# Avoiding the Deficit Model and Defining Student Success: Perspectives from a New Foundation Year Context

GERALD DAMPIER, LEWIS A. BAKER, CAROL SPENCELY, NICHOLAS J. EDWARDS, ERIVAN WHITE AND ALISON M. TAYLOR University of Surrey

This paper discusses the establishment of two new foundation year programmes at the University of Surrey; one in the Faculty of Engineering and Physical Sciences and the other in the Faculty of Arts and Social Sciences. Specifically, it explores how the programmes have been constructed and how programme teams have attempted to avoid the 'deficit model' by adopting a student-centred approach that focuses on the development of successful students when considering staffing expertise and curriculum design. This is followed by an exploration of staff and student perspectives on what constitutes a successful foundation year student. Finally, the paper comments on how success will be measured in the future, suggesting that, whilst specific metrics might serve as indicators of success, no single metric is likely to capture the complicated nature of what success is and what it looks like for the individuals we teach. Overall, the paper suggests that the question, 'What is a successful foundation year student?' should be considered carefully in the process of designing and developing foundation year programmes.

# Introduction

Descriptions of foundation year students often centre around perceptions of a deficit in terms of lack of achievement, lack of subject knowledge and need for support – thereby 'feeding' the 'deficit model monsters' that prowl through our curricula and language. 'Deficit' is a term that has been used in many educational contexts for varying purposes and with different agendas, and a definition is hence hard to pin down. For the purpose of this discussion, the term is used in the sense adopted by Lea and Street (1998) in their seminal article 'Student Writing in Higher Education: An academic

© Copyright 2019. The authors, Gerald Dampier, Lewis A. Baker, Carol Spencely, Nicholas J. Edwards, Erivan White and Alison M. Taylor, assign to the Journal of the Foundation Year Network the right of first publication and educational and non-profit institutions a non-exclusive license to use this document for personal use and in courses of instruction provided that the article is used in full and this copyright statement is reproduced. Any other usage is prohibited without the express permission of the authors.

literacies approach', where the authors explore in-depth the shortcomings of "a skills-based, deficit model of student writing" (p. 157) which they saw as typified by institutional "fix it" approaches through "atomized" (p. 172) study skills. For example, by focusing mainly on ways of developing student writing, the deficit model approach is viewed as somewhat superficial, leading to writing being seen as a "technical and instrumental skill" (ibid) and neglecting the extent to which academic literacy is highly contextualised. Terms such as "remedial" (Cottrell, 2001, p. 40) and "bolt-on" (Wingate, 2006) have come to typify attitudes to de-contextualised models of study skills which have long been seen as necessary for those individual or at-risk students who managed to enter university without the skills to study effectively at tertiary level, but are now viewed as simplistic and outdated.

The overall debates inherent in this topic are in no way limited to university foundation year cohorts, but are of particular significance in this context, given the number of foundation year students who are from non-traditional backgrounds. While student numbers and the diversity within the student population have grown substantially in recent years, this has particularly been the case at university foundation year level, where the number of entrants into foundation year programmes has tripled from around 10,000 students to around 30,000 students between 2012-13 and 2017-18 (OfS, 2019). Indeed, two new foundation year streams established at the University of Surrey in 2018-19 form the basis of the analysis in this paper.

The "bolt-on" approach, of which Wingate (2006) is highly critical, is contrasted specifically with much more student-centred "built-in" approaches to supporting students to ensure progression to later stages of university study. Wingate acknowledges increasing awareness within the sector that most 'traditional' as well as 'non-traditional' students may struggle with demands of university study — in other words, not denying that deficits exist, but looking for inclusive models, involving all teachers and students, to replace more de-contextualised remedial approaches. Key in the design of the new foundation year programmes at the University of Surrey has been awareness within the programme teams of the desirability of changing perspectives and discourse. A focus on what foundation year students bring, their potential, and strengths of the foundation year provision in terms of opportunities for learning development and academic acculturation is considered together with the need to enable such potential and demonstrate this to others in terms that do not count holes in walls that have been 'plugged' with skills and knowledge fixes.

