graduates should be able to establish, monitor and review systems for controlling design document production. They should then be able to integrate, evaluate and recommend changes to design information, select drawing production methods and media, enabling them to control and check schedule production, operate technical information systems and manage information.

An ability to generate convincing design concepts quickly is prized in practice, as it enables us to pitch for work and respond rapidly to 'what if' scenarios. But design needs to be grounded in practical knowledge of materials, regulations and building type standards – there is no market in form for form's sake. There is no point in producing graduates who can put together a flashy presentation, but don't know the dimensions of a brick, a car parking space or a disabled toilet.

Given the focus on design in architecture schools, it is odd that student projects are only developed to concept stage. Many students and most employers are disappointed that detailing is not taught in schools of architecture. Developing or adapting a detail is not only a vital practical architectural skill, but a real test of knowledge and intellectual ability. Like other architects, I have learned this skill at the coal face, by reading manufacturers' literature, attending CPDs, visiting sites and discussing details with technical representatives and builders. Detailing is taught every day in architectural technology courses, but for some reason is not deemed important enough to be taught in schools of architecture.

1 **RIBA (2010) RIBA Validation Criteria at part 1 and part 2**
http://www.architecture.com/files/ribaprofessionalservices/education/validation/ribavalidationcriteriafromseptember2011parts1,23.pdf

2 **CIAT (2007) Architectural Technology Benchmark Statement**
http://www.qaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Architectural-technology.pdf

3 **HM Courts Service (2010) Guideline Hourly Rates**
http://webarchive.nationalarchives.gov.uk/20110218200720/http:/www.hmcourts-service.gov.uk/publications/guidance/scco/previous_rates.htm

Yarema is a Director at Richard Morton Architects and an RIBA Client Adviser
He works on residential, commercial and heritage projects. He was previously an associate at Sidell Gibson Architects, and has completed a postgraduate diploma in law.

Relevant survey statistics

Both employers and students or recent graduates are concerned about students' practical knowledge and skills when they graduate. In fact, most (86% of employers and 82% of students) agree that students and graduates lack the knowledge to build what they design.

The word 'detail' is absent from the RIBA validation criteria. Compare this with the CIAT criteria:

Graduates should be able to investigate, calculate, analyse and resolve conflicting technical and construction requirements/ factors to achieve detailed design solutions and subsequently evaluate and select materials, components and systems.

Specification is another subject which is given short shrift in architecture schools. It is a subject so poorly understood among architects that it tends to be assigned to specialists within the office. And yet there is no mystery to writing a specification – it simply requires a methodical approach, technical knowledge and close attention to detail. The RIBA validation criteria do not require students to learn to write a specification. Compare this with the CIAT criteria:

Graduates should be able to draft prescriptive technical specifications and define technical performance specification requirements in order that the completed project can conform to agreed function and performance requirements.

When I ask architecture graduates about designers' CDM risk assessments, I get blank looks. This is hardly surprising when the RIBA validation criteria merely require general knowledge of health and safety in construction. Compare this with the CIAT's validation requirements which are concise and on the mark:

Graduates should be able to identify and assess hazards and risks inherent in project designs in order to make informed design choices. Consequently, they will be able to eliminate and reduce health and safety risks in project production and performance in use through processes such as the principle of ERIC (eliminate, reduce, inform, control).

I can think of no other profession where new graduates must wait a decade or more to be given significant responsibility because they have not acquired basic skills in university.

For the last 20 years, legal education has been in a state of permanent revolution, aimed at properly preparing students for practice. Undergraduate law is now taught as an utterly vocational subject, even at Cambridge. The legal practice course (the equivalent of the Part 3) involves learning how to fill in court forms. This is one of the reasons that trainee solicitors can be charged out at over £100 per hour, even in the regions[3]. In contrast, new architecture graduates struggle to fill in a planning application form for a house extension.

The RIBA has belatedly woken up to the fact that something must be done about the staggering cost of an architecture degree, as tuition fees appear to have been set in inverse relation to earning power. The RIBA is rightly concerned that this will lead to a gentrification of the profession and economic exclusion of students from lower and middle income backgrounds.

Law schools have responded to the rise in tuition fees by introducing a two-year LLB, which is followed by a one-year legal practice course and two years' practical experience. This means that it is possible to qualify as a solicitor in five years, compared to seven for an architect. One way of making the architectural profession more accessible would be to eliminate Part 2. Put bluntly, architecture schools could prepare students just as badly for practice in three years as they currently do in five.

The better course of action would be to radically overhaul the architectural curriculum to meet the CIAT criteria, widened to include a grounding in architectural history and urban design, with the studio component reduced to 30% of assessed work, and taught in four years.

Some countries already do this well. Spanish graduates have shown me diploma projects designed to Stage D, including structure and services. Egyptian students are taught to design schools and hospitals by leading practitioners in these fields. In Austria, student projects must comply strictly with building regulations, or get a failing grade. I have employed Polish graduates who had sufficient technical background to take on working drawing packages straight out of university.

Our system of architectural education produces enthusiastic self-starters who work hard, think laterally and can grasp complex information, but are completely lacking in basic practical skills. We urgently need to focus on equipping students with the skills needed for a lifetime in practice, and let go of the myth that every problem can be solved by design iteration. ●

"I can think of no other profession where new graduates must wait a decade or more to be given significant responsibility because they have not acquired basic skills in university."

The student perspective

Charles Weston Smith
Canterbury School of Architecture
at University for the Creative Arts

Our university education gives us the potential to truly open our minds to the possibilities of design.

