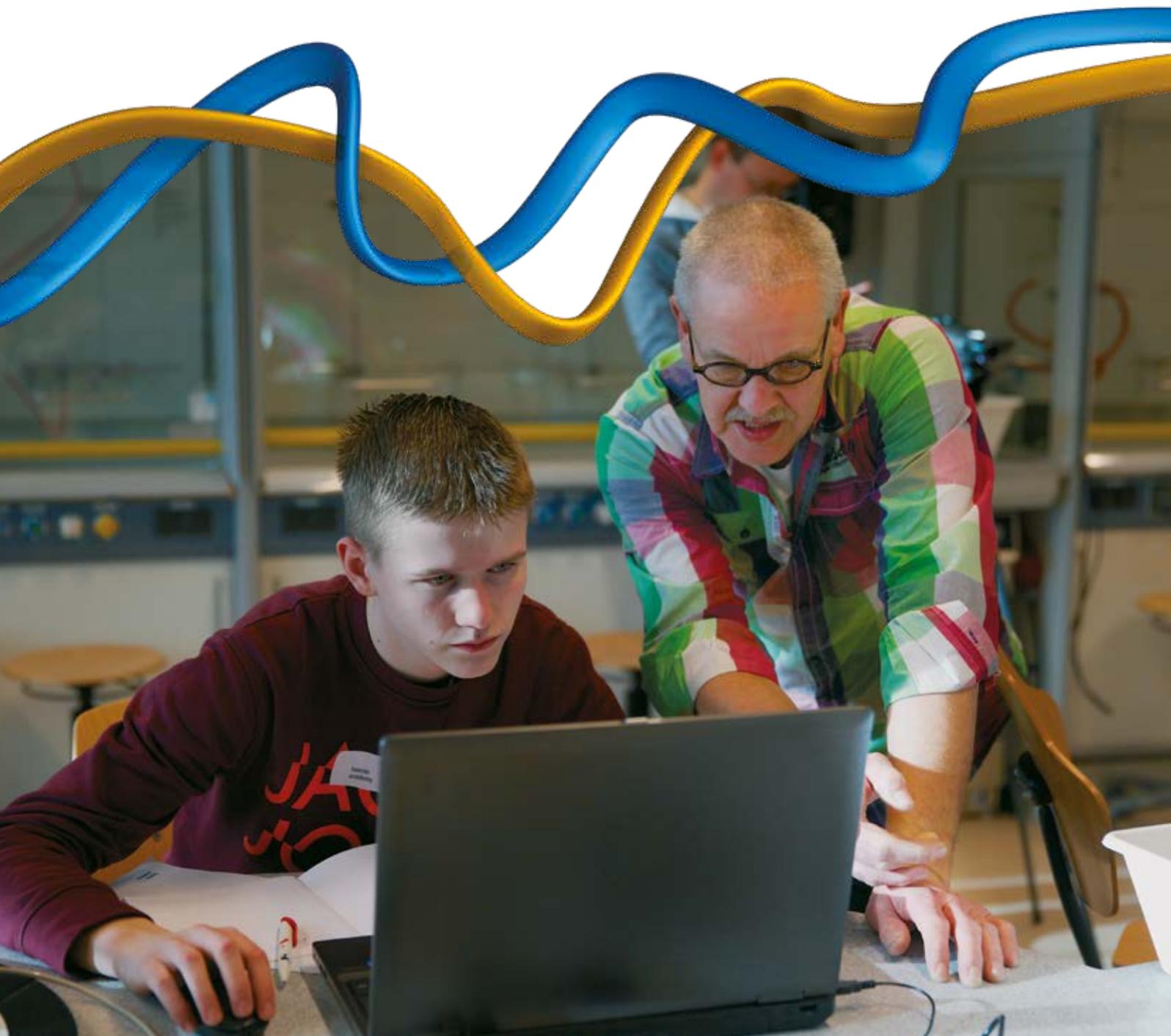# ROYAL ACADEMY OF ENGINEERING

The Career Framework for University Teaching:
background and overview

APRIL 2018

Author's biography

Dr Ruth Graham is an independent higher education consultant. Her work is focused on fostering change in higher education across the world; helping to improve engineering teaching and learning worldwide and supporting the emergence of technology-driven entrepreneurship within universities. Further details can be found on Ruth's website – www.rhgraham.org – which provides an outline of recent projects as well as copies of her published reports.

Acknowledgements

cover photo courtesy of University of Twente (photographer: Gijs van Ouwerkerk)

Foreword

Professor Dame Ann Dowling OM DBE FREng FRS

President
Royal Academy of Engineering

For too long, excellent teaching in higher education has been unrecognised and unrewarded. Institutions promote academics on their research abilities, often at the expense of quality teaching and learning. University students deserve great teaching, and the Royal Academy of Engineering has a commitment to ensuring the UK has a world-class system of engineering education that satisfies the aspirations of young people, while delivering the high-calibre engineers and technicians that businesses need.

The Teaching Excellence Framework has been created by the government to recognise and reward higher education institutions that provide high-quality teaching in higher education in England. The next challenge is measuring and rewarding the contributions of academics to teaching.

To this end, this report sets out a template for universities, in the UK and internationally, to measure the teaching achievements of their academic staff. It is a culmination of over four years of work with academics and partner universities from the UK and around the world. It includes valuable case studies that show how the template can be adapted and used by universities – and even by government education departments – to support academic recruitment and promotion.

The UK has a well-deserved excellent reputation for its higher education system. To ensure that we remain at the forefront of academic excellence we must not be complacent. I very much hope that university leaders will read this report and see how it can shape their own academic recruitment and progression policies to give teaching the recognition it deserves.

Executive Summary

The Career Framework for University Teaching is an open-access resource to help universities evaluate and reward the teaching achievements of their academic staff. It represents the culmination of a four-year project funded by the Royal Academy of Engineering as part of its commitment to advancing excellence in undergraduate education.

The Framework's development draws on educational research, good practice from across the world, a survey of academic staff, and interviews with experts and the wider academic community. It is also informed by feedback from a group of university partners, many of which have piloted or used the Framework.

The Career Framework for University Teaching provides universities with a template to define and evaluate teaching achievement at all stages of the academic career ladder. It covers teaching and research (T&R) career pathways as well as education-focused pathways. It offers a clear set of definitions and criteria of teaching achievement that are not bounded by disciplinary, institutional or national contexts, thus maximising opportunities for achievements to be transferable between institutions.

For all teaching-active academics, the Framework provides:

» a structured pathway to guide career progression on the basis of the academic's contribution to university teaching and learning

» an evidence base through which to evaluate and demonstrate the academic's teaching achievement during appointment, promotion, professional development and annual appraisal.

The Framework is presented in Section 5 of the report and as a stand-alone document at www.teachingframework.com

A guidance note on using the Framework is available at www.teachingframework.com/resources

This report describes the development of the Framework, which progressed through four stages:

PHASE A **(November 2013 to March 2015) examined perceptions of how university teaching is recognised and rewarded.** Based on a survey (n=604) and in-depth interviews (n=52) of UK academic staff and university managers, it identified a number of structural barriers to recognising and rewarding university teaching achievement. Phase A was published in 2015 [1] and is summarised in Section 2 of this report.

PHASE B **(January to July 2015) reviewed current practices and state of the art in the evaluation and reward of teaching achievement.** It was informed by a range of evidence, including interviews with global experts in university teaching and promotion procedures; a desk-based review of the promotion guidelines of top-ranked universities; and interviews with academics about their experiences of citing teaching achievement to support their case for career advancement. This phase is summarised in Section 2.

PHASE C **(July 2015 to January 2016) developed the Framework.** The two earlier phases of the project were used to identify the principles underpinning the Framework's design and the draft version was reviewed by 11 of the global experts consulted during Phase B of the project. This development phase of the project is summarised in Section 3.

PHASE D **(January 2016 to April 2018) road-tested the Framework in universities across the world.** Feedback was provided by 15 partner universities in 12 countries. Listed in full in Section 4, the partner universities included the National University of Singapore, the University of New South Wales (Australia), University College London and Chalmers University of Technology (Sweden). Of this group, four provided a written review of the Framework and 11 drew on their experience of using the Framework in practice, either by piloting it or by using it to inform revisions to their institutional reward/appraisal processes. Section 4 summarises the feedback from university partners.

As part of Phase D, case studies were chosen from partner universities to illustrate the different ways in which the Framework has been used. The case studies are presented in Section 6.

Introduction

Structure of the report

discusses current practice in the recognition and reward of university teaching achievement and outlines key barriers to change. It draws on a review of the literature, a review of global best practice, an evaluation of current practice at top-ranked universities, feedback from experts in the field and a survey of the wider higher education community.

outlines the process by which the draft Framework was designed. It discusses the core principles guiding the Framework's design and the evidence and feedback used to develop it.

outlines the process by which the Framework was refined and improved in collaboration with 15 university partners from across the world. Their contribution is described as well as the refinements made to the Framework in the light of their feedback.

provides a summary of the final Framework. The section describes its three major components and how it can be tailored to the needs and priorities of individual universities.

illustrates how the Framework can be used. The section presents nine case studies illustrating different ways in which the Framework has been used by university partners in improving systems to evaluate and/or reward university teaching achievement.

There has been growing concern across the higher education sector about the lack of recognition for teaching in university career advancement at a time when universities are seeking to improve the quality of undergraduate education.[2, 3, 4, 5]

The Career Framework for University Teaching addresses this concern. The Framework is an open-access resource to help universities seeking to improve systems to evaluate and reward the teaching achievements of their academics. Its development was undertaken by the project author, Dr Ruth Graham, and launched by the Royal Academy of Engineering in April 2018.

The Framework provides universities with a template to define and evaluate teaching achievement at all stages of the academic career ladder. It covers teaching and research (T&R) career pathways as well as education-focused pathways, and is designed for application across all disciplines within all types of university.

It provides:

» a structured pathway to guide career progression on the basis of the academic's contribution to university teaching and learning

» an evidence base through which to evaluate and demonstrate the academic's teaching achievement during appointment, promotion, professional development and annual appraisal.

This report describes the background and development of the Framework, summarises its key features and illustrates how the Framework is being used in practice. It builds on previous publications that marked key stages in the Framework's development.[1, 6, 7]

It should be noted that the term 'teaching achievement' is used throughout this report and the Framework to denote an individual's contribution to and impact in teaching and learning. This includes impact via educational research as well as impact on the quality of teaching and learning at an institutional, national and global level.

> Further information about the Framework can be found at
> www.teachingframework.com

PHASE A
2013–2015

Capturing perspectives on how teaching achievement is rewarded and recognised in UK universities

- Survey evidence (n=604)
- Interview evidence (n=52)

Report
(PUBLISHED MARCH 2015)

PHASE B
2015

Review of knowledge and existing practices in the evaluation and reward of academic teaching achievement

- Literature review
- Interviews with academics (n=24)
- Review of promotion policies
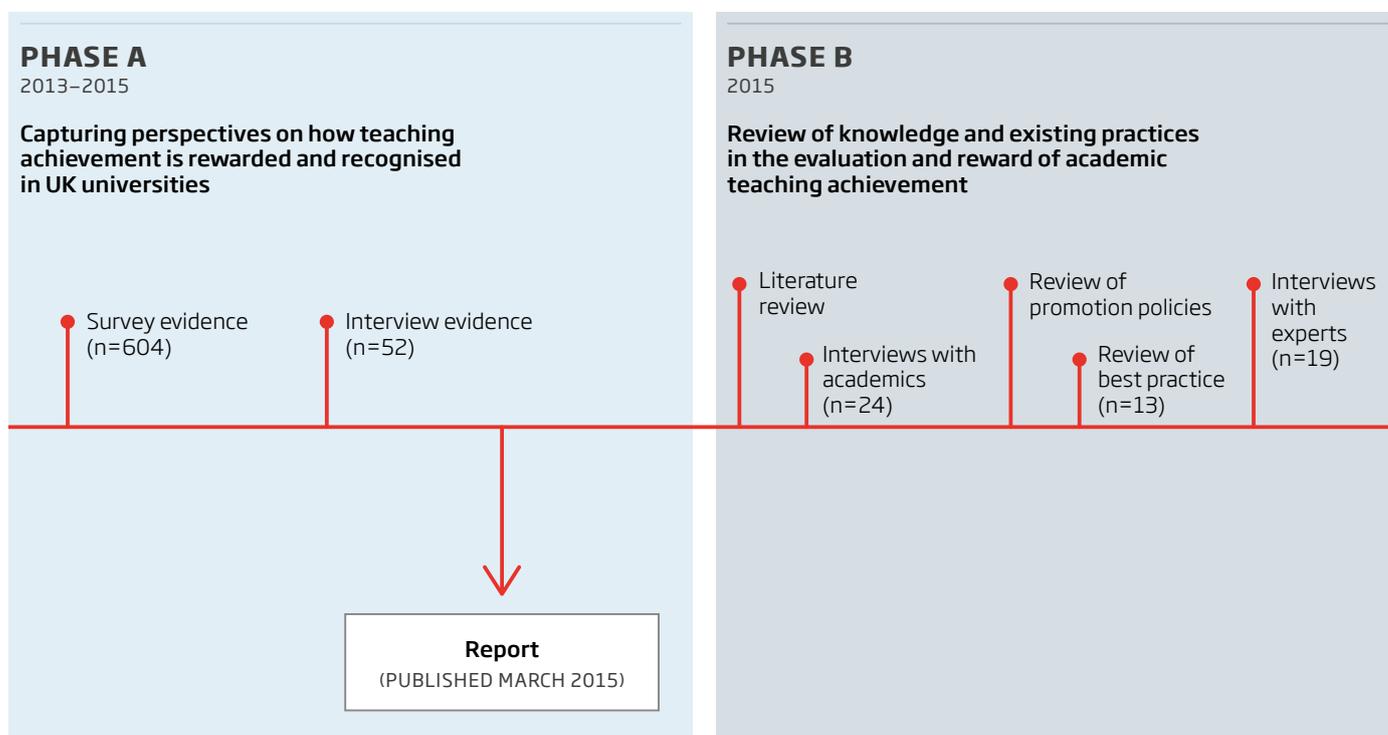- Review of best practice (n=13)
- Interviews with experts (n=19)

Figure 1:   Project timeline, 2013 to 2018

Project approach

The development of the Framework progressed through four stages as summarised in Figure 1.

PHASE A
(November 2013 to March 2015)

examined perceptions of how university teaching is recognised and rewarded in academic careers. It drew on survey (n=604) and interview (n=52) evidence from the UK academic community. Findings were published in March 2015.[1]

PHASE B
(January to July 2015)

reviewed current practices and state of the art in the evaluation and reward of teaching achievement. It brought together evidence and insights from a range of sources, including:

» a snapshot review of the literature on the evaluation and reward of teaching achievement from within and beyond the higher education sector.

» interviews with academics across the world (n=24) about their experiences of using different forms of evidence of teaching achievement to support their cases for appointment, promotion or a teaching award/fellowship.

» a desk-based review of guidance relating to the evidencing of teaching achievement within the appointment and promotion process at 14 of the world's top-ranked universities.

» identification and review of international good practice in the evaluation and evidencing of teaching achievement in higher education, drawing on interviews (n=13) with those engaged in designing, implementing and using these systems.

» one-to-one interviews with global experts (n=19) in university teaching and learning, the measurement of teaching achievement and university promotion procedures.

PHASE C
2015–2016

Development and review of draft of Framework

- Establishment of the Framework's design principles
- Review of draft Framework by expert panel

Draft Framework
(PUBLISHED FEB 2016)

PHASE D
2016–2018

Working with partner universities from across the world to review, implement and refine Framework

- Engage group of 15 partner universities
- Support for piloting and implementation of Framework at partner universities
- Preparation of case studies from partner universities

Annual meetings with partner universities
(2016, 2017 & 2018)

Final report and Framework
(PUBLISHED APRIL 2018)

PHASE C
(July 2015 to January 2016)

developed the Framework as a resource for universities to evaluate and reward university teaching achievement. Phases A and B were used to identify the principles underpinning the new Framework. The draft version of the Framework was reviewed by 11 of the global experts consulted during Phase B of the project.[6]

PHASE D
(January 2016 to April 2018)

road-tested the Framework in universities across the world. Feedback was provided by 15 partner universities in 12 countries, enabling iterative improvements to be made to the Framework. University partners were drawn from institutions engaged in internal discussion about reshaping their reward and/ or appraisal processes with respect to teaching. Case studies give more detail of the ways in which the Framework is being used and illustrate its adaptability to different national and institutional priorities.
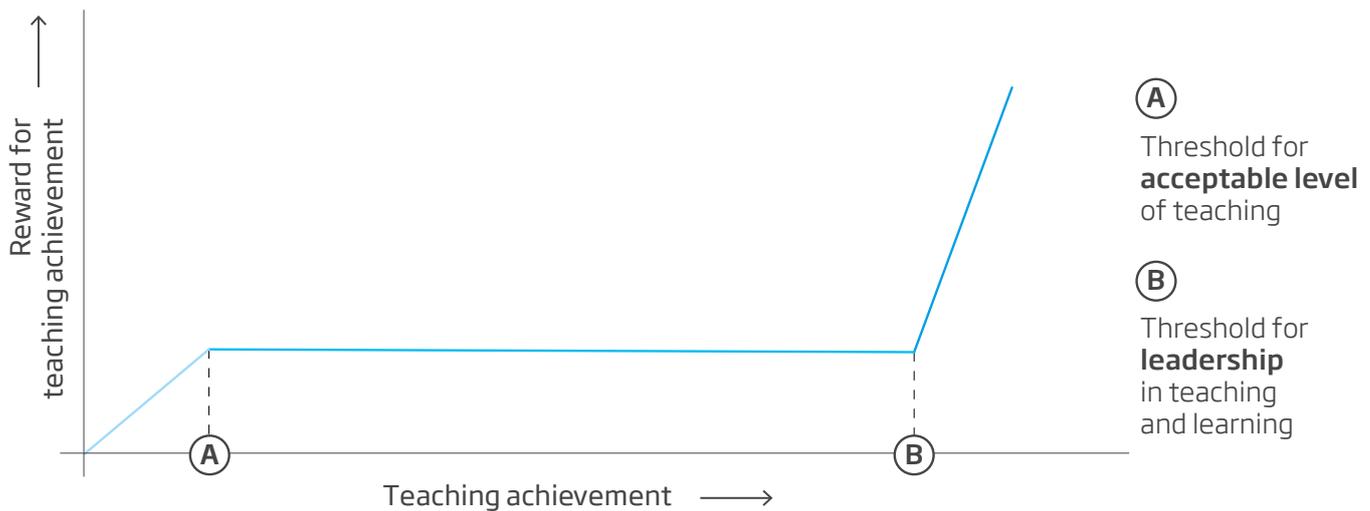
Context for change

Figure 2: A model for how teaching achievement, and progressive improvement in this achievement, is typically rewarded in current university promotion systems

The mission of higher education includes the promotion of excellence in research and teaching. However, it is widely recognised that the systems by which academic staff are evaluated and rewarded focus primarily on their research performance.