In a subsequent article, Wingate (2007) examines issues around student transitions to higher education and while discussion focuses overtly on developing the learning of first-year undergraduate students, there is little reason to debate the applicability of her research to the growing numbers of students entering UK HEIs (such as the University of Surrey) through in-house foundation streams. Wingate (2007, p. 391) seeks to increase awareness among university teaching and managerial staff that approaches to skills which are based on models emphasising deficiency are likely to lead only to "remedying the overt problems of individual students" and to persuade them that a preferable way forward is a holistic approach which reaches all students and teachers through "the complex process of learning to learn in higher education". In contrast to more traditional "bolt-on" approaches which aim to cater to all students from all disciplines and often at a range of levels from undergraduate to masters, Wingate sees subject-specific approaches as efficacious in enabling students to use relevant skills to construct knowledge within their chosen fields.

The specific theme of "learning to learn" is developed at length in Wingate's 2007 article, where she stresses the extent to which students are likely to have been "spoon-fed" prior to university by staff at secondary schools ever mindful of the dependence of their league table positions on student results. It is therefore likely, she argues, that students will reach university still needing to develop the skills to learn actively and independently, and to take responsibility for their own learning. In addition, she cites Lea and Street (1998) in stressing how students need not only to understand their own "discipline's conventions of constructing knowledge" — and that this is likely to be different in different disciplines — but also how to become independent learners. Wingate expresses concern that the development of learning should be consistent, gradual, structured, and certainly not left to chance. Embedding learning development within the main curriculum provides the structure and opportunities for students to learn in a discipline-specific manner.

In our own context, such research has informed decisions at a strategic level in the design of individual programme teaching teams. Full-time dedicated learning developers were recruited to work closely with subject teachers in an embedded approach to supporting skills development within disciplinary strands. The aim here is to enable students to better understand relevant learning processes and subject knowledge. An integral facet of the programme design has been a focus on outcomes in terms of where the student-centred model should aim, and as such, has led to deliberation as to what might represent a successful foundation year student — with consideration of achievements, behaviours and characteristics. Key to this discussion was not only the voice of the academics but also that of the students themselves.

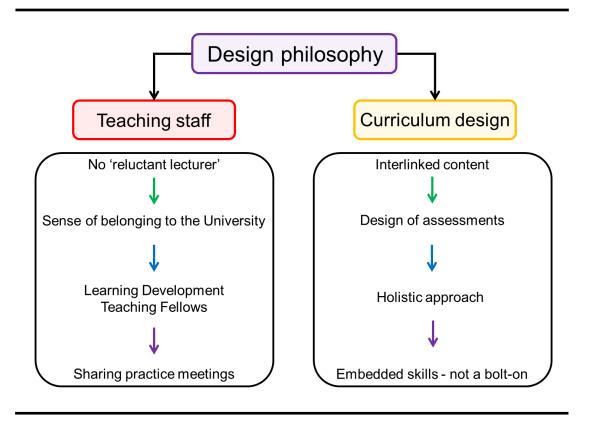


Figure 1: The overview of our design philosophy

# **Programme Design**

The academic year 2018-2019 was the inaugural year for foundation years for the Faculty of Arts and Social Sciences (FASS) and the Faculty of Engineering and Physical Sciences (FEPS) at the University of Surrey. It is perhaps unsurprising that these foundation year streams are the first to be adopted at Surrey: in the most recently published data, 'Business and administrative studies' and 'Engineering and technology' remain the most popular subjects for foundation year entrants (OfS, 2019). Each of these foundation years feeds into several undergraduate degree courses and students have the option to change degree stream during their foundation year, should they wish. At the outset, these foundation years would appear to be quite different and to feed into a diverse set of degree streams, but they have been designed in the same manner. Grouping the design into two perspectives, teaching staff and curriculum design, the similarity becomes more obvious (see Figure 1 above).