Back in June 2014, I wrote:

Teach more about the realities of practice, and less blue sky thinking. We were often told that you'd never be able to build most of what we design in school, so why encourage it? The best projects were often the most unrealistic. I believe that architectural education should be at least part based in reality and should be taught as such from the beginning. This way when we leave our Part 1 courses, and start working on our respective placements, we will be far more prepared for the real world. In my experience, there are hardly any Part 1 Placements available because, quite frankly, no recent Part 1 students have a clue how practice actually works. If this is to change, prospective employers need to know that when they employ a Part 1 student, that person will actually know what they're doing to some extent and not be a liability to the practice, which, in my experience, very much isn't the case.

When I initially thought this, I had only been working for a couple of months, and had absolutely no idea of what I was doing. I remember feeling stressed, anxious and useless. Most of all, I was annoyed. I was furious that the hard-earned first part of my architectural education had provided me with a grand total of zero skills which could be usefully and helpfully applied to the realities of practice within the building industry. It almost felt like a betrayal. The stress, the countless sleepless hours and the radical recession of my hairline seemed to have been in vain.

The question is does Part 1 provide you with adequate skills which can be applied on a practical level in the real world? My answer: No, not in the slightest. However, this might not be an entirely bad thing.

Upon leaving architecture school, it became immediately apparent that there was a vast disparity between the number of graduates at Part 1 and the available number of positions within the industry. This problem of numbers does not have an easy fix. Due to the tense relationship between architecture and economics, it would not, for example, be appropriate for the RIBA/ARB to issue an annual maximum quota of places on architecture courses. However much as we would love it to be so, the industry is not currently desperately crying out for fresh blood like other professions such as medicine.

"We were often readily told during critiques that academic projects like ours are rarely built in the real world. Often the most successful projects academically were also the most pretentiously unrealistic."

Relevant survey statistics

Surprisingly, perceptions of the importance of design skills varied widely, with employers putting a much greater emphasis on these skills... the importance of these should not be forgotten.

Perhaps a divergent solution would be to ground at least the initial part of our education in some semblance of reality. As I stated in my initial comments, we were often readily told during critiques that academic projects like ours are rarely built in the real world. Often the most successful projects academically were also the most pretentiously unrealistic. I found myself questioning why it was encouraged to such a great extent and I wonder whether basing a portion of the project briefs in practical reality might help to both ground and challenge students in a more contextual approach. Architecture is a global language, and interestingly, it seems that our system of education in this country casts architecture as an art form, which is a vastly different approach from other countries'.

The majority of my Part 1 project experience involved the design component of units taking centre stage, with other areas such as technology, history and the 'buildability' of the project considered less critical. Let's say, for example, that in a typical Part 1 project, the design component is worth 90% of the final grade, with technology and historical context worth 5% each: practicality gets 0% because, in my experience, it isn't even considered. If the typical Part 1 experience is like this, with there being little to no emphasis on practicality, it's difficult to see how a potential employer can expect a Part 1 graduate to know anything at all about the realities of practice. After being asked to write this opinion piece, I asked the director of the practice I work for if he'd be able to briefly describe what he wished I'd known when he hired me. He laughed and jokingly responded with "Well, how long have you got?". With that in mind, it's little wonder that I felt the way I did.

If the main emphasis continues along its present path, how does it prepare us for the real world? Well, for one thing, I think it gives us an enormous degree of confidence in our abilities, which is invaluable in the workplace. It puts us in a good position both on site and in the office to communicate our ideas effectively, and in many respects stand up for them. I also think that it allows us a greater understanding of the wider context in which we work. In practice, we strive to do more with less. Our university education gives us the potential to truly open our minds to the possibilities of design. We are able to rise above and beyond the constraints of the brief and, most of all; it allows us the opportunity to properly appreciate the true value of great design.

For the sake of argument, let us briefly compare the typical university project to the opening stages of a real world commission. In my experience, it is the concept design to which those in practice dedicate the most time, which, after careful contextual consideration of the brief, informs the next phase. This I find to be comparable to the emphasis on the design and context components of a university project. Next, we have the technology component. I've found that a lot of the technical knowledge of a real world project is handled not by architects, but by the various specialists, trades and consultants who typically advise us during developmental design. So, in actual fact, the two are again quite similar. The practical knowledge I wish I'd had when starting out has been handed out in equal measure to the amount of effort put in to working on it.

As I write this now, I find that looking at what I wrote in anger almost six months ago represents a drastically different opinion to the one I hold now. Working in practice has allowed me to reflect upon my experiences, and I can now look back and easily remember why I was so aggravated. I now think that the practical experience afforded to us in our placement years more than makes up for the lack of it during our university years. It means that we end up with at least two full-time years of experience in the industry alongside a grounding in management and professionalism upon qualifying – as well as five years of pure design tuition at university. This puts us in a unique position in that when we do finally graduate, we are not only accomplished designers, but experienced ones at that, with skills that are applicable not just within the building industry but all fields of design.

Looking forward to future endeavours in Part 2, it seems to me that contrary to my initial feelings, the way in which the first part of our architectural education is designed is actually decidedly positive. Every year, it enables the RIBA/ARB to produce young, talented and radical thinkers. Ultimately, it provides us with not only the confidence and ability to pose new and innovative answers to tired old questions, but also the means to design them.

Charles graduated in 2013 from the Canterbury School of Architecture at University for the Creative Arts with a 2:1 in architecture.

He currently works for a high-end residential practice in London's Covent Garden and is helping to design a large scale, new-build luxurious residence currently in the developed design stage. He is a fervent deconstructivist, and is in the process of applying to the Architectural Association in the hopes that he will gain entry to study for Part 2.

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