To date, teaching excellence has played a much less central role in career advancement. Universities have sought to give greater recognition to an academic's contribution to teaching and learning; however, evidence from phases A and B of the project suggest that the changes have affected only a very small section of the academic community.

As Figure 2 indicates, many universities set, either explicitly or implicitly, a minimum threshold for teaching quality. So an academic whose teaching contribution falls below an acceptable standard, marked A in Figure 2, may find it difficult to progress up the career ladder. At the same time, many universities provide promotion pathways for those seen as outstanding with respect to teaching and learning, whose teaching achievement extends beyond point B in Figure 2. The members of this small group are likely to be making high-profile and externally-recognised contributions to teaching and learning, often as part of an education-focused role, and find that these achievements add weight to their promotion cases.

The reality for most academics is that their teaching achievements make little difference to their career prospects.

Without clarity on how achievements will be evaluated, it is very difficult to plan for advancement on the basis of teaching.

However, for the large majority of academic staff, particularly those on 'standard' T&R contracts, any teaching contributions beyond the minimum threshold are unlikely to have a major impact on their chances of promotion at any stage of their career. Despite what might be written in the university's promotion guidelines, the reality for most academics performing above the minimum threshold is that their teaching achievements make little difference to their career prospects. In the words of one academic interviewee from Phase A of the project, *"teaching just does not get you promoted. Pure and simple".*

The disjunction between a university's educational mission and its appointment and promotion system is one that many universities are seeking to address. However, two major structural barriers are holding back change:

1. **The absence of clear and accepted definitions of progressive 'levels' of teaching achievement** that punctuate each stage of the academic career – between points A and B in Figure 2.

2. **The inadequacy of the forms of evidence currently used to demonstrate and evaluate** the teaching contribution of academics at each stage in their career progression.

Drawing on the evidence gathered in Phases A and B of the project, these two challenges are explored further in the two subsections that follow.

2.1 Defining progressive 'levels' of teaching achievement

Feedback from the global academic community suggests that universities are struggling to define the progressive levels of teaching achievement that underpin advancement on the basis of teaching and learning. The feedback pointed to two particular problems.

Firstly, university guidance relating to the recognition and reward of teaching is often unclear. It is therefore difficult for academics to plan their career and for university managers to evaluate their progress. As two experts consulted for Phase B of the project observed, guidance relating to the education-based promotion can be *"muddled and unclear"*; as a result, *"candidates are often left in the dark about the criteria that are being used to assess their teaching"*.

To explore this issue, the project author undertook a desk-based review of promotion policies at 14 of the world's top-ranked universities, looking specifically at promotion application forms and guidelines (see Appendix). Of the 14 sets of promotion forms and guidelines, most did not appear to make a clear distinction between teaching-based **promotion criteria** (the characteristics of teaching achievement that the institution would look for in a successful candidate) and the teaching-based **evidence** (the qualitative and quantitative data that must be provided to demonstrate achievement of the criteria). A review of US institutional teaching awards identified similar ambiguity between the stated criteria and evidence of teaching achievement.[8] In addition, only five (36%) of the 14 institutions provided a description of what was meant by teaching achievement (such as the level of teaching achievement expected of candidates), and few offered guidance on what forms of evidence could be used to demonstrate teaching achievement. Instead, there were open-ended statements such as *"the candidate must demonstrate evidence of innovation in teaching"*, with no further guidance on what such evidence might be and how it might be considered.

Without clarity on how their teaching achievements will be evaluated and on the factors that will support their career advancement, it is very difficult for academics to plan for advancement on the basis of teaching and learning. Instead, they may simply choose to focus on research achievements, where promotion criteria and supporting evidence are well understood.

University reward systems give little emphasis to educational leadership, which requires collaboration with colleagues across the institution.

Secondly, in an attempt to increase opportunities for career advancement on the basis of contributions to teaching, many universities have established education-focused career pathways linked to educational scholarship. This approach enables universities to make direct comparisons between contributions to educational scholarship and to research. However, there are problems with this approach. Feedback from experts in university teaching and learning and the wider academic community highlighted how career tracks based on educational scholarship can become 'exclusive clubs' and therefore discourage the 'all round' academic – who excels in both teaching and research – from investing in teaching. Further, successful scholars do not necessarily have an impact on the quality of education at their home university. As one university leader consulted in Phase A observed, *"there is a comfort with measuring [teaching] scholarship… there is an equivalence there with research, but it sends the message that impact [on institutional teaching and learning] does not translate into promotion"*.

Evidence from the project suggests that university reward systems often give little emphasis to educational leadership. While educational scholarship can be undertaken by the individual working alone, educational leadership requires collaboration with colleagues across the institution. Leadership is distinct from management,[2, 9] and is exemplified by *"creativity, innovation, an ability to inspire and influence others, and an ability to make a demonstrable impact on both student education and on the work and motivation of colleagues"*.[3] As one expert in teaching and learning noted:

> *"…it is a question of 'what contributes most to the quality of education at [my university]?' No question, we need educators who are skilled and committed, but how many people do we need outside of the [university's] school of education who are writing academic papers on pedagogy? What I need are people who are across the university, changing the culture, bringing people together, bringing in new ideas… helping us all improve how we teach… We have been ignoring these people; they are nowhere in the [promotion guidelines] at the moment."*

2.2 Identifying evidence to demonstrate achievement

Robust evidence is a prerequisite for rigorous systems for assessing and rewarding teaching achievement. Phases A and B pointed to the difficulties that individuals and institutions faced in compiling and evaluating such evidence. Two particular problems were highlighted.

Firstly, commonly-used measures of teaching achievement do not command the respect of the academic community and their university managers.

Survey data (n=604) from Phase A showed that, while four in five (80%) of academics regarded the evidence used to evaluate research achievement as 'very robust' or 'somewhat robust', only a minority (29%) expressed the same levels of confidence for teaching achievement.[1] During follow-up interviews, many raised particular concerns about over-reliance on student evaluation surveys as the primary, and sometimes only, source of evidence used to demonstrate teaching achievement. As the Phase A report concluded:[1]

> *"The metrics used to evaluate teaching contribution are seen to be poor indicators of achievement and impact. They are therefore often attributed little weight by candidates when preparing their cases and are perceived to be accorded little weight by promotion boards when evaluating these cases."*

While standard measures of research achievement are internationally recognised and are used to support the inter-institutional mobility of academics across the world, the forms of evidence used to demonstrate teaching achievement are unlikely to carry weight beyond the candidate's home institution. As Gunn and Fisk[9] note, the *"lack of standardisation"* in the criteria used to evaluate teaching excellence has left *"promotion panels with institutionally subjective criteria rather than quality controlled approaches that map appropriately to other institutions within the same mission group"*.

Secondly, while doubts were expressed about the existing measures of teaching achievement, alternative metrics are not routinely collected either by academics or universities. This stands in contrast to research, where evidence of quality and impact is integral to the research process and is built into university performance management. For example, academics record their research grant income, research publications and research impact on an ongoing basis, and can additionally use externally-generated metrics such as citation counts and the H index. Updated on an ongoing basis, such measures are a low-cost resource both for individuals and institutions seeking to monitor their research achievements.

However, collecting evidence of individual quality and impact is not integral to the process of teaching. It therefore places a much greater burden on academics seeking to record their educational contribution: often, only limited institutional support is provided to academics preparing such evidence for appointment and promotion. The challenge is therefore to establish forms of evidence of teaching achievement that are respected across the academic community and can be integrated into the academic's role and into wider institutional processes. As well as transforming the capacity of universities to appropriately evaluate and reward the teaching achievements of their academics, such sector-wide measures of teaching achievement would open the door to greater inter-university mobility of academics excelling in teaching and learning.

Collecting evidence of individual quality and impact is not integral to the process of teaching. It therefore places a much greater burden on academics seeking to record their educational contribution.
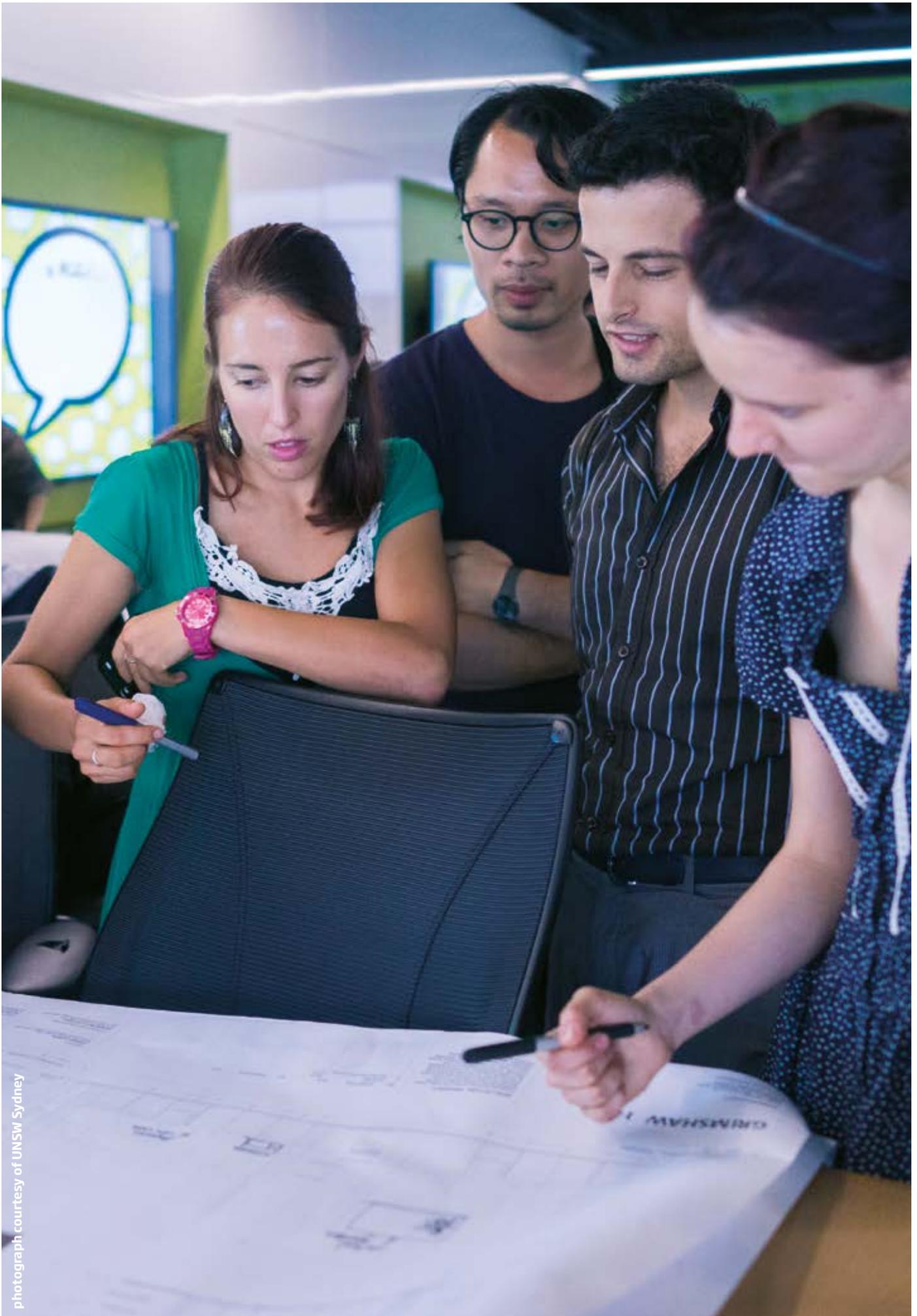
Developing the Framework

Phase C of the project focused on the development of the Career Framework for University Teaching. This section provides an overview of this process.

The development process began by articulating a set of design parameters that addressed the key challenges facing the evaluation and reward of university teaching achievement (summarised in Section 2). These design parameters, outlined in Box 1, underpin the Framework and, drawing on wider literature in the field, informed its development.

An overarching structure for the Framework was produced, as illustrated in Figure 3. This structure defines four progressive levels of teaching achievement that range from the 'effective teacher' (the threshold for acceptable university teaching) through to the 'global/national leader in teaching and learning' (an individual with impact on a global or national stage). At the third level, the Framework offers two parallel branches for progression, focused respectively on impact on the educational environment and on pedagogical scholarship, giving candidates the option of following one or a combination of these pathways.

LEVEL 4	National / global leader in teaching and learning
LEVEL 3	Institutional leader in teaching and learning	Scholarly teacher
LEVEL 2	Skilled and collegial teacher
LEVEL 1	Effective teacher
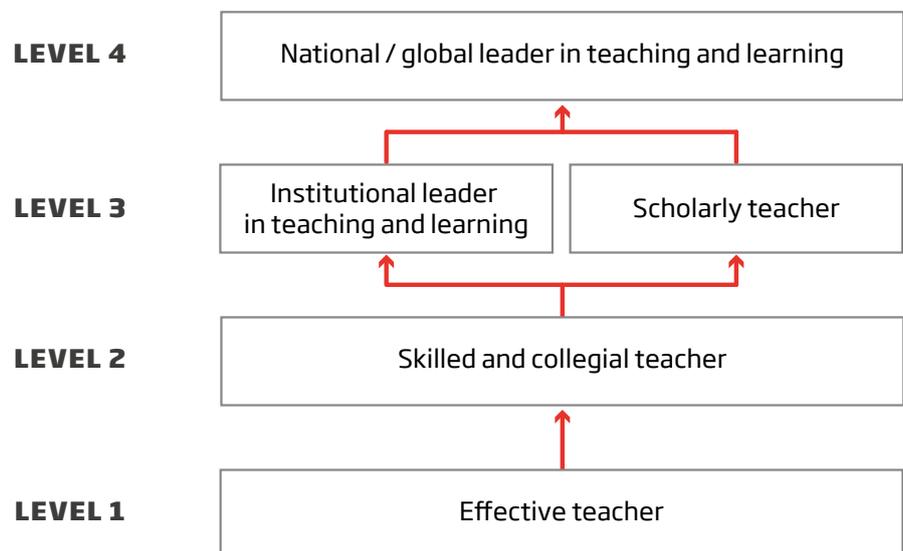
Figure 3: The Framework's core structure, containing four progressive levels of teaching achievement

With the overarching structure of the Framework in place, work focused on its two core elements:

1. The **definition of teaching achievement** at each of the Framework's levels and the associated promotion criteria that would underpin progression.

2. The **forms of evidence** that could be used to demonstrate achievement of the criteria at each Framework level.

The development of these elements of the Framework is outlined in the subsections that follow.

BOX 1   **DESIGN PARAMETERS**

THE FRAMEWORK SHOULD:

BE APPLICABLE TO ALL ACADEMIC ROLES THAT INVOLVE TEACHING

> The Framework should guide and support the teaching and learning achievements of all university academics, including those on T&R contracts as well as those on education-focused contracts. It should enable universities to embed a progressive increase in the minimum threshold for acceptable teaching. It should therefore (i) accommodate a range of levels of teaching achievement that mark advancement beyond this minimum threshold, and (ii) allow T&R academics the opportunity to place a greater weight on these contributions in their promotion cases.

RECOGNISE EDUCATIONAL LEADERSHIP AS WELL AS EDUCATIONAL SCHOLARSHIP

> Career progression in teaching and learning should not be confined only to those contributing to pedagogical scholarship. It should therefore (i) also support progression on the basis of educational contribution and leadership at a group, departmental, institutional or national/global level, and (ii) emphasise impact and legacy rather than managerial responsibility.

BE ACTIONABLE

> The Framework should be one that can be implemented within the current academic system. It must provide a well-informed, rigorous system of evaluation that does not disrupt wider academic structures and processes. It should (i) not be overly burdensome for candidates or for university promotion panels, and (ii) be capable of operating in conjunction with evidence of achievement in other domains of the academic role, such as research or technology transfer. The Framework is therefore not designed to encompass activities associated with research-related or other academic activities.

PROVIDE CLARITY ABOUT THE FORMS OF EVIDENCE THAT CAN SUPPORT A CASE

> The Framework should provide clear recommendations about the types of evidence that appointment/promotion candidates can use to demonstrate their teaching achievements. In particular, the Framework should (i) make a clear distinction between *criteria* (the types of teacher characteristics desired) and *evidence* (the forms of evidence that a candidate can use to demonstrate achievement of these characteristics), and (ii) provide clear definitions of each form of evidence along with guidance on how relevant data can be gathered.

OFFER A FLEXIBLE RESOURCE THAT CAN BE USED ACROSS A RANGE OF UNIVERSITY CONTEXTS

> The Framework should offer a set of definitions and criteria that are not bounded by institutional, national or disciplinary conventions. It would therefore maximise the opportunity for teaching achievements to be 'portable' and recognised by other universities in a similar way to research achievements.

SUPPORT CONTINUING DEVELOPMENT IN TEACHING AND LEARNING

> In addition to appointment, promotion and annual appraisal, the Framework should support continuing professional development in teaching and learning (i.e. support academics as they improve their teaching practice and as they progress towards each step of the career ladder).