Foundation year staff members are employed solely to teach on the foundation year programmes. This is not ubiquitous in the sector, but it means that teaching staff are not sourced from elsewhere in the University under an obligation to fill their teaching quota, which can result in 'reluctant lecturers'. Anecdotal evidence suggests that, for the students, a dedicated foundation year teaching team invokes a sense of belonging to the University, and the programmes themselves do not feel like a 'bolt-on' to the undergraduate degrees the students want to study. From a staff perspective, this also sends a clear, supportive message that the Faculty is invested in foundation year programmes. Teaching Fellows predominately teach their subject expertise. An innovative feature of the University of Surrey foundation years is that each programme has a dedicated Learning Development Teaching Fellow who embeds subject-contextualised learning development throughout the programme (the aforementioned 'built-in' approach) as opposed to running standalone skills modules.

Teaching staff from all foundation year programmes meet regularly to discuss and share good practice. This proves particularly useful for two reasons. The first is that it aids in identifying common solutions and problems across disciplines, whether this is in the FEPS or FASS foundation year programmes. These shared practice meetings are also open to all foundation years within the University, further increasing the diversity of discipline representation, and with it, further diversity in the shared practice discussions at these meetings. The second reason these meetings prove useful is that there is a distribution in teaching experience, with a mix of experienced higher education teachers as well as secondary school trained teachers. This helpful overlap between experience in teaching in these two education sectors, representing the students' prior education and future education, provides complementary expertise for the effective development of inclusive foundation year provision that bridges the gap between secondary and higher education.

# **Curriculum Design**

A key design principle for each of these new foundation year programmes was the interlinking of content, something which is made simpler by having dedicated teaching teams working collaboratively. This means that content and concepts from one module can be purposely reinforced and expanded upon in another module. This approach seeks to avoid deficit by focusing on overarching student development across multiple areas, empowering students to identify the

connections between subject-specific knowledge and the skills required in real world contexts – whether at university or beyond (see Department for Education, 2018; Roberts, 2002). In addition to this, the content has been interlinked with *real-world* discussions, cases, experiments and problems to develop an inquisitive mindset within the students. This aims to inspire students to develop a passion for their subjects of study and to explore current and new areas of their subjects. This sense of exploration is supported in the emphasis placed upon enabling students to have the freedom to change degree stream during the foundation year. It is worth noting that caution must be taken in concluding that such a curriculum design invokes and develops behavioural changes in the students, since it is beyond the scope of the current work to measure these effects.

To balance the interlinked content and inclusive approach of academic skills, the areas of assessment had to be carefully designed. Students are deliberately assessed in numerous ways, including open-note exams, traditional exams, group work, presentations, multiple-choice exams, long-written essays, blogs and videos. An example that highlights how interlinked content and blended academic skills work, is where students are tasked to blog about contemporary real-world issues, thereby developing an inquisitive mindset and passion for their subjects. Students are subsequently tasked with converting one of these blogs into an academic piece of work to include theoretical concepts and references, thus facilitating exploration of genre. Within the assessments, where possible, students are given the supervised 'freedom' to make choices on the content they wish to study. The Business Case in Engineering, for example, requires students to work in groups to produce a poster for an engineering idea of their choice, which they then pitch to the wider cohort of students and staff. Within all these assessments, specific attention has been directed to the development of transferable, employability and core skills, practised in a discipline-specific setting. These skills are difficult to label and may even be referred to as 'soft skills'. Whatever their label, they include "listening, communication, teamwork, time management, self-management, empathy, integrity, flexibility, emotional intelligence, and related social skills" (Anthony and Garner, 2010, p. 360). In addition to this, students are provided with formative opportunities for development where they can work one-to-one with the dedicated learning developers on any assignment.

Regarding curriculum design, a holistic approach across the two different programmes has been taken and is regularly discussed in the sharing practice meetings. While the two programmes do not currently share teaching and assessments, several meetings have taken place to develop collaborative work between staff and students for the next academic year (2019-20). With the advent of two further streams in 2019-20, more opportunities will arise to collaborate across faculties on teaching and assessments.