PROVIDE A SYSTEM THAT HAS THE APPROVAL OF THE ACADEMIC COMMUNITY

> Prior to finalisation, the Framework should have been reviewed and piloted at a range of different institutions worldwide to (i) refine and improve its design, and (ii) build community recognition, support and trust for the application of the Framework.
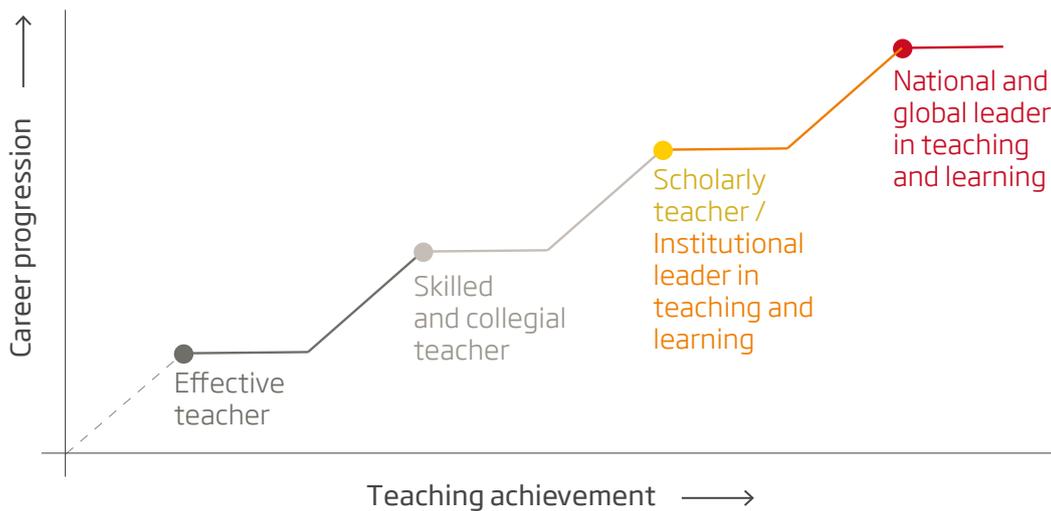
Figure 4:   A model for how teaching achievement would be recognised through the Framework

3.1 Defining progressive levels of teaching achievement

The Framework is designed to overcome shortcomings in the way teaching achievement is currently rewarded in universities (shown in schematic form in Figure 2). It provides a series of differentiated 'levels' of teaching achievement that could each be evaluated and recognised by institutions, as illustrated in Figure 4. The process of establishing these definitions was undertaken in two broad steps, as outlined below.

Step 1: Establishing the principles that would underpin progression: this step was informed by Phase B's interviews with pedagogical experts and analyses of global best practice. Both sources made clear that progression should be underpinned by breadth as well as quality of impact. Therefore, to progress beyond the lower levels of the Framework, an academic must widen their *sphere of impact* in teaching and learning beyond the students they teach and tutor. With progression, this sphere of impact would expand to encompass (i) the environment for teaching and learning within and beyond their institution, and/or (ii) pedagogical scholarship that influences both educational knowledge and practice.

Step 2: Defining the promotion criteria for each Framework level: with the Framework levels in place (Figure 4), the next step was to articulate a corresponding definition of teaching achievement. This step drew on the teaching and learning literature, interviews with pedagogical experts and global best practices in the evaluation and reward of teaching achievement, including the University of South Australia (Australia), Uppsala University (Sweden), Higher Education Academy Fellowship scheme (UK), University of Edinburgh (UK), Lund University (Sweden) and Chalmers University of Technology (Sweden).

The Framework provides a series of differentiated 'levels' of teaching achievement that could be recognised by institutions.

One potential criterion generated particular debate, namely whether pedagogical training or an evidence-based approach to teaching would be expected at level one of the Framework (the 'effective teacher' level). Current practice varies considerably: some universities (including many in Europe) require all teaching-active academics to have completed pedagogical training, while others (including many US universities) have no such requirement. A range of views was expressed by those consulted in Phases B and C. Some argued that pedagogical knowledge and an evidence-informed approach was a prerequisite for high-quality teaching, and therefore should be an expectation of all academics. However, the consensus view was that, in the words of one teaching and learning expert, *"the practice comes first, then you can become more skilled, more reflective."* The expectation for demonstrable teaching skills is therefore reserved for the second level of the Framework, the 'skilled and collegial teacher'.

This table outlines the definitions of teaching achievement established for each level of the draft Framework, along with the evidence that informed them.

LEVEL 1	LEVEL 2
The Framework defines an **'effective teacher'** as an individual who *"takes a conscientious and reflective approach, creating positive conditions for student learning and demonstrating effective teaching delivery that develops over time"*.	The Framework defines the **'skilled and collegial teacher'** as an individual who *"takes an evidence-informed approach to their development as a teacher and provides mentorship to their peers to promote a collegial and collaborative educational environment across their school or discipline"*.
The definition was influenced by various classifications of 'acceptable' and 'excellent' teaching.[9-12] It was also guided by the concept of 'pedagogical competence', developed in Sweden, which stresses the importance of *"continuous development of teaching and personal professional development"* over time.[13] The 'effective teacher' would not be expected to demonstrate an evidence-based teaching approach (beyond what was required by their institution). Promotion criteria would instead focus on the candidate's attitudes (a reflective and professional attitude that develops over time) and delivery (the effective design, delivery and assessment of courses and materials).	Drawing inspiration from the Swedish definition of 'pedagogical competence',[13] the 'scholarly and reflective teacher' would adopt an evidence-informed and student-centred approach to improve student learning and engagement. Alongside this emphasis on the candidate's skills in teaching and learning, the promotion criteria also focus on their demonstrated collaboration to support a collegial and collaborative learning environment.

LEVEL 3A

The Framework defines the **'institutional leader in teaching and learning'** as an individual who *"makes a significant contribution to enhancing the environment for inclusion and excellence in teaching and learning within and beyond their institution"*.

As noted in Section 2, educational leadership is given little focus in the literature.[3, 9] The definition of the 'institutional leader in teaching and learning' was instead informed by examples of good practice (such as from the University of Edinburgh and Lund University) and feedback from experts in teaching and learning and the wider academic community. The promotion criteria emphasise the candidate's leadership, recognising their legacy and impact on educational quality across and beyond their institution, rather than simply crediting their managerial responsibilities.

LEVEL 3B

The Framework defines the **'scholarly teacher'** as an individual who *"makes a significant contribution to pedagogical knowledge by engaging with and contributing to scholarly research that, in turn, influences educational practice within and beyond their institution"*.

This definition drew on descriptions in the literature[14, 15] where 'scholarly' approaches to teaching are distinguished by teacher self-reflection and the use of evidence-informed approaches to improve student learning. It also drew on concepts of the scholarship of teaching[14, 16] where the individual contributes to knowledge in the field through systematic enquiry and "our work as teachers becomes public, peer-reviewed and critiqued".[15] The promotion criteria emphasise the candidate's contribution to knowledge, while also making clear that the work of the 'scholarly teacher' must be applied and must influence educational practice at and beyond their institution.

LEVEL 4

The Framework defines the **'national and international leader in teaching and learning'** as an individual who *"makes exceptional contributions to teaching and learning in higher education through national and global influence and leadership in educational practice and/or in pedagogical research"*.

This definition built on those of both the 'scholarly teacher' and the 'institutional leader in teaching and learning'. It drew upon examples of good practice (such as the University of Sheffield) and feedback from experts in teaching and learning. The promotion criteria emphasise, in particular, the candidate's influence in teaching and learning at a national and global level.
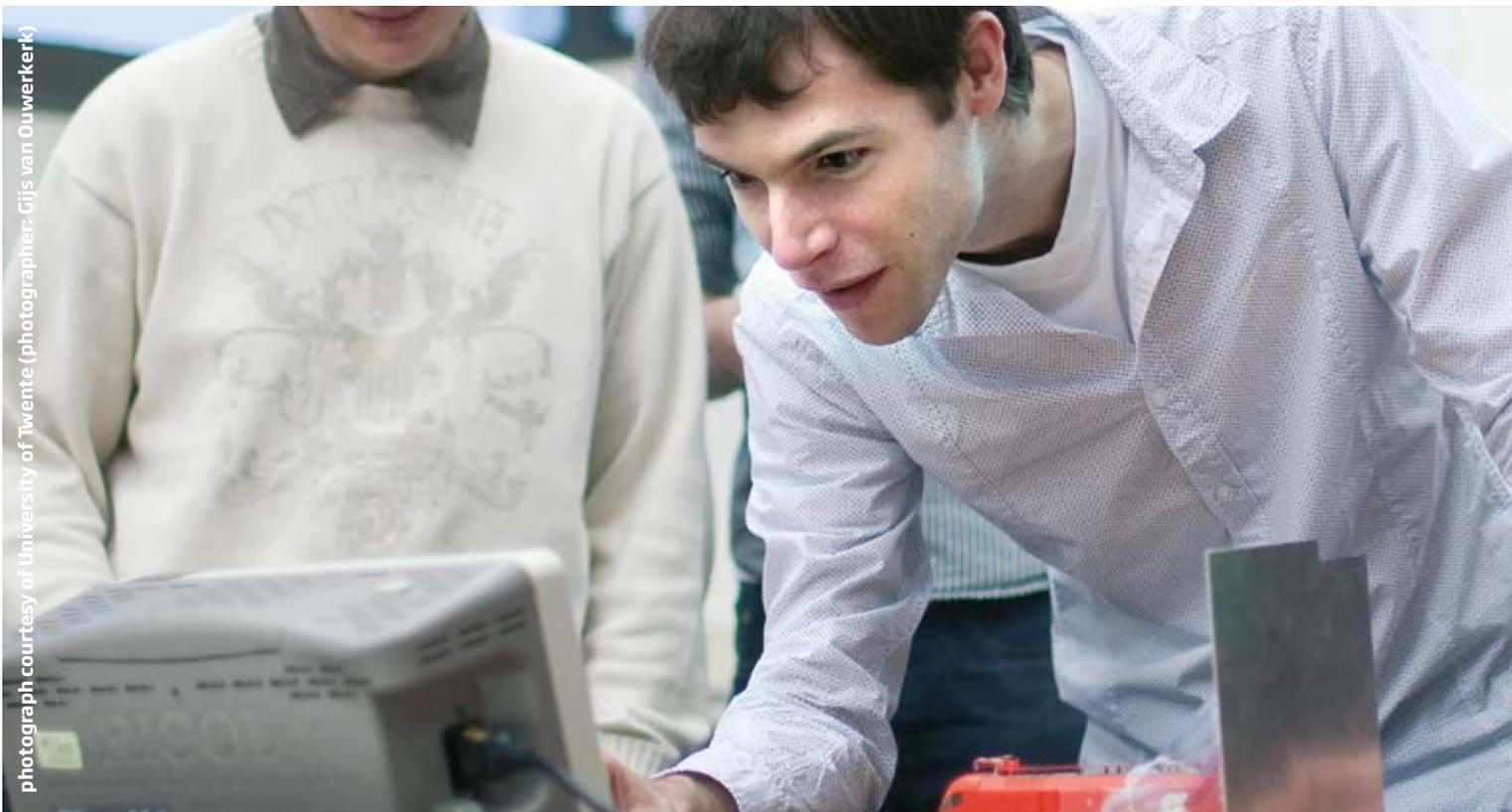
3.2 Forms of evidence used to demonstrate teaching achievement

The Framework's development also involved identifying forms of evidence that could be used to demonstrate achievement in teaching and learning. The process of defining these forms of evidence was undertaken in four broad steps, as outlined below.

1. Review of the forms of evidence that can be collected by universities

This step involved a literature review of the forms of evidence of teaching achievement that can be collected during the appointment and promotion process[11, 17–23] and called for during submissions for teaching awards.[8, 24, 25] A desk-based review was also undertaken of the forms of evidence required by 14 of the world's top-ranked institutions as a mandatory element of a candidate's submission for appointment/promotion to full professorship (as summarised in the Appendix).

2. Identification of alternative/newly developed forms of evidence

A review was also conducted to identify alternative or newly developed forms of evidence of teaching achievement that could be usefully incorporated into the Framework. The review pinpointed a number of projects and developments, such as OECD's Assessment of Higher Education Learning Outcomes (AHELO),[26] an assessment instrument that supports cross-institutional comparison of student learning across institution and countries, and approaches to evaluate student learning gains, such as those outlined in an ongoing project supported by the Higher Education Funding Council for England.[27] Despite the potential of such tools, none could be easily and immediately adopted across universities and academics for the purposes of evaluating individual teaching achievement. Indeed, rather than relying on one or two lone metrics, the literature pointed to the importance of triangulating evidence of teaching achievement from a wide range of sources.[11, 28, 29] A decision was therefore made that the Framework would draw on a wide range of different sources of evidence, giving candidates flexibility and scope to select the forms of evidence best suited to their teaching profile.

3. Development of a system to classify the different forms of evidence available

Having decided that the Framework would facilitate the inclusion of a wide range of evidence sources, the next step considered how these evidence sources should be presented. This was progressed through a review of systems to classify measures of teaching achievement [9, 11, 18, 30, 31] together with classification systems used at universities across the world (e.g. University of South Australia, Hong Kong University of Science and Technology, the University of Edinburgh, University of Wollongong and Western Sydney University). Building on these inputs, the Framework categorised the forms of evidence that can be used to demonstrate an individual's teaching achievement into five broad domains: (i) self-assessment; (ii) professional activities; (iii) direct measures of student learning; (iv) indirect measures of student learning; and (v) peer evaluation and recognition.

4. Developing advice and guidance for academics

The final step was to gather information and develop guidance to help candidates to identify the most appropriate source of evidence and gather the data required. This guidance was developed through case studies, highlighting different forms of evidence that can be collected and presented as part of an appointment or promotion case. Targeted interviews were held with 13 appointment and promotion candidates that had each used different forms of evidence of their teaching achievement in a successful appointment or promotion case. From these interviews, eight case studies were developed, as presented in the interim Framework report[6] and as included in the project website (teachingframework.com). Additional interviews with experts in teaching and learning were used to establish guidance on how candidates could collect and present evidence of their teaching achievement.

Road-testing the Framework

The final phase of the project involved road-testing the Framework to ensure that it had the greatest potential for application in different higher education contexts around the world.

This phase brought together 15 partner universities, from across 12 countries, to provide feedback on the Framework and demonstrate how it can be used in practice. Of the 15 universities, four institutions provided feedback based on a review of the written Framework, two institutions based their feedback on their experience of piloting the Framework within selected schools or faculties, and nine institutions based their feedback on their experience of using the Framework to inform a revision of university-wide reward/appraisal systems.

University partners were drawn from institutions worldwide that are already engaged in internal discussion about reshaping their reward and/or appraisal processes with respect to teaching. The university partners are listed below:

» Chalmers University of Technology, Sweden

» School of Engineering and Applied Sciences & Faculty of Arts and Sciences, Harvard University *

» École Polytechnique Fédérale de Lausanne (EPFL), Switzerland *

» School of Engineering, Massachusetts Institute of Technology (MIT), US *

» National University of Singapore (NUS), Singapore

» NMiTE (New Model in Technology and Engineering), UK

» Pontifical Catholic University of Chile (PUC), Chile

» Skolkovo Institute of Science and Technology (Skoltech), Russia

» Technical University of Denmark (DTU), Denmark

» Universiti Teknologi Malaysia, Malaysia

» University College London (UCL), UK

» University of Edinburgh, UK *

» University of New South Wales, Australia

» University of Technology and Engineering, Peru

» University of Twente, Netherlands

Universities marked with an asterisk (*) provided their feedback based only on a review of the written Framework and did not pilot or use the Framework in practice.

4.1 Supporting reform at partner institutions

Phase D ran for 28 months to give partner universities time to engage their academic communities and develop and roll out reforms to their professional development and/or recognition systems. This required a range of activities and typically included:

» a series of university-wide consultations to capture perspectives on current systems and the potential for change

» the establishment of cross-institutional taskforces to develop draft plans for change

» a final approval process by the university management board (or equivalent)

» activities to introduce the new professional development/reward systems to the academic community, which could involve workshops, away-days and/or the development of case studies of how the systems could be used in practice.

During this phase, the Framework's author provided one-to-one support to individuals identified as key points of contact at the partner universities as they worked through the process of change. This included both off-site support and, in some cases, onsite meetings with university leaders and stakeholders (such as HR managers and university academics).

Annual partner meetings were also held in 2016, 2017 and 2018 at the Royal Academy of Engineering in London. Most participants were senior leaders or representatives from the HR or teaching and learning offices. The annual meetings were also attended by a small group of individuals from across the world with particular expertise in the evaluation and recognition of university teaching.

4.2 Feedback provided by university partners

Throughout Phase D, the partner universities offered feedback on the Framework: its structure, focus, layout and writing style. This feedback was used to make iterative improvements to both the written Framework and the linked website.

Some of the changes were presentational, for example amending terms that were unclear when translated into different languages and institutional contexts. A number of changes were more substantial and related to the Framework's design and structure. These are noted in Box 2.

BOX 2

CHANGES MADE TO THE FRAMEWORK

EXPANDING THE FRAMEWORK'S SCOPE OF APPLICATION

When originally designed in early 2016, the Framework was aimed primarily at supporting change to academic promotion systems. University partners pointed out that promotion protocols did not operate in isolation: to be successful, any reforms to promotion systems must be made in conjunction with parallel reforms to institutional appointment, professional development and annual appraisal procedures. By mid-2016, therefore, the focus of the Framework expanded to encompass the teaching and learning components of all institutional reward and professional development systems.

AMENDING THE EVIDENCE DOMAINS

The first draft of the Framework presented five broad evidence domains that could be used to demonstrate an academic's teaching achievement, which included separate domains for 'direct measures of student learning' and 'indirect measures of student learning'. Following feedback from university partners, these two domains were merged into one, in acknowledgement of the fact that, in practice, few academics are in a position to collect direct measures of student learning.

LIMITING THE LENGTH OF THE DOCUMENT

Almost all university partners stressed the need to keep the Framework document as concise as possible. The original document produced was over 30 pages in length and contained full promotion criteria for each Framework level, as well as details of all forms of evidence that could be used to demonstrate achievement of the criteria. Early piloting and implementation by partner universities made clear that key stakeholders, such as promotion candidates and their managers, felt unable to digest this amount of material. A much shorter – five-page – 'core' Framework document was therefore produced, where further information and detail was made available via hyperlinks to the project website. Individual universities would then be able to attach this 'core' Framework document to institutional documentation on appointment and promotion policies and requirements.

AMENDING THE DEFINITION OF THE 'SCHOLARLY TEACHER'

Following feedback from university partners, the description of the 'scholarly teacher' was updated to emphasise the need for the candidate to positively influence teaching practice at and beyond their institution. Although the promotion criteria remained unchanged, the description of the 'scholarly teacher' was amended to highlight that the individual must be *"grounded in a student-centred perspective and share their findings with institutional colleagues, promoting communities of practice around their educational research"*.

EMPHASISING THE CANDIDATE'S SPHERE OF IMPACT

The candidate's expanding 'sphere of impact' was one of the key principles that guided the definition of the Framework's four levels of teaching achievement. Partner universities suggested that this principle should be emphasised more explicitly in the Framework documentation, with details included about the candidate's 'sphere of impact' at each level.