These design principles, whilst incorporating some good practices, are of course by no means perfect. Indeed, one significant shortcoming in this design is that it does not guarantee student engagement. At the University of Surrey, there is no attendance policy which requires students to attend lectures, seminars or tutorials (except for some group work and laboratories). This appears to have led to notably poor attendance in these teaching hours, raising concerns about student engagement with the resources and consequent impact on learning (cf. Hughes, 2009; Newman, 2008). Like most universities, lecture capture and teaching resources are made available through an online platform, but as other literature shows, this does not guarantee engagement (Morris et al., 2019).

# What is a Successful Student on our Foundation Year Programmes?

Staff perspectives: Debates about the nature and practice of pedagogy and andragogy (Knowles, 1973) and their applicability in a foundation year setting can often be forgotten amongst the day-to-day challenges for a busy teaching team. During shared practice meetings it became clear that the teams delivering the foundation year strands at the University of Surrey shared certain perceptions about the traits they would like their learners to exhibit, identified in Figure 2. Contrary to popular belief, these perceptions do not revolve around the 'ideal student type' (Wong et al., 2018), but rather around a student who starts the year with a willingness to engage with the course and the capacity to adapt. The challenges of working with foundation year students are ones which in general enliven and excite the teaching team.

Outcomes of shared practice discussion suggest that a 'good' and thus, hopefully, a successful foundation year student is seen within the team as one who will exhibit a willingness to learn, coupled with a desire to use that trait to further their knowledge and skills actively, critically and independently. The latter may involve anything from preparedness to read beyond recommended texts, through presenting to a group of fellow students (irrespective of the outcome), to learning to cook. The student experience on the foundation year is often coupled with the first break from home life. In that sense, it means that students are not only confronting a new and daunting experience in academic terms, but also a profound dislocation from the familiarity of home. Staff can and do advise on means of working through such challenges, but this requires a student to be receptive and honest. Both these traits are key characteristics of successful independent learners.

Disappointment and despondency often loom large for foundation year students if they experience missing out on direct entry to the first year of a degree course, and this can translate into apathy if there is no support with progressing towards a new goal. Initially, progression can be broken down into small, unintimidating targets and teaching staff help students to avoid framing their experience in terms of 'failure'.

There is no expectation that students will come equipped with the resilience and tenacity to face all the circumstances which university life will throw at them. Rather they are expected (and encouraged) to show a preparedness to participate in a dialogue which enables advice and support to influence perspectives, reactions and approaches. If this preparedness is evident then the job of teaching itself is made even more enjoyable.

Once the initial melee of the start of term has settled into a routine, staff expectations are straightforward: a 'good' student will devote at least some time to organising themselves; they will attend sessions punctually more often than not; they will participate in an ongoing dialogue with staff and fellow students; and they will submit work that is requested. These traits alone demonstrate engagement and the resilience to be able to deal with the demands of university life, demands that will not diminish through the remainder of university or in the workplace. These expectations are at the heart of 'engagement', which will manifest itself at a number of levels in successful students: with the programme of study itself, but also with the wider study opportunities and resources offered by the institution, and, not least, the range of extra-curricular activities available. Such opportunities also underpin the potential to add significantly to social and professional networks which can be sustained through university and beyond.

There is also a more subtle aspect in all this, which is far from insignificant: with each lecture attended, each contribution to seminar discussion and each submission of work comes burgeoning confidence. The student is likely to be unaware of this, but it is an indispensable resource for future success. Work in groups and teams comes with challenges that take many students significant time

to come to terms with. Staff tend to correlate success in foundation year students with an ability to recognise the value in such work and contribute actively to it.

Looking beyond the end of the foundation year, staff share an expectation that foundation year students progressing to first year undergraduate programmes will, as a minimum, be able to hold their own in comparison with direct entrants, and in many cases outperform them. This expectation comes with an acknowledgment that while issues around transition into undergraduate study may impact direct entry students as well as foundation year students, those coming through the foundation year are more likely to be settled in the university context and potentially more focused and equipped for their studies. Linked in part to the same processes of adjustment to the tertiary academic culture comes an expectation from staff that it is during the foundation year that students will begin to show evidence of development from passive recipients of knowledge to being more active, independent, learners.