IMPROVING THE DIAGRAMS USED IN THE FRAMEWORK

University partners noted that academics and university managers often relied heavily on the embedded diagrams when seeking to apply the Framework. These experiences underlined the need for each of the Framework's diagrams to be self-explanatory as a standalone reference. All diagrams were updated accordingly. So, for example, the text used in the diagrams reinforces the fact that the expectations and promotion criteria for each level of the Framework are cumulative: that achievement at each Framework level is expected in addition to continuing achievement at lower levels.

The Framework in synopsis

Note on the Framework synopsis

This section contains a synopsis of the Framework. It should be reiterated that the Framework is designed:

1. to support professional development and appraisal as well as the appointment and promotion process

2. for use by all academics with any responsibility for teaching (e.g. where career progression rests primarily on research as well as where it is based primarily on educational achievements)

3. for application across disciplinary and geographic contexts, and at any higher education institution where teaching takes place.

The Framework has therefore been designed to maximise its applicability and adaptability. Its essential components are the definitions and promotion criteria defining the four levels. Beyond these elements, the Framework can be adapted to fit the contexts of its use. As one Vice-President from the group of university partners commented, "the Framework is like a modelling kit, that you use to fit your purpose".

For example, adaptations made in the adoption of the Framework by university partners included:

» replacing the terms 'teaching' and 'teacher' with 'education' and 'educator' respectively throughout the Framework document and accompanying information, in line with the terminology used at the institution

» including details of institutional teaching training and qualification requirements alongside relevant promotion criteria

» delineating the relationship between the Framework's levels and the 'rungs' on each of the university's career pathways. For example, some institutions spelled out the teaching achievement level beyond which academics on a T&R contract would not be expected to progress.

The Framework synopsis is designed to be used in conjunction with the project website, www.teachingframework.com
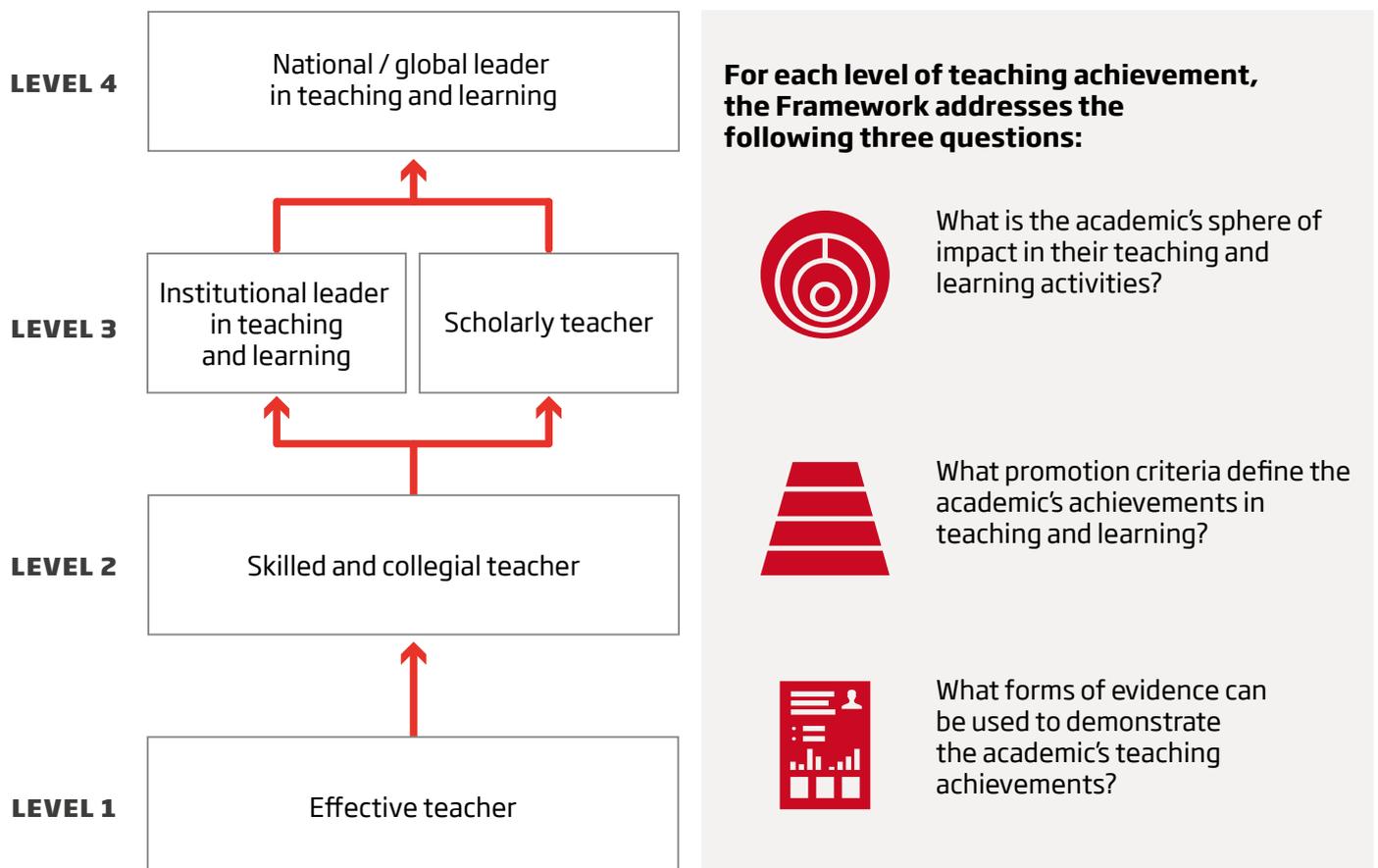
Introduction to the Framework

The Career Framework for University Teaching is designed to guide and support academic career progression on the basis of their contribution to teaching and learning. The Framework rests on the principle that all academics who teach – whether they be in an education-focused role or in a blended research/teaching role – should continue to strengthen the quality and impact of their teaching activities as they progress through their career. The Framework should be used alongside other mechanisms to evaluate and reward contributions academics make to their institution and discipline (such as research achievement) as appropriate to their role.

Offering both a structured pathway for academic career progression and an evidence base on which to demonstrate and evaluate teaching achievement, the Framework provides a template that universities can adapt to their career structures and progression points. It can be used to advance teaching achievement across the academic career, including appointment, professional development, appraisal and promotion.

The Framework is structured around four progressive levels of university teaching achievement.
Level 1 – 'the effective teacher' – represents a threshold of teaching achievement which all academics should attain. Level 4 – 'the national and global leader in teaching and learning' – is likely to be reserved for those progressing to full professorships solely or predominantly on the basis of their teaching achievement.

Please note: the term 'teaching achievement' is used to denote an individual's contribution to and impact on teaching and learning at an institutional, national and global level, including contributions to educational research.

LEVEL 4 — National / global leader in teaching and learning

LEVEL 3 — Institutional leader in teaching and learning · Scholarly teacher

LEVEL 2 — Skilled and collegial teacher

LEVEL 1 — Effective teacher

For each level of teaching achievement, the Framework addresses the following three questions:

What is the academic's sphere of impact in their teaching and learning activities?

What promotion criteria define the academic's achievements in teaching and learning?

What forms of evidence can be used to demonstrate the academic's teaching achievements?

🔗 **This document is designed to be used in conjunction with www.teachingframework.com where full details of the Framework can be found**

A. Spheres of Impact

SPHERES OF IMPACT (CUMULATIVE)
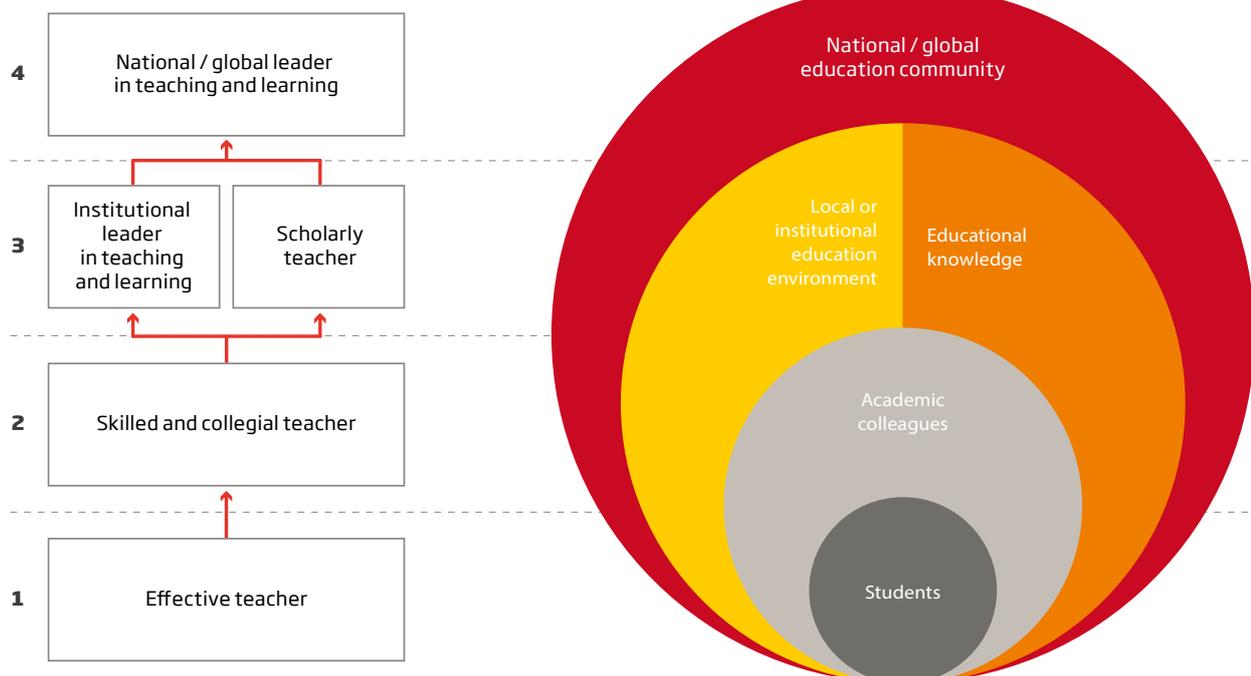
The four levels of the Framework are outlined above. They can be characterised in terms of the academic's sphere of impact in teaching and learning, which expands as they progress to each level. Please note: at level 3, the pathway splits, and individuals may elect to be assessed on the basis of their contributions to education at their home institution, and/or on the basis of their efforts in the scholarship of teaching and learning.

LEVEL 1 The effective teacher takes a conscientious and reflective approach, creating positive conditions for student learning and demonstrating effective teaching delivery that develops over time. Their primary sphere of impact is the students they teach and tutor.

LEVEL 2 The skilled and collegial teacher takes an evidence-informed approach to their development as a teacher and provides mentorship to their peers to promote a collegial and collaborative educational environment across their school or discipline. Their sphere of impact encompasses their academic colleagues (as well as students).

LEVEL 3A The institutional leader in teaching and learning makes a significant contribution to enhancing the environment for inclusion and excellence in teaching and learnin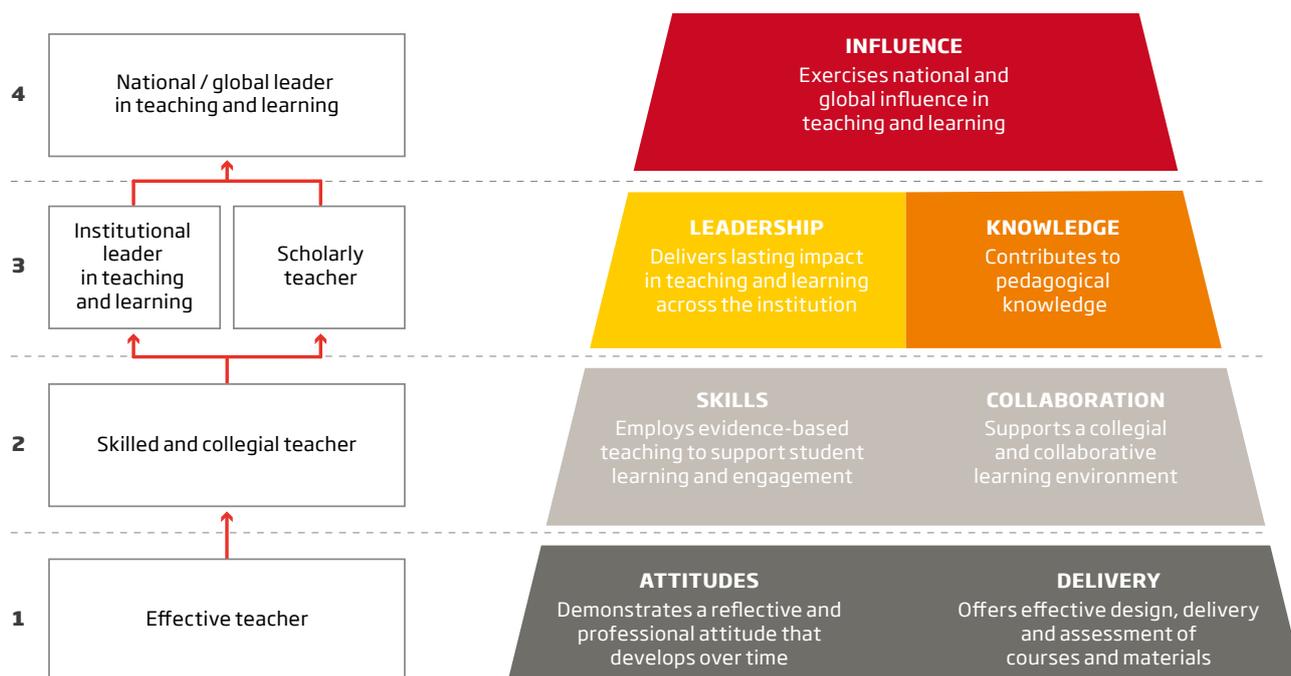g within and beyond their institution. Their sphere of impact encompasses the educational environment at their school/university (as well as their impact on academic peers and students).

LEVEL 3B The scholarly teacher makes a significant contribution to pedagogical knowledge by engaging with and contributing to scholarly research which, in turn, influences educational practice within and beyond their institution. Their sphere of impact encompasses 'educational knowledge', at their institution and within the community in their pedagogical fields of interest (as well academic peers and students).

LEVEL 4 The national and global leader in teaching and learning makes exceptional contributions to teaching and learning in higher education through national and global influence and leadership in educational practice and/or in pedagogical research. Their sphere of impact encompasses the national/global education community (as well as the relevant spheres noted above).

🔗 **Further details can be found at**
www.teachingframework.com/framework/spheresofimpact/

B. Promotion Criteria

PROMOTION CRITERIA (CUMULATIVE)

Framework Levels	Capabilities
4 National / global leader in teaching and learning	**INFLUENCE** Exercises national and global influence in teaching and learning
3 Institutional leader in teaching and learning / Scholarly teacher	**LEADERSHIP** Delivers lasting impact in teaching and learning across the institution · **KNOWLEDGE** Contributes to pedagogical knowledge
2 Skilled and collegial teacher	**SKILLS** Employs evidence-based teaching to support student learning and engagement · **COLLABORATION** Supports a collegial and collaborative learning environment
1 Effective teacher	**ATTITUDES** Demonstrates a reflective and professional attitude that develops over time · **DELIVERY** Offers effective design, delivery and assessment of courses and materials

The Framework's promotion criteria are conceptualised around the key capabilities that determine achievement at each level, as illustrated in the diagram above. Again, it should be noted that, at level 3, career progression splits into two parallel branches – one focused on impact on the educational environment and one focused on impact on educational knowledge – and individuals can opt to focus on one or a combination of these branches. Both branches offer progression to the fourth level, as a recognised global leader in teaching and learning.

All levels of the Framework are cumulative, with achievement at a higher level expected to be in addition to continuing achievement at lower levels. The full promotion criteria corresponding to each level of the Framework can be accessed using the hyperlinks in the table below.

LEVEL	ROLE	CUMULATIVE CAPABILITIES	PROMOTION CRITERIA
1	Effective teacher	**attitudes** and **delivery**	www.teachingframework.com/framework/promotioncriteria/effectiveteacher/
2	Skilled and collegial teacher	**skills** and **collaboration**	www.teachingframework.com/framework/promotioncriteria/skilledteacher/
3A	Institutional leader in teaching and learning	**educational leadership**	www.teachingframework.com/framework/promotioncriteria/institutionalleader/
3B	Scholarly teacher	**educational knowledge**	www.teachingframework.com/framework/promotioncriteria/scholarlyteacher/
4	National and global leader in teaching and learning	**national and global influenc**e in teaching and learning – in education knowledge and/or in educational practice	www.teachingframework.com/framework/promotioncriteria/globalleader/

🔗 **Further details can be found at www.teachingframework.com/framework/promotioncriteria/**

C. Forms of Evidence

There is a range of different forms of evidence that can be used to demonstrate an individual's teaching achievement. These forms of evidence have been grouped into four broad domains:

» **Self-assessment:** a self-reflective narrative describing the individual's educational approach, including how and why it has developed over time, as well as its impact.

» **Professional activities:** a description of the individual's professional activities in teaching and learning, providing insight into the nature, volume and range of contributions made, as well as their particular areas of interest and/or expertise.

» **Measures of student learning:** measures of student learning can be 'indirect' or 'direct'. 'Indirect measures' are evidence that has been shown to correlate with student learning, while not measuring it directly (such as pass rates, unsolicited student feedback, employer feedback). 'Direct measures' of student learning capture the knowledge/skills/attitudes of the student cohort, enabling evaluation of student performance over time or against a defined benchmark.

» **Peer evaluation and recognition:** assessments from peers, both internal and external to the university. Peer assessments can relate to a range of different aspects of an individual's teaching achievements, including their: (i) impact on teaching and learning within their institution; (ii) impact and influence beyond their own institution, including contributions to pedagogical knowledge; and (iii) esteem and recognition, through indicators such as teaching awards.

Using evidence in an appointment/promotion case

Teaching achievement can be seen to rest on two key components: approach and impact. Where possible, candidates (e.g. for appointment or promotion) should present evidence from at least one approach domain and at least one impact domain within their teaching and learning portfolios.

» **APPROACH:** a candidate's approach can be viewed as the 'input', or the prerequisite, for achievement, and is typically demonstrated by a candidate's self-assessment and, at early career stages, their professional activities.

» **IMPACT:** a candidate's impact can be viewed as the 'output' for achievement and is captured through a wider range of evidence, including professional activities at more advanced levels, direct and indirect measures of student learning and peer assessment.