# What makes a successful Foundation Year student?

# Staff perspectives

- Resilient
- · Student engaged with the programme
- Moved from passive recipient to active knowledge seekers
- · Critical thinker
- Independent learner
- Understands the value of group work
- Is able to outperform / hold their own with direct year one entrants
- Developed confidence and networking skills

# Student perspectives

- Resilient
- · Engaged with the course
- Have a good mental attitude towards learning
- Be adaptive
- Good time management
- Team player / able to work in a team
- Not afraid to make mistakes
- Learns from mistakes and feedback
- Organised
- Tenacity

Figure 2: Summary of foundation year staff and student perspectives on what they think makes a successful foundation year student

Student perspectives: Semi-structured interviews were conducted with six foundation year students at the point in the academic year where they had completed all assessments and were waiting for final results. A number of comments from these students illustrate further the qualities summarised above: "Don't give up, that is the most important thing in the foundation year"; "(have) grit and determination. Bounce back from whatever has happened to you"; "You need to be resilient and able to face adversity head-on"; "[A good foundation year student is] someone who doesn't give up easily".

Overall, the student message is simpler and resoundingly clear: whether the trait is couched in terms of resilience or tenacity the central message was 'don't give up'. Whatever the issue encountered the refrain of students was that the successful foundation year student can and will overcome it as long as the will is there.

That said, it would be a mistake to conflate this sentiment expressed by a handful of students into one over-simplified response. Other traits and skills were alluded to in the individual interviews conducted, many of them consistent with the staff perspective: "You need to be as adaptive as possible... to any task that is presented... to you"; [a good foundation year student is] not afraid to make mistakes, but able to learn from them" and has "a good mental attitude towards learning". The underpinning requirement for engagement is repeatedly identified here, along with the need to be open and adaptable to new modes of learning and new expectations, some of which may be self-imposed.

Finally, the ability to organise oneself and, if necessary, others, was mentioned: "Get things done on time and to the best standard that you can. Do not leave it until the last minute"; "You need to be a good team player". These observations correspond with the requirement for dialogue, receptiveness and honesty identified by the staff. They imply a discourse which, despite its malleability, begins with the institution and its expectations, conveyed through the foundation year teaching teams.

In summary, there is a congruence between the perspectives of the foundation year teaching staff and the students in terms of what makes a good foundation year student (see Figure 2). The traits and skills commonly identified all issue from the capacity to engage and understand the need for dialogue to negotiate a route for success. After all, this is a university journey that only begins with foundation year and will continue into a degree course and beyond, and the implications of that dialogue become more profound as a student progresses. "Take it seriously", says one student, "it's one of the most important years of your life". We are trying to convey that message to cohorts of students who are experiencing the transition from childhood into young adulthood, but this also points to the complex challenges inherent in supporting a student to be 'successful' in the context of the foundation year and, more generally, in higher education.

### How Can the Success of our Foundation Year Students be Measured?

Having indicated what staff and students consider success to look like in a foundation year student, a key follow-up question is, 'how can the success of foundation year students be measured effectively'? — and, in turn, 'how can the success of the design and delivery of our new foundation year programmes be measured'? To answer this, it is important first to consider the purpose of the foundation year. At its most fundamental, the foundation year is designed to prepare its students for their chosen undergraduate degree course, and, beyond that, for employment. In terms of this preparation, the student and staff perspectives of what a successful foundation year student looks like are instructive, showing where responses can be broken down into the categories of attainment and attitudes/behaviours, with the theme of skills interwoven through these categories. One possible approach to measuring student success in these elements is to use the Kirkpatrick evaluation model (Kirkpatrick, 2006; Kirkpatrick, 2016) which incorporates evaluation of behaviours and measures of attainment and could be adapted to the context of foundation year studies. The model has 4 levels:

- 1. **Reaction:** evaluating engagement with training/teaching sessions and resources.
- 2. Learning: evaluating attainment against pre-determined learning objectives.
- 3. **Behaviour**: investigating how well the student applies what they have learnt: Do the students use their learning across modules and make connections between theory and practice, for example? Does their approach to a team-working assignment change due to the training given on working effectively within teams?
- 4. **Results**: measuring 'outcomes', 'benefits', or 'return on investment'; these may be longer term outcomes such as progressing to their undergraduate degree, being awarded a degree, degree classification, or moving into employment.