APPROACH

Self-assessment & reflection

Professional activities

IMPACT

Measures of student learning

Peer review and recognition
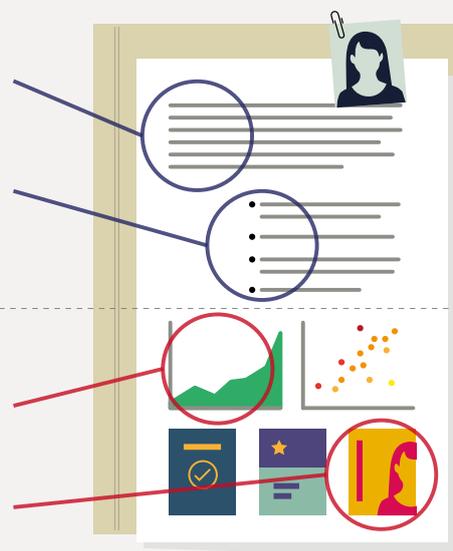
The blend of evidence sources used by candidates will vary considerably, depending on the nature of their teaching contribution. However, a candidate's 'approach' is likely to play a more prominent role at levels 1 and 2 of the Framework, while their 'impact' is likely to play a more prominent role at levels 3 and 4.

🔗 **Further details can be found at www.teachingframework.com/framework/evidence/**

Using the Framework

The Framework is designed as a flexible resource that can be used to support and advance educational excellence at universities across the world. This section provides an illustration of the different ways the Framework can be used by universities in practice.

These case studies are taken from the group of partner universities that have adopted or used the Framework to guide institutional reform to their systems for evaluating and rewarding teaching achievement.

The case studies cover a wide variety of contexts for reform, including a range of:

» **geographical contexts**, with case studies taken from seven different countries

» **institution types**, where the case studies include (i) both research-led and teaching-focused institutions; (ii) both specialist institutions and ones covering a broader range of disciplines; and (iii) both new-start universities, established from a blank slate, and long-established universities

» **types of reform**, including the development/redesign of university processes of academic appointment, annual appraisal, professional development and promotion, as well as awards/fellowships/bursaries in teaching and learning offered at an institutional or national level.

The nine case studies are listed in Box 3. In each case study, a figure describes how the Framework's levels of teaching achievement map onto the innovation (such as the new promotion system, new bursary scheme, the new teaching qualification).

The case studies make clear that new policies and structures for the evaluation and reward of teaching achievement are not 'standalone'; to be successful, they need to be embedded in a supportive institution. Nurturing a culture that inspires, supports and rewards excellence in education requires a suite of supporting measures aimed at building engagement, capacity and community across the academic population. These may include, for example, (i) workshops/away-days to introduce and explain the new reward/appraisal systems; (ii) the introduction of innovation grants, sabbaticals and new communities of practice for academics that are focusing specifically on education; and (iii) the development of institution-specific case studies to outline how academics with different interests/specialisms could progress up the career ladder under the new reward systems.

BOX 3   **CASE STUDIES**

6.1 The redesign of the university's three academic career pathways at
University College London (UCL) in the UK.

6.2 Improvements to the 'educator track', the teaching and learning career pathway at the
National University of Singapore (NUS).

6.3 The introduction of new teaching qualifications at
Chalmers University of Technology in Sweden.

6.4 The design of a new national bursary scheme established by the
Dutch Ministry of Education to support innovation in university teaching.

6.5 The design of the academic pathways at
University of Technology and Engineering (UTEC), a new-start university in Peru.

6.6 The development of new academic career pathways, professional development systems
and university teaching qualifications at the **University of Twente** in the Netherlands.

6.7 The redesign of the academic career pathways at the
Universiti Teknologi Malaysia (UTM) in Malaysia.

6.8 The establishment of a career and professional development Framework at
NMiTE, a new university under development in the UK.

6.9 The introduction of a new education-focused career pathway at the **University
of New South Wales, Sydney** (UNSW Sydney) in Australia.

University College London, UK

Redesign of the university's career framework

Based in the UK, University College London (UCL) is consistently rated among the world's top 10 universities in global rankings. In 2014, UCL embarked on a root-and-branch reform to its three academic career pathways:

» teaching fellow track

» research fellow track

» academic track (blending research and teaching).

The reforms were driven by a recognition that limited consistency and coherence existed between the university's three career tracks, and their scope was insufficiently flexible to recognise the full range and mix of activities undertaken by UCL academics. At the heart of the plans for change was also a major drive to improve the recognition and status of teaching and learning on campus. As UCL's 2034 strategy states:

"…in common with other universities, we have struggled to substantiate our commitment to parity of esteem between research and teaching and other activities in relation to the reward of academic staff."

The reform to the university's career pathways was designed to provide a new platform to raise expectations in and the profile of education at UCL.

From 2014 to 2017, the university engaged the UCL community in a wide consultative process informed by global research and best practice in academic recognition practices, including the Career Framework for University Teaching. This development phase resulted in a new unified recognition system for UCL – entitled the *UCL Academic Careers Framework* – that would underpin academic appointments, professional development, appraisal and promotions at the university. The *UCL Academic Careers Framework* was launched in October 2017 for the university's 2017/18 promotion round.

The new *UCL Academic Careers Framework* uses a single model to support all three career pathways, through evaluating the candidate's impact across four domains: teaching, research, institutional citizenship and enterprise/external engagement. At each step in the university's career ladder (grades 7 to 10), candidates seeking appointment/promotion must identify which of these four domains is:

» a **threshold** ability

» a **core** ability

» an **extended** (or specialist) ability.

The introduction of the 'threshold' criteria for each academic grade represents a major change to the UCL promotion systems; it requires promotion candidates at all grades of the academic track to meet a threshold level of teaching quality. As illustrated in Figure 5, this minimum bar of teaching achievement that all UCL academics must meet is equivalent to the 'effective teacher' level of the Career Framework for University Teaching. The introduction of the 'core' and 'extended' criteria also accommodates a much greater breadth of academic profiles, including those with specialist contributions to the domains of teaching, institutional citizenship and enterprise/external engagement. Indeed, an individual on either the academic track or the teaching fellow track can identify education as their 'extended' ability and now has the opportunity to progress to a full professorship on that basis (as illustrated opposite).

In all domains – teaching, research, institutional citizenship and enterprise/external engagement – career progression under the *UCL Academic Careers Framework* is underpinned by the academic's sphere and quality of impact. This focus on personal impact has been used, in particular, to design clearly articulated pathways to progression on the basis of teaching and learning. The *UCL Academic Careers Framework* also provides clear guidance on the sources of evidence (termed 'indicators of impact') that could be used to support progression on the basis of teaching and learning at each grade.

CAREER FRAMEWORK FOR UNIVERSITY TEACHING

UCL ACADEMIC CAREER PATHWAYS

	Teaching fellow track. Education as specialism	Academic track. Education as specialism	Academic track. Education as threshold
4 National / global leader in teaching and learning	*(UCL Grade 10)* **Professorial Teaching Fellow**	*(UCL Grade 10)* **Professor**	
3 Institutional leader in teaching and learning / Scholarly teacher	*(UCL Grade 9)* **Principal Teaching Fellow**	*(UCL Grade 9)* **Associate Professor**	
2 Skilled and collegial teacher	*(UCL Grade 8)* **Senior Teaching Fellow**	*(UCL Grade 8)* **Lecturer**	
1 Effective teacher	*(UCL Grade 7)* **Teaching Fellow**	*(UCL Grade 7)* **Lecturer**	*All academics at Grades 7 to 10 must reach Framework Level 1*

Figure 5: The relationship between the levels of the Career Framework for University Teaching and teaching and learning components of UCL's new academic pathways, illustrated for: (i) the teaching fellow track, where education has been selected as the candidate's specialism; (ii) the academic track, where education has been selected as the candidate's specialism; and (iii) the academic track, where education is identified as the candidate's threshold ability

6.2

National University of Singapore

Improving the educator-track career pathway

The National University of Singapore (NUS) is a large, comprehensive, research-intensive university, home to around 40,000 students and 2,500 full-time academic staff. Over the past two decades, the university has sought to strengthen its reputation as a global leader in high impact research. This increased emphasis on research has led to a bifurcation of academic roles, with academics increasingly being either research-focused or teaching-focused, accompanied by a widespread perception that research is more valued than teaching.

In part to address this issue, NUS introduced a teaching-only career pathway in 2008, which was reframed as an 'educator track' in 2015. The 2015 reforms sought to reinforce the status of the educator track, through improving the incentives for academics following this pathway, including enabling the progression to Full Professor with tenure. Despite these changes, challenges with the educator track remained, including:

» A lack of clarity about the pathways available for progression, due in large part to the lack of explicit promotion criteria to describe teaching achievement at each 'rung' of the career ladder.

» The limited range of evidence sources available to evaluate teaching achievement, with an over-reliance on student ratings, widely perceived at the institution as 'fake-able'.

» Ongoing concerns about the quality of external review and benchmarking of candidates' teaching achievement, leading to a perception that promotion based on teaching was less 'rigorous' than promotion based on research.

» A lack of clarity as to the place of 'research' in career progression; whether those on the educator track should be research-active, and if so, whether this should be 'pedagogical' research or discipline-specific research.

Taken together, these factors militated against the institutional respect the educator track was intended to inspire.

In late 2015, the NUS Provost's Office (PVO) set up a task force, with representatives from across the university, to examine the challenges associated with the educator track and propose a way forward. Their proposals for change focused on ensuring that the educator track provided a clear and well-articulated pathway for career advancement and offered parity of esteem and harmonization with the university's tenure track. The Career Framework for University Teaching played a central role in guiding the revisions to the educator track and its associated career development policy. The reforms taken forward included:

» The articulation of clear promotion criteria at each stage in the career pathway.

» A clear emphasis on the candidate's sphere of impact in teaching and learning, including impact on their academic colleagues, the scholarship of teaching and learning and the institutional environment.

» The establishment of opportunities to integrate 'research' into the role, whether in the candidate's disciplinary fields or oriented towards their teaching practice. Inspired by the Career Framework, two non-mutually exclusive, strength-based pathways for promotion were taken forward in the educator track, one in research/scholarship and one in educational leadership.

» The identification of valid and reliable sources of evidence through which to demonstrate candidates' teaching achievements and to be documented through a teaching portfolio.

» An external review of candidates' teaching achievements, including (where relevant) pedagogical scholarship, by an external review panel consisting of global experts in learning and teaching.

The first promotion round under NUS's new policy for the education-focused track has recently been completed. With it has come valuable feedback from the external review panel, as well as from faculty and school representatives. The increase in number of promotion cases submitted under the revised educator track suggests that greater clarity in criteria, evidence, and requirements for progression provided has been achieved.
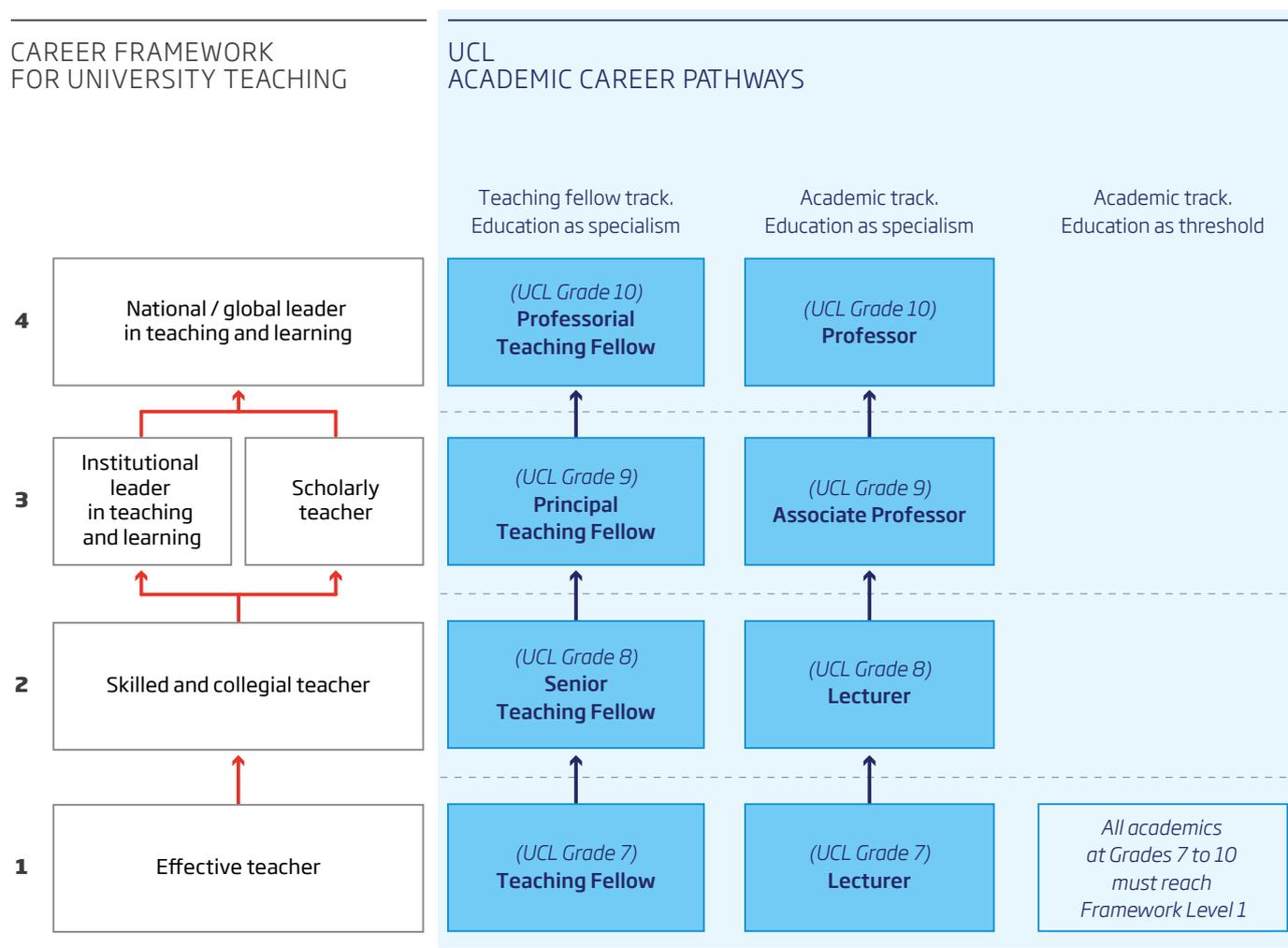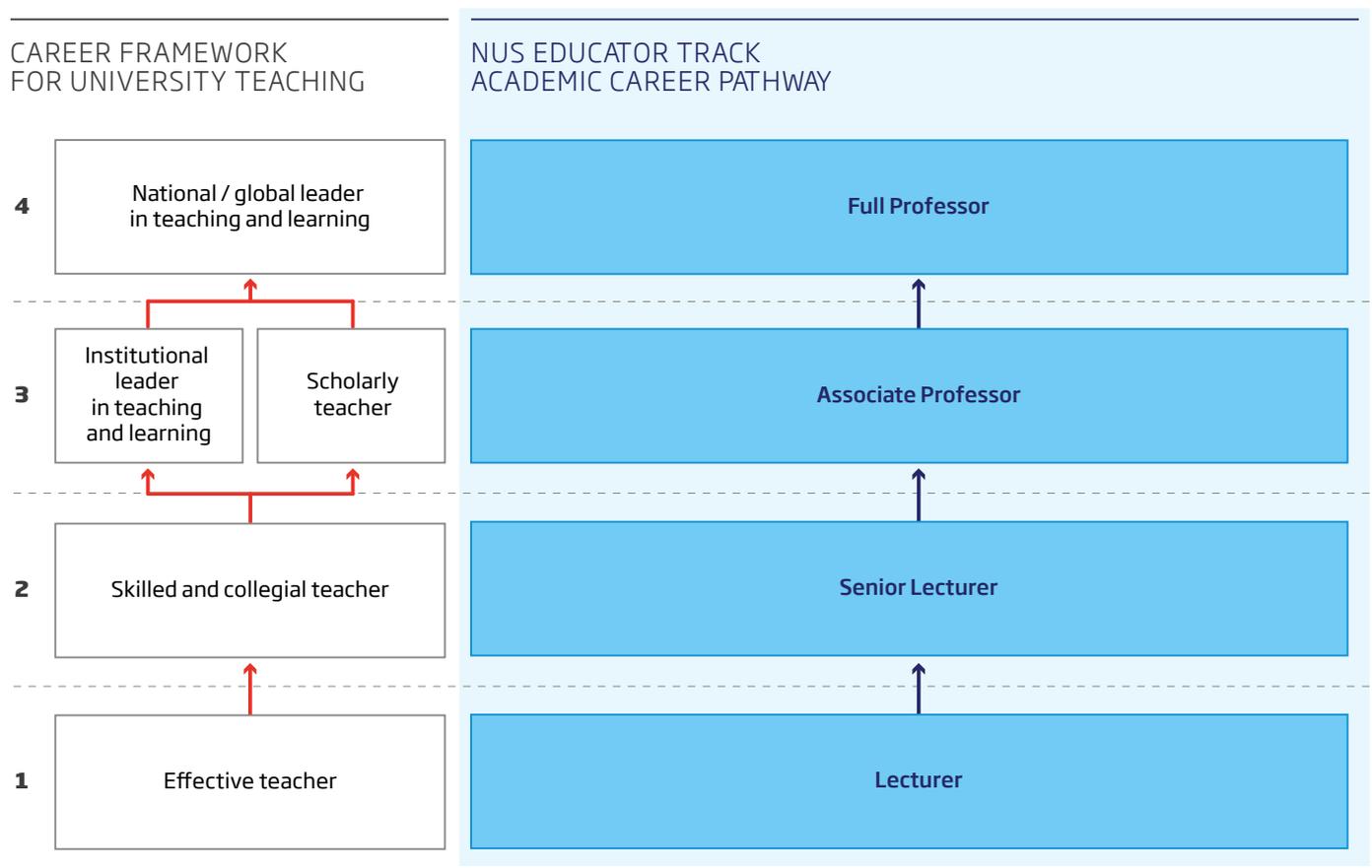
Figure 6: The relationship between the levels of the Career Framework for University Teaching and the levels of NUS's new educator track career pathway

Chalmers University of Technology, Sweden

New recognition and reward systems that are separate from formal promotion pathways

Founded in Gothenburg in 1829, Chalmers University of Technology is a research-led institution specialising in science and technology. Over the past two decades, the university has refined its academic appointments and promotion procedures by progressively improving its processes for evaluating and rewarding teaching. For example, all of Chalmers' appointment and promotion candidates are given two separate interviews – one focused on research and one focused on teaching – to ensure that both domains are given equal weighting. The university also engages an external 'pedagogical expert' to provide an independent evaluation of each candidate's teaching portfolio. In addition, and in line with national guidelines, all academics at the university, regardless of role or seniority, must hold a basic teaching qualification, which incorporates minimum requirements for professional development in education. This mandatory teaching qualification draws on elements of level 1 (effective teacher) and level 2 (skilled and collegial teacher) on the Career Framework for University Teaching, as illustrated in Figure 7.