The introduction of any such model, however, risks reintroducing elements of deficit model thinking through additional metrics. Further work is therefore required not only in defining the nature of foundation year student success, but also in attempting to measure this effectively at various stages of the student journey. Moreover, it is important to recognise that the perspectives on what makes a successful foundation year student outlined above do not necessarily relate directly to existing institutional and external measures of 'success' and this disjunction, and the appropriateness of comparative metrics, must be considered. For example, comparing degree classifications for undergraduate and direct entry cohorts may appear to be a robust measure of success in attainment but this cannot account for the success of a student whose completion of a degree via the foundation year entry route (regardless of the result) can most certainly be considered successful on account of their particular individual circumstances. Similarly, student retention rate metrics may reflect the development of successful characteristics such as 'resilience' (Abrica, 2018) but cannot account for complex personal circumstances which mean that a student has been 'successful' in a variety of ways but has not progressed to undergraduate study.

# **Concluding Remarks**

This paper considers the current and historical landscape for foundation year students in terms of the language and definitions used, with a particular focus on the deficit model. It then discusses the ways in which the process of designing new programmes of foundation year study in the Faculty of Engineering and Physical Sciences and the Faculty of Arts and Social Science at the University of Surrey attempted to move away from the deficit model by using a built-in approach, contrasting that of a bolt-on approach, notably by embedding study and learning skills throughout the course. The nature of student 'success' is then discussed from the perspective of the foundation year teaching staff and students on these new programmes and shared definitions of success are highlighted. This is followed by a short discussion of how such success can be measured. While a variety of existing metrics relate to 'student success', these cannot capture the complex nature of what constitutes success for an individual foundation year student and, indeed, may serve to reintroduce elements of deficit model thinking. It is hoped that this paper will ignite a wider debate and prompt further research into what success looks like for foundation year students and how this might be more robustly analysed — perhaps through a sector-wide approach — with a view to informing foundation year programme design and teaching and learning that avoids the deficit model.

# Acknowledgements

The authors would like to thank our Foundation Year students Toria Bahrami, Shindy Manic, Sara Pervez and Thomas Varnes for contributing to the Foundation Year Network Conference presentation and to all the students who expressed their views in our analysis. We thank Dr Richard Harrison (University of Surrey) for useful discussions and Robert Walsha (University of Surrey) for reading and commenting on the original manuscript.