Building on this basic teaching qualification, the university is now taking forward plans to introduce two further voluntary qualifications; their titles are yet to be determined but they shall be termed the Excellent Teaching Practitioner (ETP) and the Senior Excellent Teaching Practitioner (SETP) for the purposes of this case study. Together, they are designed to promote innovation in teaching and learning as well as establish esteem and a community of support for the university's pioneers in teaching and learning.

Chalmers has used the Framework to guide the requirements and evaluation protocols for these new qualifications. However, as illustrated in Figure 7, they do not line up precisely with the Framework's levels:

» The ETP will be positioned between level 1 and 2 of the Framework. It is focused on evidence-based teaching practice and student-centred learning.

» The SETP will be positioned between level 2 and 3 of the Framework. The successful candidate must demonstrate a broadening sphere of impact in their teaching and learning achievements.

The introduction of these awards is designed to support advancement and excellence in teaching and learning at both an individual level and at a collective departmental level. So, for example, the receipt of an award would provide an individual academic with a robust evidence base for a promotion case. At the same time, Chalmers intends to provide additional funding to departments in proportion to the number of their academics that hold the ETP and SETP awards. These awards will also provide a strong evidence base for academic appointments and promotions.

Chalmers plans to implement the new qualifications in the coming year, with the first call for applications to be issued in late 2018 or early 2019.
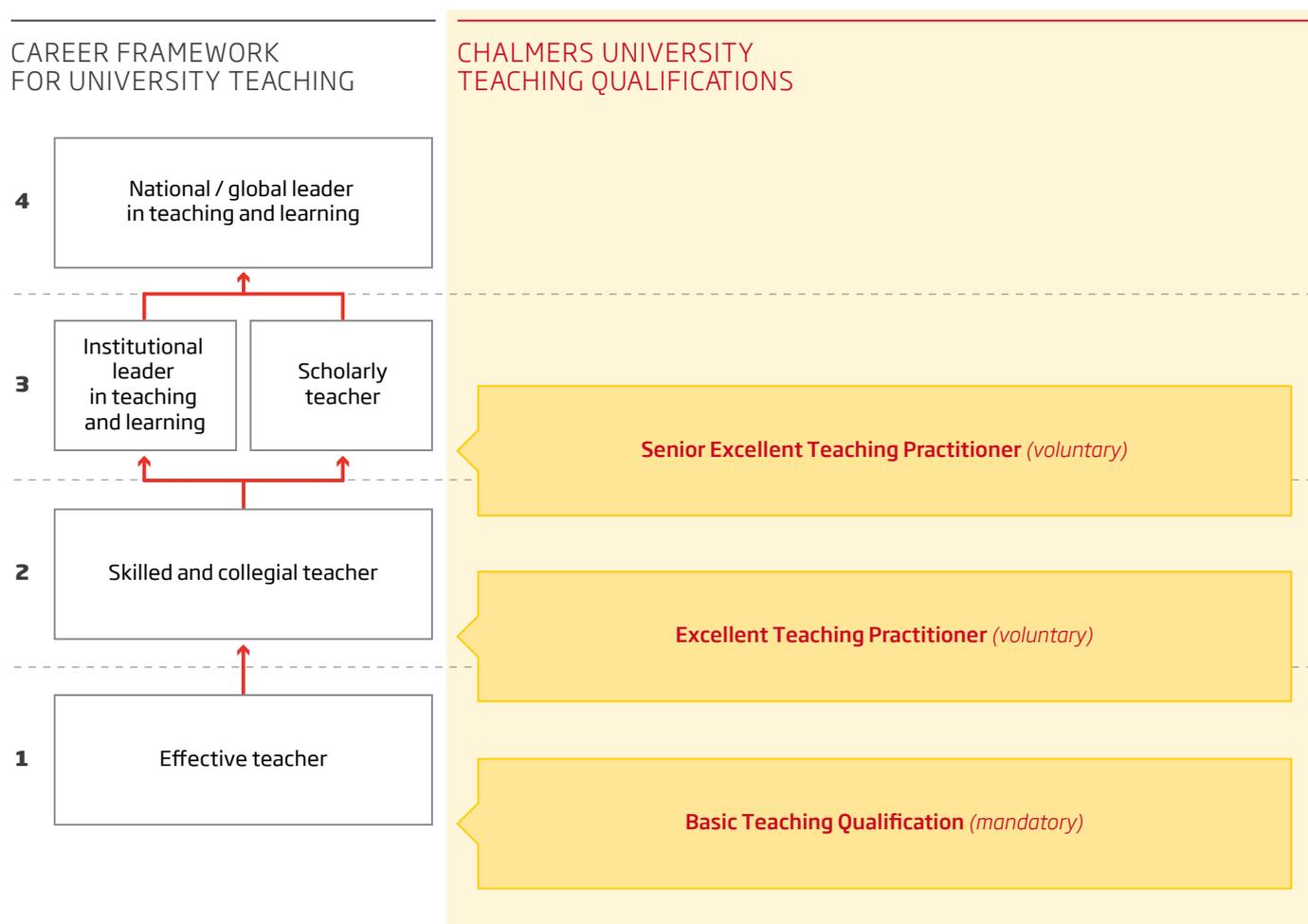
Figure 7: The relationship between the levels of the Career Framework for University Teaching and the levels of the new university teaching qualifications under development at Chalmers University of Technology

Comenius Grant Scheme, Ministry of Education, Netherlands

National bursary scheme to support innovation in university teaching

Up to 2015, university students in the Netherlands received government grants to cover their tuition fees and living costs. In 2015, these grants were replaced with government loans, which students were required to repay following graduation. The Dutch government made a commitment to use the income generated from these loan repayments to advance the quality of university teaching and learning across the country, including support for research and innovation in university education. A component of this investment is the newly-established Comenius Grant Scheme, which aims to:

"...enable professionals in higher education to implement their ideals and ideas in practice. By facilitating a wide range of educational innovations each year, the programme contributes to the improvement of higher education in the Netherlands. Furthermore, by demonstrably valuing excellent and inspired teaching, the Ministry of Education is keen to contribute to more variety in the careers of teachers and researchers at universities and universities of applied sciences".

The Comenius Grant Scheme is structured in three 'tiers':

1. **Teaching Fellow**: awards are €50,000 in value and support a one-year project focused on a small-scale teaching innovation. Successful applicants must have at least two years of university teaching experience. The sphere of impact of the innovation project is the students participating in the course/activity taught by the awardee.

2. **Senior Teaching Fellow**: awards are €100,000 in value and support a two-year project focused on a teaching innovation that spans an entire degree programme. Successful applicants will hold an educational coordination role and have at least five years of university teaching experience, including delivery of at least one successful course-level innovation. The sphere of impact of the innovation encompasses the students enrolled on the degree programme as well as the teaching staff engaged in its design and delivery.

3. **Leadership Fellow**: awards are €250,000 in value and support a three-year teaching innovation project that brings together multiple faculties or the entire university. Successful applicants are described as those that demonstrate *"educational leadership and are able to inspire and give impetus to their vision on education".* They must also have a track record of delivering successful innovations in teaching and learning. The sphere of impact of the innovation encompasses staff, students and teaching support services across part or all of the university.

The Career Framework for University Teaching was used to define these three fellowship levels and the attributes of successful candidates in each case. As illustrated in Figure 8, each of these three fellowship awards lies on the interface between the Framework's four levels.

A pilot version of the Comenius Grant Scheme was launched in 2017, with the award of 10 Teaching Fellowships. Already, two of these successful candidates have been able to use their award to support a successful case for promotion within their institutions. The full Comenius Grant Scheme was launched in 2018, and awarded 74 Fellowships to academics across the Dutch university system (46 Teaching Fellows, 22 Senior Fellows and six Leadership Fellows).

All recipients of a Comenius Grant also join the Comenius Network, a community of support for university teaching and learning hosted by the Royal Netherlands Academy of Arts and Sciences. Each awardee will be offered a four-year membership of this community, which is designed to offer peer-support, ideas exchange and inspiration for this group of the country's leading innovators in university teaching and learning.

**CAREER FRAMEWORK
FOR UNIVERSITY TEACHING**

**COMENIUS
GRANT SCHEME**

4 National / global leader
in teaching and learning

3 Institutional
leader
in teaching
and learning

Scholarly
teacher

2 Skilled and collegial teacher

1 Effective teacher

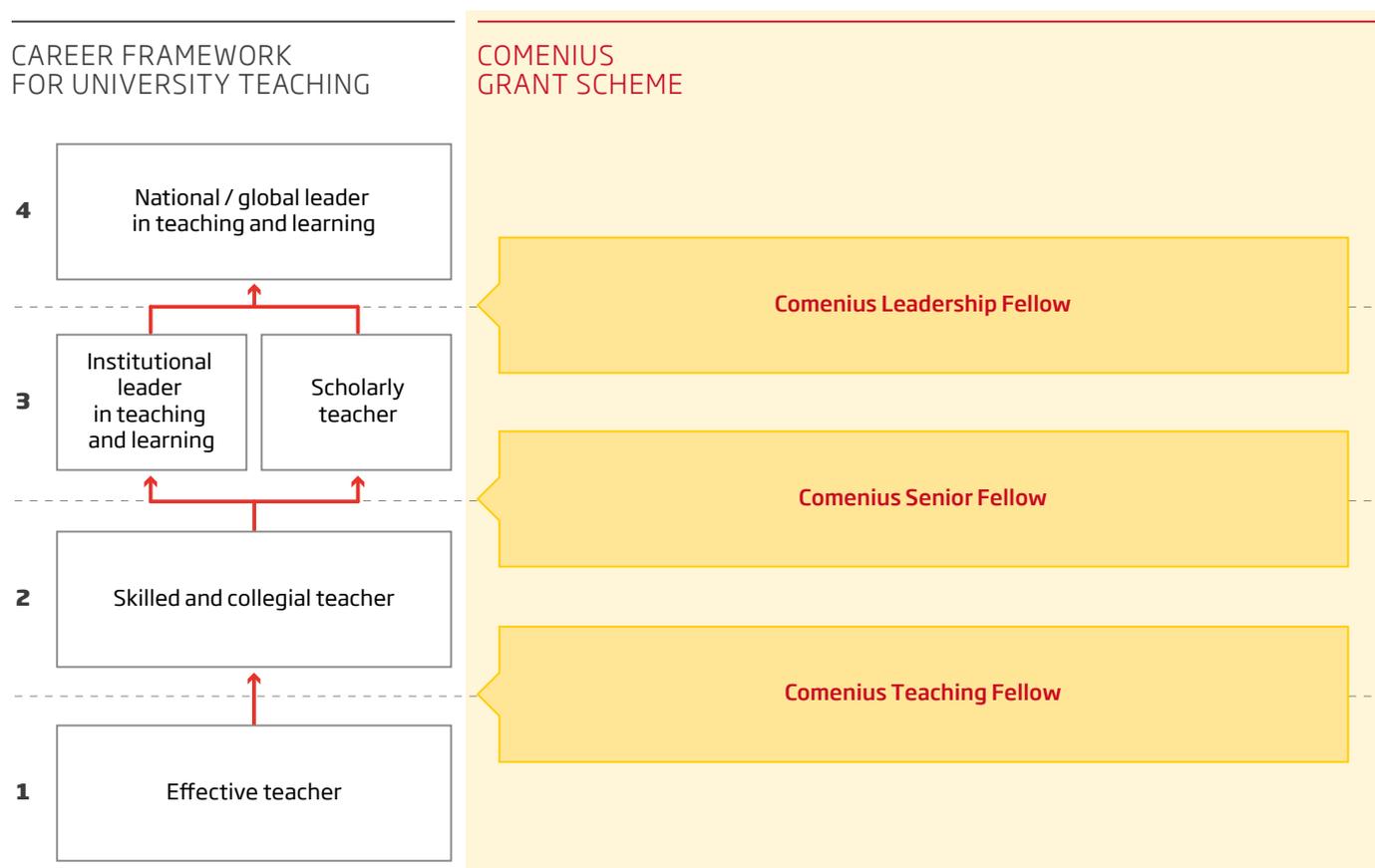Comenius Leadership Fellow

Comenius Senior Fellow

Comenius Teaching Fellow

Figure 8: The relationship between the levels of the Career Framework for University Teaching and the levels of the Comenius Grant Scheme

6.5

UTEC (University of Technology and Engineering), Peru

Design of new academic promotion systems

Established in 2011, UTEC is a private engineering- and technology-specialist university, based in Lima, Peru. It has adopted an active, student-centred educational approach, supported by strong partnership with regional industry.

During the first six years of the university's operation, all UTEC academics were employed to the same grade with no pathways for progression. Over the past two years, UTEC has developed and implemented a new promotion and reward system. As outlined in Figure 9, the university has adopted a single academic career track, with progression underpinned by the candidate's contribution to three domains: (i) teaching, (ii) research, and (iii) leadership and service.

The university used the Career Framework for University Teaching to define the teaching and (at higher academic grades) selected research components of this pathway. As illustrated in Figure 9:

» At the **Lecturer** grade, all candidates must perform at level 1 of the Framework (the 'effective teacher') in their teaching activities.

» At the **Assistant Professor** grade, all candidates must perform at level 2 of the Framework (the 'skilled and collegial teacher') in their teaching activities.

» At the **Associate Professor** grade, all candidates must continue to perform at the 'skilled and collegial teacher' level in their teaching activities. In the research domain, they also must identify a specialist research area from six options, one of which is 'educational research'. The promotion criteria for the educational research domain have been taken from level 3b of the Framework, the 'scholarly teacher'.

» At the **Full Professor** grade, all candidates must perform at level 3a, the 'institutional leader' level in their teaching activities. If selecting 'education' as their research specialism, they must be operating at level 4, the 'national and global leader in teaching and learning' in their research activity.

Following Peruvian regulations, all teachers at UTEC must hold a Master's Degree. To reach the Full Professor level, however, a PhD Degree is required. The only mandatory sources of evidence that candidates must submit as part of their appointment/ promotion case are: (i) outcomes of peer observation of class visits (which include evaluations from the Educational Innovation and Quality team), and (ii) outcomes of student evaluation surveys. However, all sources of evidence are rated by the promotion committee on both the quality of the evidence source and the candidate's performance in that area.

CAREER FRAMEWORK
FOR UNIVERSITY TEACHING

UTEC
SINGLE ACADEMIC TRACK

	Teaching	Research	Leadership and service

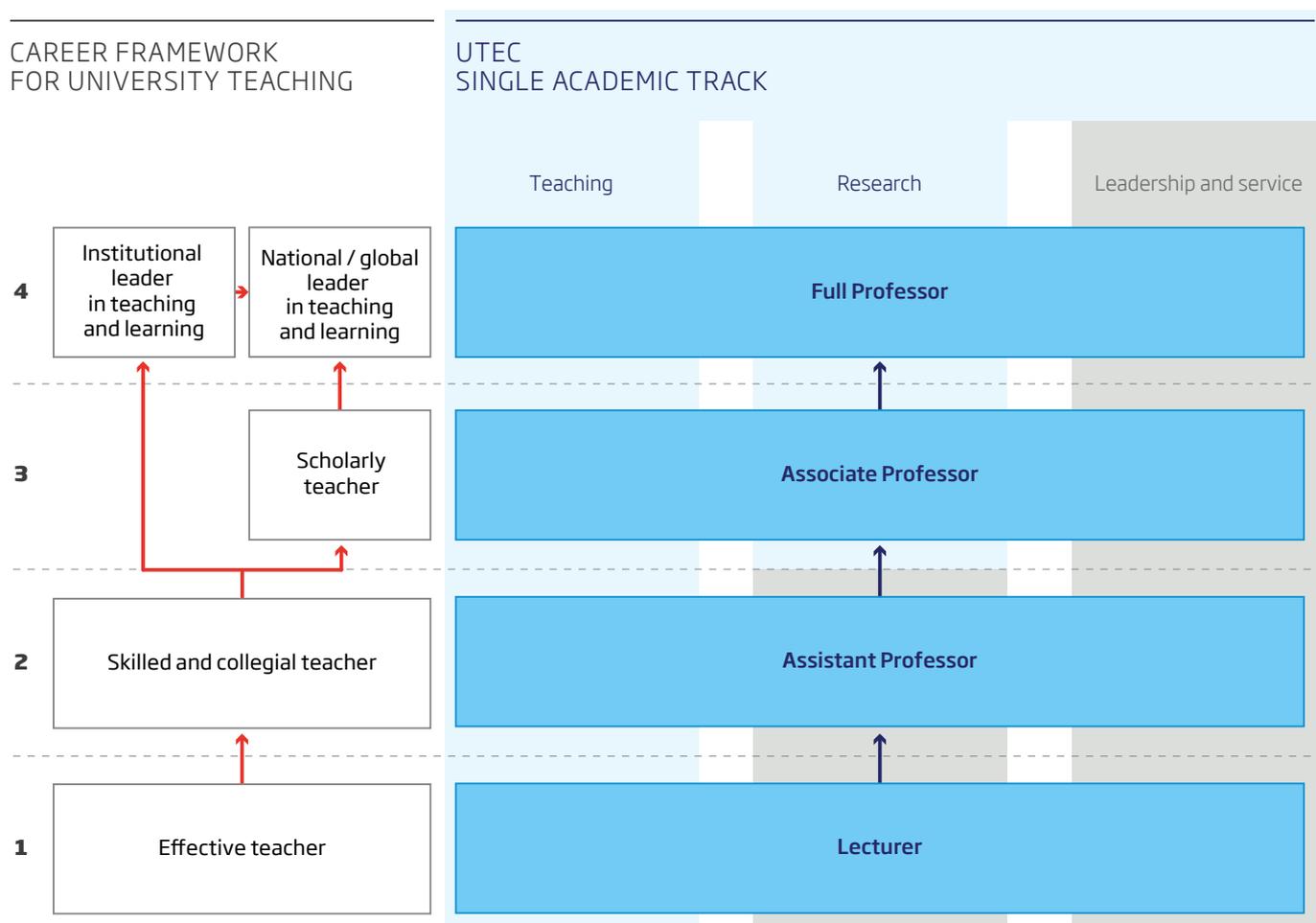|		
4	Institutional leader in teaching and learning → National / global leader in teaching and learning	Full Professor
3	Scholarly teacher	Associate Professor
2	Skilled and collegial teacher	Assistant Professor
1	Effective teacher	Lecturer

Figure 9: The relationship between the levels of the Career Framework for University Teaching and the levels of UTEC's new single academic track career pathway in both the 'teaching' and 'research' domains

6.6

University of Twente, Netherlands

New institution-wide systems to recognise and reward teaching achievement

The University of Twente is a research-led and technology-focused university based in the Netherlands. Following a recent institution-wide reform of its bachelor programmes, the university is addressing how teaching excellence is nurtured, supported and rewarded among its academic staff. Consultations with the university's teaching community revealed two important challenges: firstly, teaching achievement was widely perceived to be a low priority within the university's reward and recognition processes; and secondly, the criteria and indicators of teaching achievement used in the promotion system were perceived to be narrow in scope and inconsistent in application.

To tackle these challenges, the university has undertaken a major overhaul of its academic reward, recognition and support systems in teaching and learning. The Career Framework for University Teaching has been used to inform and structure these reforms, which have allowed the university to introduce consistent and transparent definitions of teaching achievement across its appointment/promotion, recognition and professional processes.

The reforms underway are outlined below:

1. **Appointment/promotion procedures:** the university is establishing a more robust and transparent system for defining and rewarding the teaching achievements of academics during both appointment and promotion. The new policies will stipulate that all academics must fulfil the requirements of an 'effective teacher' (level 1 of the Framework). In addition, the university will enable the opportunity for career advancement (up to Full Professorship) on the basis of teaching achievement. Rather than creating a separate career pathway for academics who excel in education, the university will increase the flexibility of its existing research/teaching pathway to accommodate differing academic profiles depending on the balance of their teaching/research/service activities. Appointment or promotion of academics with an emphasis on education will have a strong relation with teaching

achievements.. For example, as illustrated in Figure 10, a '75% education-focused' candidate would be promoted to Full Professorship if they could demonstrate research achievements equivalent to an Associate Professor level and teaching achievements in line with level 4 of the Framework.

2. **Academic teaching qualifications:** for a number of years, in line with national government guidelines, the University of Twente has required all academics to gain a basic University Teaching Qualification (UTQ). Over the past year, the university has reframed the UTQ to align with the 'effective teacher' level of the Framework and has introduced a Senior University Teaching Qualification (SUTQ), which prepares for the 'scholarly teacher' level of the Framework. Unlike the UTQ, application for an SUTQ would be voluntary, driven by the interests and ambitions of the individual academic. A major focus of the SUTQ will be the development of a pedagogical community of practice and support among the awardees.

3. **Professional development:** the university will also implement important changes to how teaching achievement is considered in its professional development and annual appraisal of academics. So, for example, in annual appraisal, academics will be assigned a score of 'low', 'medium' or 'high' against each of the promotion criteria for the relevant level of the Framework. These weightings will then be used to identify and explore opportunities to develop and advance the academic's approach and impact in teaching and learning.

Following a series of pilots and consultations in 2016 and 2017, the University of Twente will roll out these reforms during early 2018.

CAREER FRAMEWORK FOR UNIVERSITY TEACHING	UNIVERSITY OF TWENTE ACADEMIC CAREER PATHWAY	UNIVERSITY OF TWENTE TEACHING QUALIFICATIONS

Example: candidate's focus is

Education 75%	Research 25%

4 — National / global leader in teaching and learning

Full Professor
Education	Research
Performing at level 4 of the Framework	Equivalent to Associate Professor

3 — Institutional leader in teaching and learning / Scholarly teacher

Associate Professor
Education	Research
Performing at level 3 of the Framework	Equivalent to Assistant Professor

2 — Skilled and collegial teacher

Senior University Teaching Qualification *(voluntary)*

1 — Effective teacher

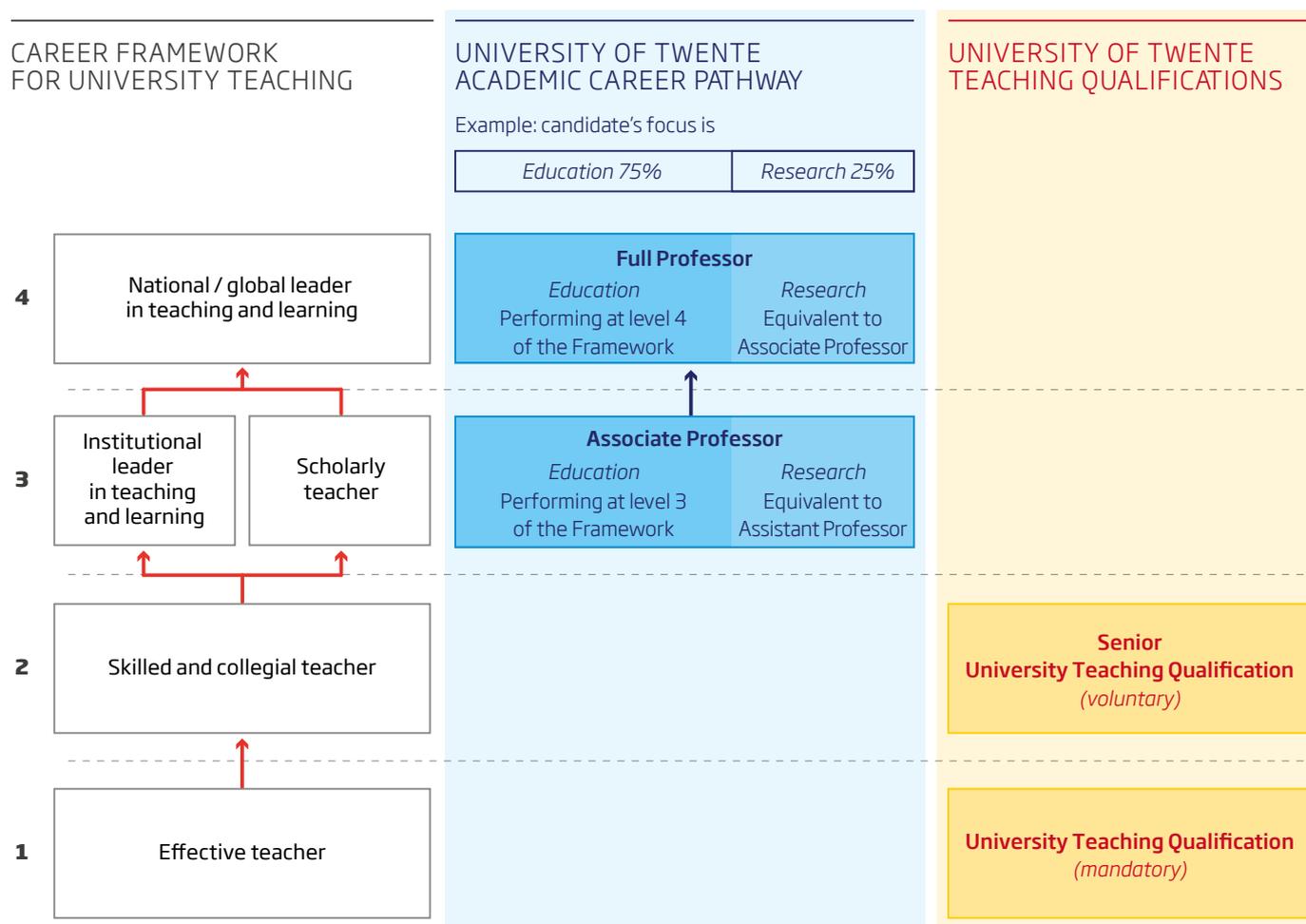**University Teaching Qualification** *(mandatory)*

Figure 10: The relationship between the levels of the Career Framework for University Teaching and the levels of the University of Twente's new (i) single academic career pathway, where the candidate has selected to dedicate 75% of their promotion case on education; and (ii) university teaching qualifications, at the UTQ and SUTQ levels

Universiti Teknologi Malaysia (UTM)

Introduction of new promotion pathways and evaluation systems

Building on the significant improvements in the research performance of Malaysian universities, the national government has turned its attention to their performance in teaching. They have called for a number of far-reaching changes, including a diversification of university career pathways, such that Malaysian academics can both build competencies and increase impact in areas of particular interest. Four domains have been identified for such career specialism: teaching; research; professional practice; and academic leadership.

UTM is a research-intensive university specialising in science, engineering and technology. Responding to government calls for change in teaching and learning, UTM has embarked on a radical programme of reform to its career pathways and academic reward systems. Prior to this change, UTM supported only one academic career pathway, where advancement was driven by research performance. The new UTM career recognition system will comprise three[i] major career pathways:

» **The teaching track**: appointees to this track will be expected to dedicate 55% of their time to teaching-related activities, including research, training and capacity-building in education. A quarter of their time will be devoted to discipline-specific research. The university has set a target that appointees to this track will comprise 30% of its academic population over the coming five years.

» **The research track**: appointees to this track will be expected to dedicate 55% of their time to discipline-specific research and 25% of their time to teaching-related activities. The university has set a target that appointees to this track will comprise 50% of its academic population.

» **The practitioner track**: the university aims to attract experts and innovators from industry to this pathway and has set a target that appointees will comprise 15% of the academic population.

In early 2019, all UTM academics will be asked to choose which of the three major career pathways they wish to follow. The university used the Career Framework for University Teaching to design the 'teaching' component of each pathway, as illustrated in Figure 11. For example, on the teaching track, the Associate Professor equates to level 2 of the Framework and the Full Professor equates to level 3 of the Framework, at which point the candidate may decide to focus on educational scholarship and/or educational leadership. Level 4 of the Framework – the 'national and global leader in teaching and learning' – is reserved for those at UTM's highest grade of professorship on the teaching track. Progression on the teaching track is driven by the candidate's quality and sphere of impact, with a predominant focus on the students they teach and tutor at lower grades and a broadening of the focus at more senior grades to include the university's educational environment and/or the wider higher education and pedagogical research communities. The Framework is also used to define the threshold achievement in teaching which all UTM academics must attain, regardless of their chosen career pathway. At grades up to Associate Professor, all UTM academics must meet the requirements for level 1 of the Framework (the 'effective teacher'), and at all grades from Full Professor, all academics must meet the requirements for level 2 of the Framework (the 'skilled and collegial teacher'), as illustrated in Figure 11.

In conjunction with the new career pathways, the university has also developed an online tool to support the assessment of academics' teaching achievements, called the 'Teaching Excellence System' (TES). The TES will be used to conduct an annual evaluation of the teaching achievements of all UTM academics against nine criteria, which include a teaching portfolio, a course review report and student feedback questionnaires. Only academics who are identified as 'sufficient' in all nine criteria (scoring two or more out of a maximum of four) will be able to apply for promotion. The TES was launched in March 2018 in preparation for the roll-out of the new UTM career tracks in early 2019.

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i   The university will also support a fourth pathway – the leadership track – which will be offered on an invite-only basis to a small number (less than 5% in total) of academics that demonstrate strong leadership potential.

CAREER FRAMEWORK FOR UNIVERSITY TEACHING

Level		
4	National / global leader in teaching and learning	
3	Institutional leader in teaching and learning	Scholarly teacher
2	Skilled and collegial teacher	
1	Effective teacher	

UTM MAJOR CAREER PATHWAYS

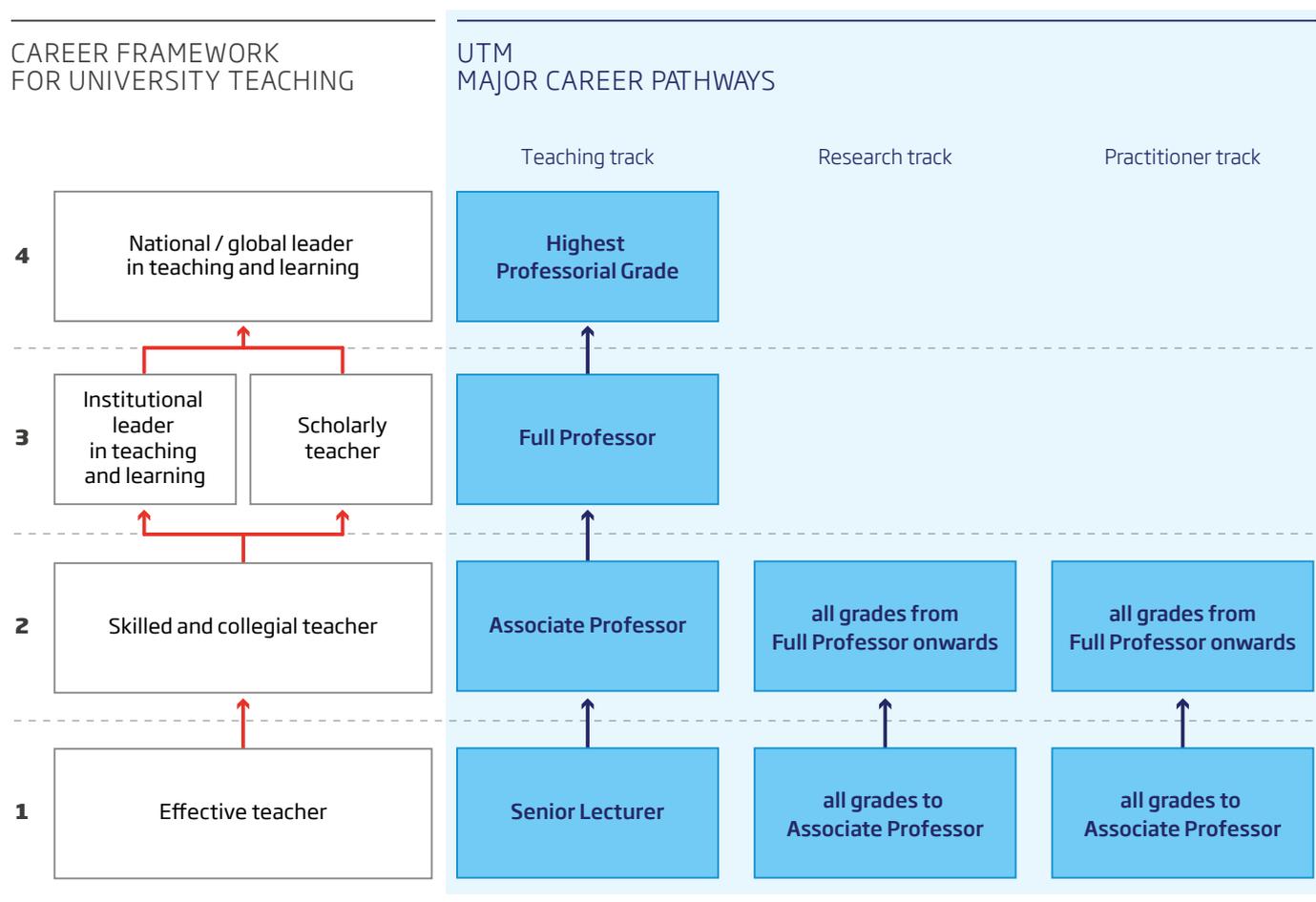|	Teaching track	Research track	Practitioner track
4	Highest Professorial Grade		
3	Full Professor		
2	Associate Professor	all grades from Full Professor onwards	all grades from Full Professor onwards
1	Senior Lecturer	all grades to Associate Professor	all grades to Associate Professor

Figure 11: The relationship between the levels of the Career Framework for University Teaching and the teaching and learning components of UTM's three major career pathways: the teaching track, the research track and the practitioner track

NMiTE (New Model in Technology & Engineering), UK

Establishment of career and professional development framework for a new university

The first new university to be established in the UK for 40 years is currently under development. Under UK law, it cannot be given the title of a 'university' until its first cohort of students graduate, so the new institution is currently operating under a temporary name: 'NMiTE', standing for *New Model in Technology & Engineering*. As its name suggests, the new teaching-led university will be technology- and engineering-focused. Its educational approach will be highly distinctive. The programme will take a project-based, immersive approach, asking students to use their engineering skills and knowledge to solve authentic cross-disciplinary problems facing society and industry. It will also immerse the 'engineers-in-training' in the liberal arts and place a strong emphasis on technology-driven innovation and creativity. The university will support a high staff to student ratio; at steady-state, it plans to be home to 90 academics and 1,200 students, with an annual intake of 350.

NMiTE will enrol its first undergraduates in September 2019. The inaugural cohort of 50 students will not be charged fees during their first year of study, in acknowledgement of their critical role in 'testing' the new curriculum. Indeed, students will also play a critical role in the design and development of the university's culture and education. From September 2018, NMiTE will host a 'design cohort' of 25 students for 12 months; this handpicked group will be charged with co-designing key aspects of the new university – such as its enrolment systems, student services and curriculum – in partnership with the institution's 'founding faculty'.

NMiTE is appointing its 'founding faculty' in April 2018. It has adapted the Career Framework for University Teaching to guide all academic appointments, promotions and professional development processes.

Thus, as illustrated in Figure 12, at both appointment and promotion stage:

» Assistant Professors must align with level 2 of the Framework; as the levels are cumulative, this means they must meet the criteria of *both* the 'effective teacher' *and* the 'skilled and collegial teacher'.

» Associate Professors must align with level 3 of the Framework, and meet the criteria for the 'institutional leader in teaching and learning' and/or the 'scholarly teacher' (as well as the requirements of levels 1 and 2).

» The two highest grades – the Full Professor and the Distinguished Professor – align with level 4 of the Framework, reflecting achievement as a 'national leader' and 'global leader' in teaching and learning respectively (as well as meeting the requirements of levels 1, 2 and 3).

NMiTE has made some adaptations to the Framework to reflect the institution's distinctive educational vision. For example, in its version of the Framework, NMiTE has replaced the words 'teaching' and 'teacher' with 'education' and 'educator'; as such, level 1 of the Framework is described as the 'effective educator'.