#### References

- Abrica, E. (2018) 'How to Measure Student Success? Toward Consideration of Student Resilience as a Metric of Success in Institutional Accountability Frameworks.' *Community College Journal of Research and Practice*, 42, pp. 569–573.
- Anthony, S., and Garner, B. (2016) 'Teaching soft skills to business students: An analysis of multiple pedagogical methods.' *Business and Professional Communication Quarterly*, 79(3), pp. 360–370.
- Cottrell, S. (2001) *Teaching Study Skills and Supporting Learning*. Basingstoke, NY: Palgrave Macmillan.
- Department for Education. (2018) Employer Skills Survey 2017 research report. Available at: <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/746493/ESS\_2017\_UK\_Report\_Controlled\_v06.00.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/746493/ESS\_2017\_UK\_Report\_Controlled\_v06.00.pdf</a> (Accessed: 22/07/19).
- Hughes, N. T. (2009) 'Attendance as a measure of student motivation and engagement.' *InForm*, 3, pp. 7–8.
- Kirkpatrick, D. L., and Kirkpatrick, J. D. (2006) *Evaluating Training Programs: The Four Levels*, 3<sup>rd</sup> edition. San Francisco, CA: Berrett-Koehler Publishers, Inc.
- Kirkpatrick, J. D., and Kirkpatrick, W. K. (2016) *Kirkpatrick's Four Levels of Training Evaluation*. Alexandria VA: ATD Press.
- Knowles, M. (1973) The Adult Learner: A Neglected Species. Houston: Gulf Publishing Company.
- Lea, M., and Street, B. (1998) 'Student writing in higher education: An academic literacies approach.' *Studies in Higher Education*, 23(2), pp. 157–172.
- Morris, N. P., Bronwen S., and Taryn C. (2019) 'Lecture recordings to support learning: A contested space between students and teachers.' *Computers & Education*, 140, 103604.
- Newman-Ford, L., Fitzgibbon, K., Lloyd, S., and Thomas, S. (2008) 'A large-scale investigation into the relationship between attendance and attainment: A study using an innovative, electronic attendance monitoring system.' *Studies in Higher Education*, 33(6), pp. 699–717.
- Office for Students (OfS) (2019). *Preparing for degree study*. Available at: <a href="https://www.officeforstudents.org.uk">https://www.officeforstudents.org.uk</a>/ (Accessed 15/07/2019).
- Roberts, G. (2002) SET for success. The supply of people with science, technology, engineering and mathematics skills. Available at: <a href="https://dera.ioe.ac.uk/4511/">https://dera.ioe.ac.uk/4511/</a> (Accessed 20/12/19).
- Wingate, U. (2006) 'Doing away with 'study skills'.' *Teaching in Higher Education*, 11(4), pp. 457-469. Wingate, U. (2007) 'A framework for transition: Supporting 'learning to learn' in higher education.' *Higher Education Quarterly*, 61(3), pp. 391–405.
- Wong, B. and Chiu, Y. (2018) 'University lecturers' construction of the 'ideal' undergraduate student'. *Journal of Further and Higher Education*, DOI: 10.1080/0309877X.2018.1504010.

### **About the Authors**

**Gerald Dampier**: Gerald has been a Teaching Fellow in Learning Development attached to the Foundation Programme in Business, Economics and Management at the University of Surrey since 2018. Previous experience includes 14 years in English for Academic Purposes, Learning Development and academic management roles at Royal Holloway, University of London; he has also taught English as a Foreign Language in the UK, Greece and Japan.

**Lewis A. Baker**: Lewis completed his MPhys and PhD in Mathematical Biology and Biophysical Chemistry at the University of Warwick in 2017. He then trained as a secondary-school teacher before combining these experiences in his current position as Teaching Fellow on the Faculty of Engineering and Physical Sciences Foundation Year at the University of Surrey.

**Carol Spencely**: Carol is currently a Teaching Fellow in Learning Development on the Engineering and Physical Sciences Foundation Year at the University of Surrey. Carol originally trained as a clinical immunologist and completed a BSc (Hons) in Physiology and Pharmacology, and a Masters in Pathological Sciences. Following a PhD in Immunology at Liverpool and research and teaching positions at Imperial College London, Carol moved to the *dark side* of professional services and helped to set up the Postdoc Development Centre at Imperial. Carol joined the University of Surrey's Doctoral College in 2012 before taking up her current position in 2018.

**Nicholas J. Edwards**: Nicholas has taught on foundation years since 2016 and joined the University of Surrey as a Teaching Fellow for the Faculty of Arts and Social Sciences (business and economics) in 2018. Nicholas has taken a break from completing his PhD to set up the Foundation Year at Surrey but promises to return to it *soon*.

**Erivan White**: Erivan started teaching for the Open University soon after completing his MA at the University of York. He has since taught in a variety of FE/HE settings and spent several years as a senior manager in a large sixth-form college. Having taught a variety of subjects at Access and A-Level he was keen to lend his experience to the new Foundation Year in Business and Economics at the University of Surrey where he now teaches full-time.

Alison M. Taylor: Alison completed a BEng (Hons) in Materials Technology and then a PhD in Surface Analysis at the University of Surrey. She spent 23 years teaching Physical Sciences at Level 3 at a large high performing state secondary school. She currently holds the post of Teaching Fellow on the Faculty of Engineering and Physical Sciences Foundation Year, having returned to the University of Surrey.