It should be noted that NMiTE is a teaching-led institution and academic activity is focused exclusively on undergraduate education. Unlike other partner universities, NMiTE is not using the Framework alongside parallel procedures to assess achievement in other academic domains, such as disciplinary research or knowledge transfer. At this university, the Framework can be used as a standalone resource and a single structure to underpin academic development and achievement.
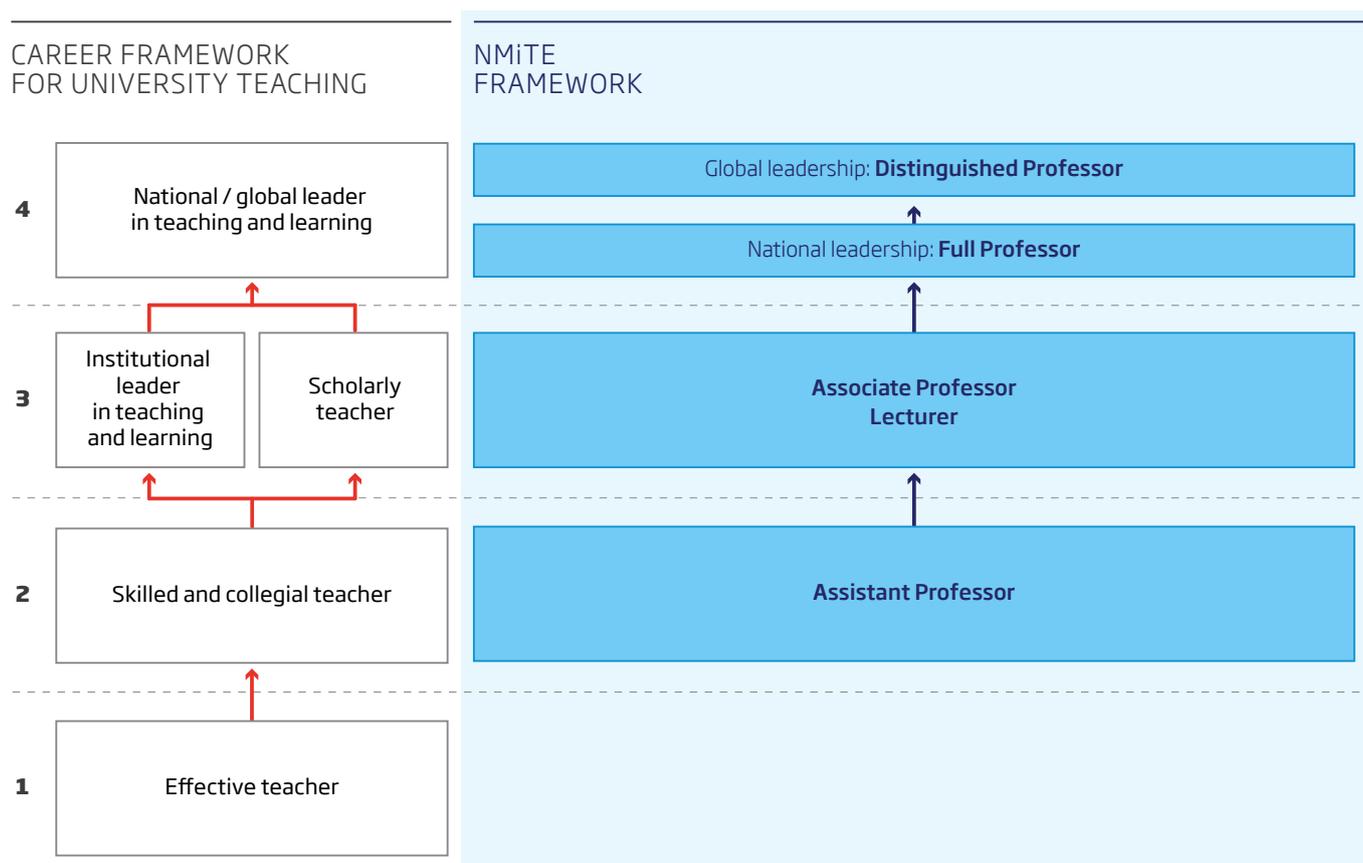
Figure 12: The relationship between the levels of the Career Framework for University Teaching and the NMiTE framework

University of New South Wales, Sydney

Introduction of a new education-focused career pathway

Based in Australia, the University of New South Wales, Sydney (UNSW Sydney) is a research-intensive public university that is home to more than 50,000 students in subjects that span science, technology and professional disciplines. In 2015, it launched 'Strategy 2025', which aims to establish UNSW Sydney as 'Australia's global university', underpinned by world-class excellence in research and education. A major component of the educational mission of Strategy 2025 is to :

"deliver a major cultural shift across the university by specifically valuing the excellence of our academics who undertake teaching. This will be achieved through support programs and clear policies, including those related to promotion".

In mid-2017, following two years of review and international benchmarking, UNSW Sydney launched a new education-focused (EF) academic career pathway. As Professor Anne Simmons, the lead of the working party that introduced the EF pathway, explained: *"the EF model recognises and values the skills of academics who excel at teaching and learning and provides a clear career path for them to progress through the academic ranks."* The EF pathway was designed to offer a parity of esteem and opportunity with the university's research-focused and more established research/teaching career pathways. Indeed, academics would be free to move laterally between these three promotion pathways if their priorities and areas of focus shift during the course of their career.

The Career Framework for University Teaching played an important role in shaping the design of the EF pathway, through both offering a definition of progressive levels of teaching achievement and identifying pathways for advancement. The relationship between the Framework's levels and the five steps in the EF career pathway at UNSW Sydney is illustrated in Figure 13. As Professor Simmons noted: *"[the Framework's] levels informed the roles and expectations of Level A though E academics within the context of an EF career at UNSW, and helped UNSW to articulate the career progression options of an EF academic."*

Less than a year after the launch of the EF pathway, more than 200 UNSW Sydney academics have already been accepted into EF roles, representing 11% of the university's academic population; the university plans for this figure to rise to 25% by 2025. Feedback from across the university suggests that this growing cohort of education-focused academics is already having a profound and positive impact on the culture, status and quality of teaching and learning at UNSW Sydney.

Those closest to the implementation of the EF pathway make clear, however, that simply introducing these new career opportunities is only one part of the story. Equally important have been the measures introduced by the university to support and advance this community. For example:

» EF academics are provided with teaching innovation grants and sabbaticals to support exploration, academic visits and the development of new ideas in teaching and learning.

» Promotion policies have been revised to allow EF academics to progress through to Full Professor.

» A strong focus has been placed on establishing a community of support across the growing population of EF academics, including events, educational retreats and small group workshops.

» EF academics are provided with dedicated coaching and professional development in teaching and learning.
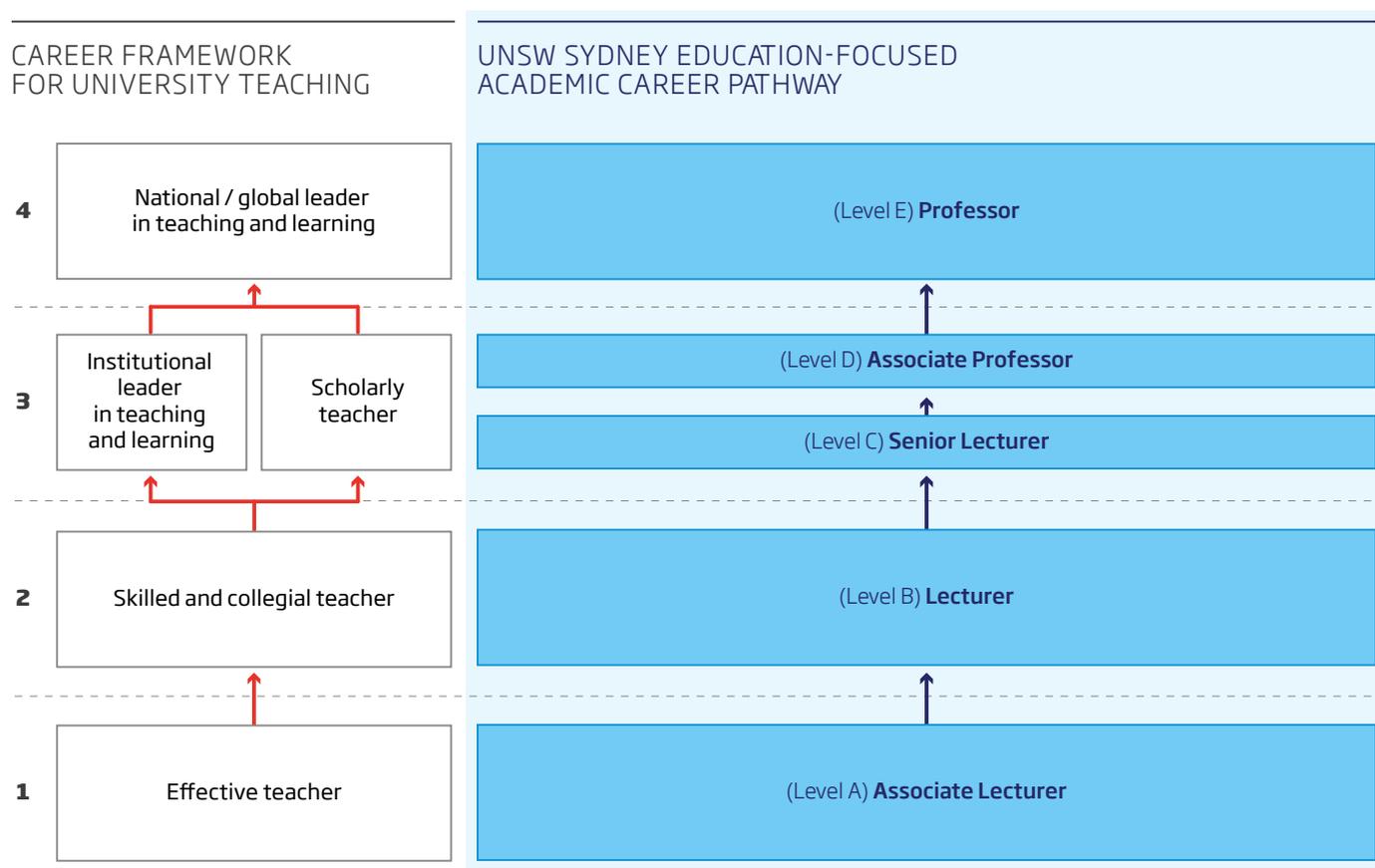
Figure 13: The relationship between the levels of the Career Framework for University Teaching and the levels of UNSW Sydney's new education-focused career pathway

Appendix

Appendix

During Phase B of the project, a desk-based review of promotion policies was conducted of 14 of the world's top-ranked universities, looking specifically at their promotion guidelines and application forms. The institutions were drawn from the top 25 of the 2014–15 World University Rankings in Engineering and Technology, published by *Times Higher Education*.[i] Because the majority (14) were US universities, a subset of seven of this group was selected along with seven non-US universities from five countries. Data was collected for the 14 universities from promotion forms and guidelines either available in the public domain, or supplied through direct correspondence with the institutions.

The review examined the extent to which the candidate's expected level of achievement in teaching was described in the promotion guidelines and documentation. As highlighted in Section 2, only five of the 14 institutions (36%) provided such a description. The review also considered the forms of evidence of teaching achievement required as a mandatory element of a candidate's submission for appointment/promotion to full professorship. The review was designed to provide insight into (i) the emphasis given to teaching during academic promotion at these top-ranked institutions; and (ii) the range and types of forms of evidence of teaching achievement that academics already routinely present during appointment and promotion across different geographic contexts (Table A1).

It should be noted that the review:

» is based on promotion criteria and guidelines operating in June/July 2015

» focused only on forms of evidence that were a mandatory element of the promotion case (sources that were listed as optional were not included)

» focused on standard T&R academic career pathways (i.e. it did not cover specialist education-focused career tracks)

» focused on formal institutional guidelines and documentation relating to promotion and tenure, and therefore may not necessarily reflect what happens in practice.

The forms of evidence required by the 14 universities are listed in Table A1, grouped according to the four evidence domains defined in the Framework: (i) self-assessment; (ii) professional activities; (iii) measures of student learning; and (iv) peer review and recognition. The table presents the proportion of these universities that required their promotion candidates to submit each of the listed forms of evidence. Only evidence sources required by one or more of the universities have been listed in the table.

The analysis pointed to national differences in emphasis; these variations were particularly evident when the US and non-US universities were compared (Table A1). The US institutions tended to call for a narrower range of evidence sources, with more than half asking for student evaluation scores, letters of support from departmental management and an indication of the candidate's teaching load. In contrast, universities based outside the US tended to place greater emphasis on self-assessment, with all requiring one or more evidence sources from this domain and 57% asking candidates to prepare a 'teaching portfolio'. There was correspondingly less emphasis on the candidate's 'duties' in teaching and learning. Interviews conducted in 2015 with representatives of the non-US universities that did not require candidates to prepare a teaching portfolio suggest that a number of these institutions will adopt a portfolio-based approach in the future. These interviews also suggested that a number of the non-US institutions plan to reduce the number of mandatory forms of evidence they ask candidates to prepare in the educational component of promotion cases, and instead will ask candidates to self-identify the evidence they wish to include in their 'teaching portfolio'.

i www.timeshighereducation.com/world-university-rankings/2015/subject-ranking/engineering-and-IT#!/page/0/length/25/sort_by/rank/sort_order/asc/cols/stats

Table A1: The forms of evidence of teaching achievement required as a mandatory element of candidate's submission for appointment/promotion to full professorship at 14 top-ranked universities

|	US universities	Non-US universities	All universities
1. Self-assessment			
Reflective statement on all aspects of career/role, in which teaching is mentioned	29%	0%	**14%**
Short reflective self-assessment statement focused on teaching (recommended one page or less)	43%	71%	**57%**
More detailed self-assessment involving more than one required element	0%	29%	**14%**
Teaching portfolio (or equivalent) required to present all evidence of teaching achievement	0%	57%	**29%**
2. Professional activities			
List of teaching responsibilities	71%	71%	**71%**
Indication of volume of 'teaching load' (number of contact hours/supervisions/students etc.)	57%	43%	**50%**
List of contributions to mentoring colleagues in teaching and learning	0%	14%	**7%**
Examples of teaching materials (course outlines, learning outcomes, assignments etc.)	0%	29%	**14%**
List of candidate's participation in professional development activities in teaching and learning	14%	29%	**21%**
Description of teaching innovations delivered	29%	29%	**29%**
List of departmental/institutional duties/activities associated with teaching and learning	14%	57%	**36%**
3. Measures of student learning			
Outcomes of student evaluation surveys	100%	86%	**93%**
Further details of student survey results (response rates, comparison with averages, cohort sizes etc.)	14%	0%	**7%**
4. Peer assessment			
Classroom observations/peer review of teaching	0%	29%	**14%**
Feedback from students or alumni (letters of reference, interviews, emails etc.)	43%	14%	**29%**
Letters of support/feedback from departmental management focused on candidate's teaching achievements	71%	43%	**57%**
Letters of support/feedback from peers/other faculty focused on candidate's teaching achievements	14%	0%	**7%**
Broad evaluation of candidate by senior management that mentions the candidate's teaching achievements	43%	14%	**29%**
Letters from external referee/s that mention the candidate's teaching achievements	29%	0%	**14%**
List of publications and/or presentations in the field of teaching and learning	0%	29%	**14%**
Research/development income in teaching and learning	0%	29%	**14%**
List of teaching awards and recognitions	29%	43%	**36%**

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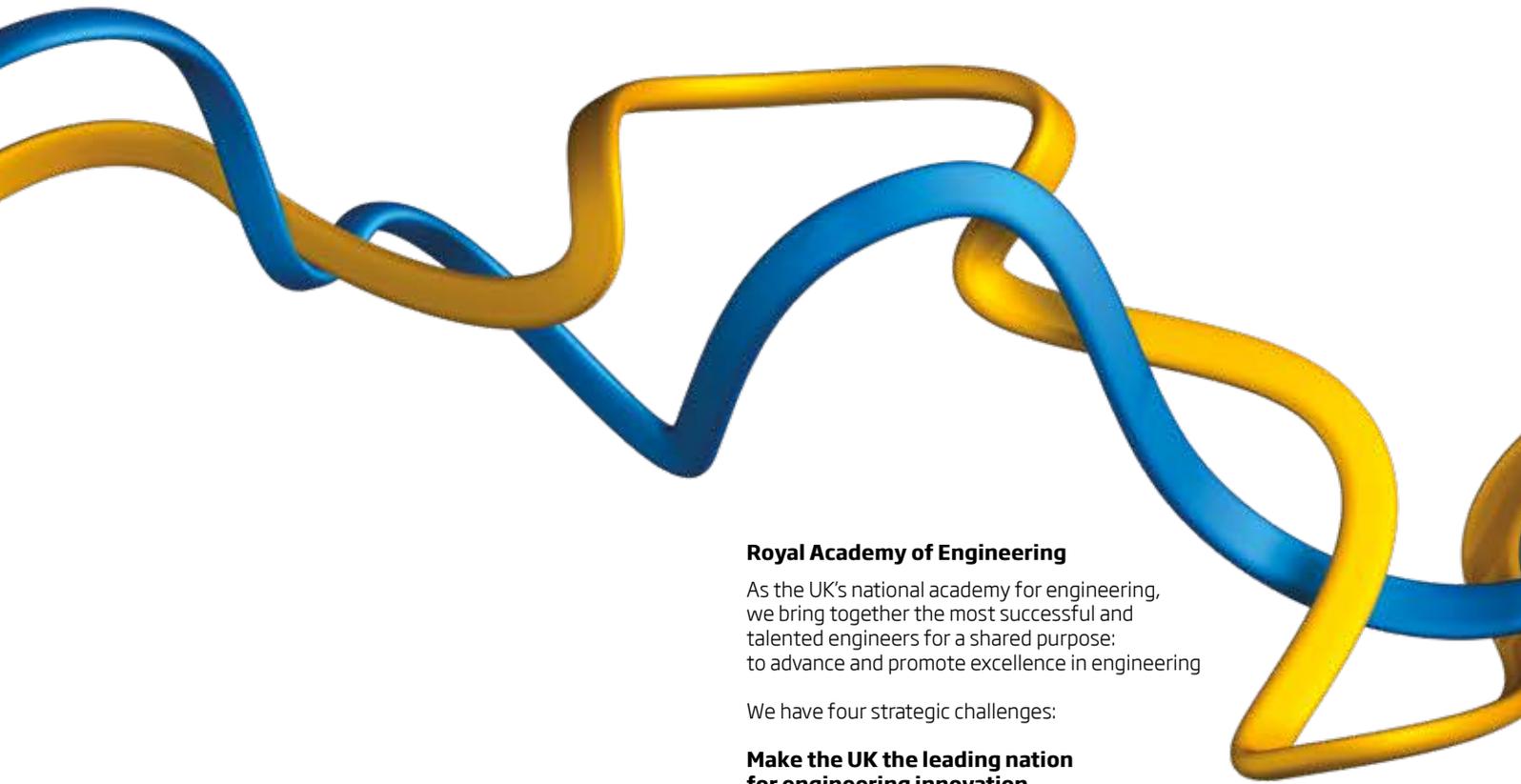
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